As filed with to the Securities and Exchange Commission on June 9, 2021.

Registration No. 333-256470

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Lyell Immunopharma, Inc.
(Exact name of registrant as specified in its charter)

Delaware	2834	83-1300510
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

Lyell Immunopharma, Inc.
400 East Jamie Court, Suite 301
South San Francisco, California 94080
(650) 695-0677
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Elizabeth Homans
Chief Executive Officer
400 East Jamie Court, Suite 301
South San Francisco, California 94080
(650) 695-0677
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Dave Peinsipp **Charles S. Kim** **Chadwick Mills** **Cooley LLP** **101 California Street, 5th Floor** **San Francisco, California 94111** **(415) 693-2000**	**Charles Newton** **Chief Financial Officer** **400 East Jamie Court, Suite 301** **South San Francisco, California 94080** **(650) 695-0677**	**Brian J. Cuneo** **B. Shayne Kennedy** **Latham & Watkins LLP** **140 Scott Drive** **Menlo Park, California 94025** **(650) 328-4600**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be registered(1)	Proposed Maximum Aggregate Offering Price(1)(2)	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee(2)
Common stock, par value $0.0001 per share	28,750,000	$18.00	$517,500,000	$56,460

(1) Includes 3,750,000 shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act of 1933, as amended. Includes the aggregate offering price of any additional shares that the underwriters have the option to purchase.
(3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. The Registrant previously paid a registration fee of $16,365 in connection with the initial filing of this Registration Statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated June 9, 2021

25,000,000 shares

Common Stock

This is an initial public offering of shares of common stock of Lyell Immunopharma, Inc. We are offering 25,000,000 shares of our common stock.

Prior to this offering, there has been no public market for our common stock. We currently expect the initial public offering price will be between $16.00 and $18.00 per share of common stock.

We have applied to list our common stock on the Nasdaq Global Market under the symbol “LYEL.”

We are an “emerging growth company” as defined under the federal securities laws and, as such, have elected to comply with certain reduced reporting requirements in this prospectus and may elect to do so in future filings.

Investing in our common stock involves a high degree of risk. See the section titled “Risk Factors” beginning on page 12.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to Lyell Immunopharma, Inc., before expenses	$	$

(1) See the section titled “Underwriting” for a description of the compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional 3,750,000 shares of our common stock at the initial public offering price, less the underwriting discounts and commissions.

The underwriters expect to deliver the shares against payment in New York, New York on , 2021.

Goldman Sachs & Co. LLC **BofA Securities** **J.P. Morgan** **Morgan Stanley**

Prospectus dated , 2021

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Neither we nor the underwriters have authorized anyone to provide you any information or make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus, and is qualified in its entirety by the more detailed information and audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should carefully read this entire prospectus, including the information under the sections titled "Risk Factors," "Special Note Regarding Forward-Looking Statements" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Unless the context requires otherwise, references in this prospectus to "Lyell Immunopharma," "Lyell," the "Company," "we," "us" and "our" refer to Lyell Immunopharma, Inc.

Overview

We are a T cell reprogramming company dedicated to the mastery of T cells to cure patients with solid tumors. We have assembled a world-class team, comprising some of the foremost scientific leaders in the fields of oncology and adoptive cell therapy (ACT), including Drs. Rick Klausner, Nick Restifo, Stan Riddell and Crystal Mackall, who have each interrogated and elucidated the mechanisms of T cell biology and its interactions with cancer for decades. We believe the key to effective cell therapy is the mastery of the identity, fate and function of cells to create living medicines. We take a systematic, interrogative, cell biology-driven approach to overcome what we view as the two major barriers to successful ACT – (1) T cell exhaustion and (2) lack of durable stemness – through the application of our proprietary genetic and epigenetic reprogramming technologies, Gen-R and Epi-R. Our technologies are designed to be applied in a target and modality agnostic manner to chimeric antigen receptor (CAR), tumor-infiltrating lymphocytes (TIL) and T cell receptor (TCR) therapies to fundamentally improve the properties of T cells needed to eradicate solid tumors. We believe our autologous T cell therapies will generate improved, durable clinical outcomes that are potentially curative for patients with solid tumors. We are building a multi-modality product pipeline across several solid tumor indications with high unmet needs and anticipate having four investigational new drug application (IND) submissions by the end of 2022.

Our Technology Platforms

ACT has demonstrated profound results in some patients suffering from hematologic tumors, but solid tumors are more complex and have evolved multiple mechanisms to evade and ultimately overcome the immune system. This has limited the use of ACTs in non-hematologic settings. We believe T cell exhaustion and lack of durable stemness – the T cell's loss of continual proliferative capacity and abilities of self-renewal and differentiation to effector states to eliminate solid tumors – are two major barriers limiting the efficacy of ACT in solid tumors.

We endeavor to overcome these two major barriers to ACT in solid tumors through our proprietary Gen-R and Epi-R technology platforms.

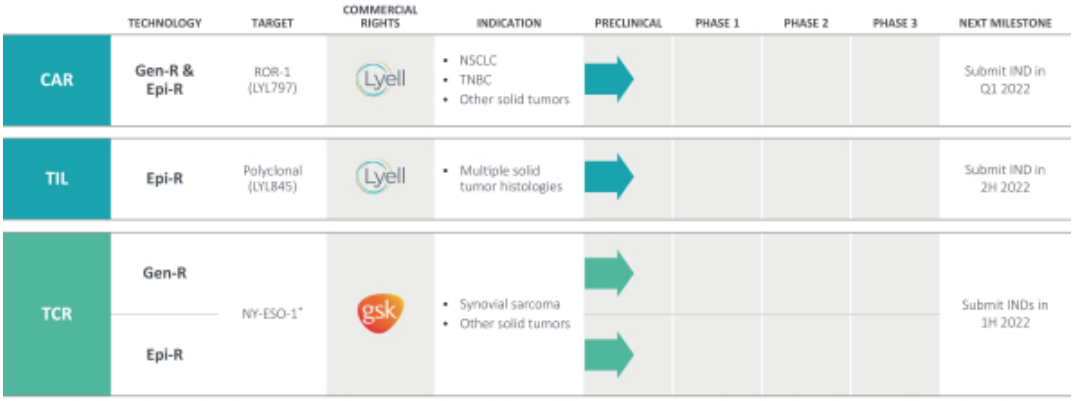
- **Gen-R** – our proprietary *ex vivo* genetic reprogramming technology to overcome T cell exhaustion, which results from transcriptional and epigenetic changes that occur as T cells differentiate into a dysfunctional state. Our scientific co-founders discovered T cell exhaustion occurs more frequently in solid tumors than in hematologic cancers where CAR T cells have demonstrated efficacy. The discovery of Gen-R came from the realization that chronic antigen

stimulation, or when the T cell is always “on,” combined with an immunosuppressive solid tumor microenvironment (TME), likely promotes the development of T cell exhaustion. In preclinical solid tumor models, Gen-R overcame T cell exhaustion and restored antitumor activity through the optimized overexpression of c-JUN, a protein which, when dysregulated, has been shown to play a crucial role in T cell exhaustion.

- **Epi-R** – our proprietary *ex vivo* epigenetic reprogramming technology to create a novel population of T cells with durable stemness. Stemness, the quality of T cells capable of self-renewal, expansion, persistence and anti-tumor response has been reported in the literature to correlate with clinical responses to immunotherapy. However, we believe *durable* stemness is required for long-term efficacy against solid tumors. Durable stemness relates to the ability of T cells to maintain their stemness until the tumor is eradicated, that is, they have the ability to self-renew despite continued persistent signals from the tumor driving activation, proliferation and differentiation. We believe that as these cells proliferate, they generate progeny cells that can both differentiate to polyfunctional effector cells and/or re-populate the population of less differentiated T cell states as they continue to divide, thereby maintaining stemness. Epi-R is designed to intentionally and reproducibly generate populations of T cells which have this property of durable stemness. Furthermore, relating specifically to TIL, application of Epi-R has generated T cell preparations that exhibit increased polyclonality during expansion, and preserved their ability to target a diversity of tumor neoantigens.

Our Pipeline

We are utilizing our Gen-R and Epi-R technology platforms to develop a multi-modality product pipeline with four IND submissions expected by the end of 2022. Each of our programs provide opportunities to expand into additional indications beyond the patient populations we are initially targeting. Our product candidates are summarized in the table below:



* Our collaborator, GlaxoSmithKline (GSK), is developing an NY-ESO-1 TCR T cell product candidate, currently in pivotal development. While we are currently evaluating Gen-R and Epi-R in separate preclinical programs for this product candidate, together these programs could represent a single future product opportunity for GSK utilizing one or both of our technology platforms.

LYL797: ROR1 + Gen-R & Epi-R

We are applying our Gen-R and Epi-R technology platforms to our lead CAR program, LYL797, which is expected to be an intravenous (IV) administered CAR T cell product candidate targeting ROR1 with a single-chain variable fragment derived from rabbit anti-R12 antibody that recognizes and binds to ROR1 and a proprietary optimized epidermal growth factor receptor (EGFRopt) safety switch. We are initially developing LYL797 for the treatment of ROR1+ non-small cell lung cancer (NSCLC) and triple negative breast cancer (TNBC). ROR1 expression is associated with poor prognosis. Significant subsets of patients with common cancers express ROR1, including TNBC (~60%) and NSCLC (~40%), two of the highest ROR1 expressing indications. If successful, we anticipate expanding into other ROR1+ cancers with a lower incidence of ROR1 expression, including potentially hormone receptor positive (HR+) breast cancer, ovarian and other solid tumors. We expect to submit an IND for LYL797 in the first quarter of 2022.

LYL845: TIL + Epi-R

We are applying our Epi-R technology to develop our product candidate, LYL845, which is expected to be an IV administered autologous TIL therapy in multiple solid tumors. TILs have previously shown clinical benefit in patients with melanoma as well as other solid tumors with high mutation burdens including advanced cervical, lung, breast and gastrointestinal cancers. TILs target a variety of tumor antigens, but it is thought that the clinical efficacy of TILs is largely driven by specific recognition of mutated tumor neoantigens. Further, broad TIL efficacy has been limited by poor enrichment of tumor-reactive T cells, poor quality and growth potential of expanded T cells and failure to maintain polyclonality of TILs during production. We have designed LYL845 to incorporate our Epi-R technology to result in enhanced T cell potency, antitumor activity and polyclonality of TILs. If successful, we expect to expand development broadly to potentially include melanoma, cervical, head and neck, pancreatic, breast, colorectal and NSCLC. We expect to submit an IND for LYL845 in the second half of 2022.

NY-ESO-1

Our collaborator, GSK, is developing a New York esophageal squamous cell carcinoma 1 (NY-ESO-1) TCR T cell product candidate, NY-ESO-1^{c259}, currently in pivotal development. We are collaborating with them to potentially enhance this clinical-stage product candidate with Gen-R and Epi-R. Preclinical efforts and IND-enabling studies are underway. We anticipate GSK will conduct initial clinical trials with the enhanced product candidate in synovial sarcoma and multiple other solid tumor indications. We anticipate an IND submission in the first half of 2022.

Our Manufacturing Capabilities

We believe it is critically important to own, control and continuously monitor all aspects of the cell therapy manufacturing process in order to mitigate risks the field has seen, including challenges in managing production, supply chain, patient specimen chain of custody and quality control. We made a strategic decision to invest in building our own manufacturing center to control our supply chain, maximize efficiencies in cell product production time, cost and quality, and have the ability to rapidly incorporate disruptive advancements and new innovations. Controlling manufacturing also enables us to protect proprietary aspects of our Gen-R and Epi-R technology platforms. We view our manufacturing team and capabilities as a significant competitive advantage.

Our LyFE manufacturing center in Bothell, Washington is approximately 73,000 square feet and comprises laboratories, offices and manufacturing suites. LyFE has a flexible and modular design

allowing us to produce plasmid, viral vector and T cell product to control and de-risk the sequence and timing of production of the major components of our supply chain related to our product candidates. At full staffing and capacity, we expect to be able to manufacture approximately 500 infusions per year depending on product candidate mix. We believe this capacity is sufficient to support our pipeline programs through pivotal trials and, if approved, early commercialization. We anticipate the facility to be current Good Manufacturing Practices (cGMPs) qualified and capable of cGMP manufacturing by the end of 2021.

Our Team

The scientific and leadership team we have assembled comprise some of the foremost leaders in the fields of oncology and ACT. These thought leaders have each interrogated and elucidated the mechanisms of T cell biology and its interactions with cancer for decades and have authored over 1,000 publications focused on the interaction between the immune system and cancer. Our management team is comprised of experienced executives who come from academia and industry-leading cell and gene therapy companies including Atara, Juno Therapeutics and Sangamo; oncology therapeutic development companies including Amgen, AstraZeneca, Genentech, Incyte and Seagen; and cancer diagnostic companies including Genomic Health, GRAIL and Illumina. The core members of our scientific and leadership team include:

- ***Dr. Rick Klausner.*** We were founded in 2018 by Dr. Rick Klausner, former Director of the National Cancer Institute (NCI), co-founder of Juno and GRAIL and whose lab in the 1980s isolated the critical components of the TCR that enabled the creation of CAR T cells. Dr. Klausner is our Executive Chairman. He is well known for his work in cell and molecular biology, immunology and human genetics, and has been the author of more than 300 scientific articles and several books, in addition to receiving numerous awards, honorary degrees and other honors. He oversaw the writing of The National Science Education Standards, the first such standards for U.S. Science Education, and served as Liaison to the White House Office of Science & Technology Policy. He is a member of the National Academy of Sciences, the Institute of Medicine and the American Academy of Arts and Sciences.
- ***Liz Homans.*** Our CEO, Ms. Homans, brings over 30 years of strategy, product development and commercialization experience. She spent over a decade at Genentech in multiple divisions including global product development, regulatory operations and U.S. sales and marketing. She spent most of her Genentech career leading large complex oncology development programs from Phase 2 through completion of pivotal trials submission, approval and launch. She is also an experienced commercial leader having led the U.S. Xolair franchise through two years of double-digit growth. She completed her tenure at Genentech by managing the U.S. HER2+ breast cancer franchise. Ms. Homans also led global regulatory operations for Roche. Prior to Genentech she spent four years at Jazz Pharmaceuticals where she built the project leadership and portfolio strategy team and she also has nearly a decade of business strategy consulting experience.
- ***Dr. Nick Restifo.*** Prior to joining Lyell as our Executive Vice President of Research, Dr. Restifo spent 31 years at the NCI with a sole focus on the development of immunotherapeutic treatments for patients with cancer. His contributions to the field include the molecular definition of the qualities of highly effective antitumor T cells identification of the gene expression within tumors that is required for successful immunotherapy and understanding the impact of host factors in cancer immunotherapy. His basic and clinical findings of how immune cells can destroy tumors have become mainstays of cell-based immunotherapies being used worldwide, documented in more than 340 publications and numerous book chapters on cancer immunotherapy.

- ***Dr. Stan Riddell.*** Dr. Riddell is a Founder of Lyell and Head of our R&D Executive Committee. He is also a Professor, Program in Immunology and the Immunotherapy Integrated Research Center at the Fred Hutchinson Cancer Research, Professor of Medicine at the University of Washington, Distinguished Affiliate Professor at the Technical University of Munich and a cofounder of Juno Therapeutics. Dr. Riddell has designed multiple clinical trials of adoptive T cell therapy using unmodified and genetically modified T cells including the first trial of CD19 CAR modified T cells of defined subset composition, which formed the foundation for Liso-Cel, which is FDA approved for treatment of diffuse large B cell lymphoma. He has more than 225 publications and his research has contributed to understanding the role of human T cell subsets in protective immunity to pathogens and tumors.
- ***Dr. Crystal Mackall.*** Dr. Mackall, a Founder of Lyell, is the Ernest and Amelia Gallo Family Professor of Pediatrics and Medicine at Stanford University. She serves as Founding Director of the Stanford Center for Cancer Cell Therapy, Associate Director of Stanford Cancer Institute, Leader of the Cancer Immunology and Immunotherapy Program and Director of the Parker Institute for Cancer Immunotherapy at Stanford. During a 27-year tenure culminating as Chief of the Pediatric Oncology Branch, NCI, and now at Stanford, she has led an internationally recognized translational research program focused on immune-oncology.

Our Strategy

Our goal is to utilize our proprietary technologies to develop curative ACT for patients with solid tumors. Key components of our business strategy to achieve this goal include:

- Leverage our two proprietary, cell reprogramming platform technologies to fundamentally improve T cell efficacy and eradicate solid tumors.
- Rapidly advance and continue to pursue our deep multi-modality pipeline of product candidates and leading edge research.
- Continually innovate to develop and advance disruptive, next generation platform technologies for cell-based therapy.
- Establish proprietary, state of the art manufacturing infrastructure and capabilities to control all aspects of cell product preparations.
- Implement digital technologies and cloud solutions to accelerate and enhance our science and operations.
- Aggressively generate, secure and defend intellectual property on our differentiated technology platforms and product candidates.

Risks Related to Our Business

Investing in our common stock involves substantial risk. The risks described under the section titled “Risk Factors” immediately following this prospectus summary may cause us to not realize the full benefits of our objectives or may cause us to be unable to successfully execute all or part of our strategy. Some of the more significant challenges include the following:

- We are a preclinical biopharmaceutical company and have incurred substantial losses since our inception and anticipate that we will continue to incur substantial and increasing net losses for the foreseeable future.

- We operate in a rapidly evolving field and have a limited operating history, which may make it difficult to evaluate the success of our business to date and to assess our future viability.
- Even if this offering is successful, we will require substantial additional capital to achieve our goals, and a failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.
- We are early in our research and development efforts and all of our product candidates are still in preclinical development. If we are unable to successfully develop and commercialize product candidates or experience significant delays in doing so, our business may be harmed.
- Our product candidates and technology platforms are based on novel technologies that are unproven and may not result in approvable or marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval and we may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.
- Our cellular therapy product candidates represent new therapeutic approaches that could result in heightened regulatory scrutiny, delays in clinical development or delays in or our inability to achieve regulatory approval, commercialization or payor coverage of our product candidates.
- The results of research, preclinical studies or earlier clinical trials are not necessarily predictive of future results. Any product candidate we advance into clinical trials may not have favorable results in later clinical trials or receive regulatory approval.
- Clinical development involves a lengthy and expensive process with an uncertain outcome.
- We intend to manufacture at least a portion of our product candidates ourselves. Delays in commissioning and receiving regulatory approvals for our manufacturing facility could delay our development plans and thereby limit our ability to generate product revenues.
- The manufacturing of cellular therapies is very complex. We are subject to a multitude of manufacturing risks, any of which could substantially increase our costs, delay our programs or limit supply of our product candidates.
- We have entered into a collaboration with GSK and may form or seek collaborations or strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.
- We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.
- Our business could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of potential clinical trial sites or other business operations.
- If we are unable to obtain and maintain sufficient intellectual property protection for our product candidates, or if the scope of the intellectual property protection is not sufficiently broad, our ability to commercialize our product candidates successfully and to compete effectively may be adversely affected.

Corporate Information

We were founded in June 2018 as a Delaware corporation. Our principal executive offices are located at 400 East Jamie Court, Suite 301, South San Francisco, California 94080 and our telephone

number is (650) 695-0677. Our website address is www.lyell.com. Information contained in, or accessible through, our website is not a part of this prospectus and the inclusion of our website address in this prospectus is only an inactive textual reference.

Trademarks and Service Marks

We use the Lyell logo and other marks as trademarks in the United States and other countries. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Implications of Being an Emerging Growth Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). We may take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm under Section 404 of the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions for up to five years or until we are no longer an "emerging growth company," whichever is earlier. We will cease to be an emerging growth company prior to the end of such five-year period if certain earlier events occur, including if we become a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the Exchange Act), our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period. In particular, in this prospectus, we have provided only two years of audited consolidated financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of accounting standards that have different effective dates for public and private companies until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, we will not be subject to the same requirements to adopt new or revised accounting standards as other public companies that are not "emerging growth companies."

The Offering	
Common stock offered by us	25,000,000 shares.
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase up to an additional 3,750,000 shares of our common stock at the initial public offering price, less underwriting discounts and commissions.
Common stock to be outstanding immediately after this offering	242,829,956 shares (or 246,579,956 shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $391.4 million (or approximately $450.7 million if the underwriters' option to purchase additional shares of our common stock from us is exercised in full), after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund through completion of Phase 1 clinical trials of LYL797 and LYL845, other research and development efforts to further advance our Gen-R, Epi-R and cell rejuvenation technology platforms, expansion of our manufacturing capacity and general corporate purposes, including working capital, operating expenses and other capital expenditures. See the section titled "Use of Proceeds" for additional information.
Risk factors	See the section titled "Risk Factors" and other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Directed share program	At our request, the underwriters have reserved up to 1,250,000 shares of our common stock offered by this prospectus, excluding the additional shares that the underwriters have a 30-day option to purchase, for sale at the initial public offering price through a directed share program to certain of our directors and officers and certain other parties related to us. Shares purchased by our directors and officers will be subject to the 180-day lock-up restriction described in the section titled "Underwriting." If these persons purchase the reserved shares, it

	will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. See the section titled "Underwriting—Directed Share Program" for additional information.
Proposed Nasdaq Global Market trading symbol	"LYEL"

The number of shares of our common stock to be outstanding after this offering is based on 217,829,956 shares of common stock outstanding as of March 31, 2021 (including (i) 194,474,431 shares issuable upon the conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 and (ii) 5,525,002 shares of unvested restricted common stock subject to repurchase as of such date) and excludes:

- 40,556,956 shares of our common stock issuable upon the exercise of outstanding stock options as of March 31, 2021, with a weighted-average exercise price of $3.92 per share;
- 1,930,000 shares of our common stock issuable upon the exercise of outstanding stock options granted subsequent to March 31, 2021, with a weighted-average exercise price of $13.20 per share;
- 24,700,000 shares of our common stock reserved for future issuance under our 2021 Equity Incentive Plan (2021 Plan), which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for issuance under our 2021 Plan; and
- 2,470,000 shares of our common stock reserved for issuance under our 2021 Employee Stock Purchase Plan (ESPP), which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for future issuance under our ESPP.

Unless otherwise indicated, this prospectus assumes or gives effect to:

- the automatic conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 into an aggregate of 194,474,431 shares of our common stock upon the closing of this offering;
- no exercise of the outstanding options described above;
- no exercise by the underwriters of their option to purchase 3,750,000 additional shares of common stock from us in this offering;
- an assumed initial public offering price of $17.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus; and
- the filing and effectiveness of our amended and restated certificate of incorporation to be in effect immediately after the closing of this offering and the adoption of our amended and restated bylaws upon the closing of this offering.

Summary Consolidated Financial Data

The following tables set forth our summary consolidated financial data for the periods and as of the dates indicated. The following summary consolidated statements of operations and comprehensive loss data for the years ended December 31, 2019 and 2020, except for pro forma amounts, have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations and comprehensive loss data for the three months ended March 31, 2020 and 2021, except for pro forma amounts, and the summary consolidated balance sheet data as of March 31, 2021, except for pro forma amounts, have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. Our unaudited condensed consolidated financial statements were prepared on a basis consistent with our audited consolidated financial statements included elsewhere in this prospectus and include, in our opinion, all adjustments of a normal and recurring nature that are necessary for the fair statement of the financial information set forth in those statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected for any period in the future and our interim results are not necessarily indicative of results that may be expected for the full year. You should read the following summary consolidated financial data together with the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Selected Consolidated Financial Data" and our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus. The summary consolidated financial data included in this section are not intended to replace the audited consolidated financial statements and unaudited condensed consolidated financial statements and are qualified in their entirety by our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except per share data)			
Consolidated Statements of Operations and Comprehensive Loss Data				
Revenue	$ 657	$ 7,756	$ 1,256	$ 2,445
Operating expenses (income):				
Research and development	63,595	182,243	25,500	41,529
General and administrative	39,151	46,881	8,880	16,831
Other operating income, net	—	(9,431)	(120)	(545)
Total operating expenses	102,746	219,693	34,260	57,815
Loss from operations	(102,089)	(211,937)	(33,004)	(55,370)
Interest income, net	8,121	5,939	2,341	354
Other (expense) income, net	(35,409)	1,526	1,423	(27)
Net loss	(129,377)	(204,472)	(29,240)	(55,043)
Other comprehensive gain (loss):				
Net unrealized gain (loss) on marketable securities	454	(198)	632	(93)
Net comprehensive loss	$(128,923)	$(204,670)	$(28,608)	$(55,136)
Net loss attributed to common stockholders:				
Net loss	$(129,377)	$(204,472)	$(29,240)	$(55,043)
Deemed dividends upon issuance or repurchase of convertible preferred stock	(1,144)	(3,582)	(3,582)	—
Net loss attributed to common stockholders	$(130,521)	$(208,054)	$(32,822)	$(55,043)

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except per share data)			
Net loss per common share, basic and diluted(1)	$(24.04)	$ (15.69)	$ (2.82)	$ (3.19)
Weighted-average shares used to compute net loss per common share, basic and diluted(1)	5,429	13,258	11,656	17,272
Pro forma net loss per common share, basic and diluted (unaudited)(2)		$ (1.04)		$ (0.26)
Weighted-average shares used to compute pro forma net loss per common share, basic and diluted (unaudited)(2)		200,327		211,746

(1) See Note 14 to our audited consolidated financial statements and Note 11 to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for a description of how we compute basic and diluted net loss per common share and the number of shares used in computing these amounts.

(2) See the subsection titled "Management's Discussion and Analysis of Financial Conditions and Results of Operations—Unaudited Pro Forma Information" for an explanation of the calculations of our basic and diluted pro forma net loss per common share and the weighted-average number of shares outstanding used in the computation of the per share amount.

	As of March 31, 2021		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(in thousands)	
Consolidated Balance Sheet Data			
Cash, cash equivalents and marketable securities	$ 640,137	$ 640,137	$ 1,031,574
Working capital(4)	552,923	552,923	944,748
Total assets	877,189	877,189	1,268,195
Total liabilities	200,269	200,269	199,871
Convertible preferred stock	1,010,968	—	—
Accumulated deficit	(389,186)	(389,186)	(389,186)
Total stockholders' (deficit) equity	(334,048)	676,920	1,068,324

(1) The pro forma column in the consolidated balance sheet data gives effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 194,474,431 shares of common stock, which will occur upon the closing of this offering and the related reclassification of the carrying value of our convertible preferred stock to permanent equity upon the closing of this offering and (ii) the filing and effectiveness of our amended and restated certificate of incorporation to be in effect immediately after the closing of this offering.

(2) The pro forma as adjusted column in the consolidated balance sheet data gives effect to (i) the items described in footnote (1) above and (ii) the issuance and sale of 25,000,000 shares of our common stock in this offering at the assumed initial public offering price of $17.00 per share after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(3) The pro forma as adjusted information is illustrative only and will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $17.00 per share would increase or decrease, as applicable, each of our cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' deficit by $23.3 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares of common stock offered by us would increase or decrease, as applicable, each of our cash, cash equivalents and marketable securities, working capital, total assets, and total stockholders' deficit by $15.8 million and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(4) Working capital is defined as current assets less current liabilities. See our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISKS FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Relating to Our Financial Condition, Limited Operating History and Need for Additional Capital

We are a preclinical biopharmaceutical company and have incurred substantial losses since our inception and anticipate that we will continue to incur substantial and increasing net losses for the foreseeable future.

Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that a product candidate will fail to prove effective, gain regulatory approval or become commercially viable. We are a preclinical biopharmaceutical company, and we do not have any products approved by regulatory authorities and have incurred significant research, development and other expenses related to our ongoing operations and expect to continue to incur such expenses. Since our inception, we have not generated any revenue from product sales and have incurred significant net losses. Our net losses were $129.4 million and $204.5 million for the years ended December 31, 2019 and 2020, respectively, and $29.2 million and $55.0 million for the three months ended March 31, 2020 and 2021, respectively. Substantially all of our net losses since inception have resulted from our research and development programs and general and administrative costs associated with our operations. As of March 31, 2021, we had an accumulated deficit of $389.2 million.

We do not expect to generate revenue from product sales for the foreseeable future, if at all. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate these losses to increase as we continue to research, develop and seek regulatory approvals for our product candidates, expand our manufacturing capabilities, in-license or acquire additional technologies and potentially begin to commercialize product candidates that may achieve regulatory approval. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues. Moreover, our net losses may fluctuate significantly from quarter to quarter and year to year, such that a period to period comparison of our results of operations may not be a good indication of our future performance. If any of our product candidates fails in research and development or clinical trials or does not gain regulatory approval, or, if approved, fails to achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods.

We anticipate that our expenses and operating losses will increase substantially over the foreseeable future. The expected increase in expenses will be driven in large part by our ongoing activities, if and as we:

- continue preclinical development of our current and future product candidates and initiate additional preclinical studies;
- commence clinical trials of our current and future product candidates;

- advance our Gen-R, Epi-R and cell rejuvenation technology platforms as well as other research and development efforts;
- attract, hire and retain qualified personnel;
- seek regulatory approval of our current and future product candidates;
- expand our manufacturing and process development capabilities;
- expand our operational, financial and management systems;
- acquire and license technology platforms;
- continue to develop, protect and defend our intellectual property portfolio; and
- incur additional legal, accounting or other expenses in operating our business, including the additional costs associated with operating as a public company.

We operate in a rapidly evolving field and have a limited operating history, which may make it difficult to evaluate the success of our business to date and to assess our future viability.

We operate in a rapidly evolving field and, having commenced operations in June 2018, have a limited operating history, which makes it difficult to evaluate our business and prospects. Our primary activities to date have included developing T cell therapies, performing research and development, acquiring technology, entering into strategic collaboration and license agreements, enabling manufacturing activities in support of our product candidate development efforts, organizing and staffing the company, business planning, establishing our intellectual property portfolio, raising capital and providing general and administrative support for these activities. Any predictions about our future success, performance or viability, may not be as accurate as they could be if we had a longer operating history or approved products on the market.

In addition, as a young business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition. We expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, any of our quarterly or annual periods' results are not indicative of future operating performance.

We currently have no products approved for sale and have never generated revenue from product sales. We may never generate revenue from product sales or achieve profitability.

To date, we have not generated any revenues from product sales. Our ability to generate revenues from product sales and achieve profitability will depend on our ability to successfully develop and subsequently obtain regulatory approval for and commercialize, our product candidates. Our ability to generate revenues and achieve profitability also depends on a number of additional factors, including our ability to:

- successfully complete our research activities to identify the technologies and product candidates to further investigate in clinical trials;
- successfully complete development activities, including the necessary clinical trials;
- complete and submit regulatory submissions to the U.S. Food and Drug Administration (FDA) the European Medicines Agency (EMA) or other agencies and obtain regulatory approval for indications for which there is a commercial market;

- obtain coverage and adequate reimbursement from third parties, including government and private payors;
- set commercially viable prices for our products, if any;
- develop manufacturing and distribution processes for our product candidates;
- develop commercial quantities of our products at acceptable cost levels;
- establish and maintain adequate supply of our product candidates, including the starting materials and reagents needed;
- complete our own manufacturing facility such that we can maintain the supply of our product candidates in a manner that is compliant with global legal requirements or to the extent necessary, establish and maintain manufacturing relationships with reliable third parties;
- achieve market acceptance of our products, if any;
- attract, hire and retain qualified personnel;
- protect our rights in our intellectual property portfolio;
- develop a commercial organization capable of sales, marketing and distribution for any products we intend to sell ourselves in the markets in which we choose to commercialize on our own; and
- find suitable distribution partners to help us market, sell and distribute our approved products in other markets.

Our revenues for any product for which regulatory approval is obtained will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval, the accepted price for the product, the ability to get reimbursement at any price and whether we own the commercial rights for that territory. In addition, we anticipate incurring significant costs associated with commercializing any approved product candidate. As a result, even if we generate revenue from product sales, we may not become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and may be forced to reduce our operations.

Even if this offering is successful, we will require substantial additional capital to achieve our goals, and a failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

We expect to expend substantial resources for the foreseeable future to advance and expand our research pipeline, conduct preclinical studies and proceed to clinical development and manufacturing of our product candidates. We also expect to continue to expend resources for the development of our technology platforms. These expenditures will include costs associated with research and development, potentially acquiring or licensing new technologies, conducting preclinical studies and clinical trials and potentially obtaining regulatory approvals and manufacturing products, as well as marketing and selling products approved for sale, if any. We will also need to make significant expenditures to develop a commercial organization capable of sales, marketing and distribution for any products, if any, that we intend to sell ourselves in the markets in which we choose to commercialize. In addition, we may be required to make substantial payments related to our success payment agreements and other contingent consideration payments under our license and collaboration agreements. Because the design and outcome of our planned and anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the discovery, development and commercialization of our potential product candidates and other unanticipated costs may arise.

We do not have any committed external source of funds. Additional funds may not be available when we need them on terms that are acceptable to us, or at all, and our ability to raise additional capital may be adversely impacted by potential worsening global economic conditions and the recent disruptions to and volatility in the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic. If adequate funds are not available to us on a timely basis, we may be required to delay, limit, reduce or terminate preclinical studies, clinical trials or other development activities for our product candidates or delay, limit, reduce or terminate our establishment of sales, marketing and distribution capabilities or other activities that may be necessary to commercialize our product candidates.

Our success payment obligations in our success payment agreements may result in dilution to our stockholders or may be a drain on our cash resources to satisfy the payment obligations.

We agreed to make success payments payable in cash or publicly-tradeable shares of our common stock at our discretion pursuant to our success payment agreements with Fred Hutchinson Cancer Research Center (Fred Hutch) and The Board of Trustees of the Leland Stanford Junior University (Stanford). These success payments will be based on increases in the per share fair market value of our common stock during the success payment period, and will become due and payable upon the occurrence of certain future events, including an initial public offering of our securities, a change of control or conclusion of the agreed-on success payment period. The total amount of success payments that we may become obligated to make is currently $400.0 million and may increase in the future due to amendments of our existing success payment agreements or additional success payment agreements that we may enter into in the future. For information related to our success payment obligations, see the subsection titled under “Business—Collaboration, License and Success Payment Agreements.”

In order to satisfy our obligations to make these success payments, if and when they are triggered, we may issue equity or convertible debt securities that may cause dilution to our stockholders, or we may use our existing cash to satisfy the success payment obligation in cash, which may adversely affect our financial position. In addition, these success payments may impede our ability to raise money in future public offerings of debt or equity securities or to obtain a third-party line of credit.

The success payment agreements may cause operating results to fluctuate significantly from quarter to quarter and year to year, which may reduce the usefulness of our consolidated financial statements.

Our success payment obligations are recorded as liabilities on our consolidated balance sheets. Under U.S. generally accepted accounting principles (GAAP), we are required to estimate the fair value of these liabilities as of each quarter end and changes in the estimated fair value are accreted to research and development expense over the service period of the collaboration agreement. Factors that may lead to increases or decreases in the estimated fair value of this liability include, among others, changes in the value of the common stock, changes in volatility and changes in the risk-free rate. As a result, our operating results and financial condition as reported by GAAP may fluctuate significantly from quarter to quarter and from year to year and may reduce the usefulness of our GAAP consolidated financial statements. As of December 31, 2020 and March 31, 2021, the estimated fair values of the liabilities associated with the Fred Hutch success payments were $8.0 million and $18.2 million, respectively, and as of December 31, 2020 and March 31, 2021, the estimated fair values of the liabilities associated with the Stanford success payments were $8.9 million and $19.6 million, respectively.

Risks Related to Our Business and Industry

We are early in our research and development efforts and all of our product candidates are still in preclinical development. If we are unable to successfully develop and commercialize product candidates or experience significant delays in doing so, our business may be harmed.

We are early in our research and development efforts, and all of our product candidates are still in preclinical development. We have not yet demonstrated our ability to successfully commence or complete any clinical trials (including Phase 3 or other pivotal clinical trials), obtain regulatory approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. We have invested substantial resources in developing our technology platforms and our product candidates, conducting preclinical studies, building our manufacturing facilities and capabilities and preparing for potential clinical trials, each of which will be required prior to any regulatory approval and commercialization. Our ability to generate revenue from product sales, which we do not expect will occur for several years, if ever, will depend heavily on the successful research and development and eventual commercialization of one or more product candidates. The success of our efforts to identify and develop product candidates will depend on many factors, including the following:

- timely and successful completion of our preclinical studies and research activities to identify and develop product candidates to investigate in clinical trials;
- Submission to proceed with clinical trials under INDs from the FDA, or comparable applications to foreign regulatory authorities that allow the commencement of our planned or future clinical trials for our product candidates;
- completion of preclinical studies and successful enrollment and completion of clinical trials in compliance with Good Clinical Practice (GCP) requirements with positive results;
- the prevalence and severity of adverse events experienced with any of our product candidates;
- successfully developing or making arrangements with third parties for, manufacturing and distribution processes for our product candidates and for commercial manufacturing and distribution for any of our product candidates that receive regulatory approval;
- receipt of timely regulatory approvals from applicable authorities for our product candidates for their intended uses;
- protecting our rights in our intellectual property portfolio, including by obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- establishing or making arrangements with third-party manufacturers or completing our own manufacturing facility for clinical and commercial manufacturing purposes;
- establishing capabilities and infrastructure to obtain the tumor tissues needed to develop and, if successful, commercialize approved products from our TIL program;
- manufacturing our product candidates at an acceptable cost;
- launching commercial sales of our products, if approved by applicable regulatory authorities, whether alone or in collaboration with others;
- acceptance of our products, if approved by applicable regulatory authorities, by patients and the medical community;
- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our products, if approved by applicable regulatory authorities;
- effectively competing with other marketed therapies;
- maintaining compliance with regulatory requirements, including the cGMP requirements;

- maintaining a continued acceptable benefit/risk profile of the products following approval; and
- maintaining and growing an organization of scientists and functional experts who can develop and commercialize our products and technology.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully develop and commercialize our product candidates, which could harm our business. If we do not receive marketing approvals for any product candidate we develop, we may not be able to continue our operations.

Our product candidates and technology platforms are based on novel technologies that are unproven and may not result in approvable or marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval and we may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.

We are seeking to identify and develop a broad pipeline of product candidates using our proprietary technology platforms. We have not commenced clinical trials for any product candidates developed with these platforms. The scientific research that forms the basis of our efforts to develop product candidates with our technology platforms is still ongoing. We are not aware of any FDA approved therapeutics utilizing similar technology. Further, the scientific evidence to support the feasibility of developing therapeutic treatments based on our technology platforms are both preliminary and limited. Additionally, we have not tested any of the product candidates in humans, and our current data is limited to animal models and preclinical cell lines, the results of which may not translate into humans or may not accurately predict the safety and efficacy of our product candidates in humans. As a result, we are exposed to a number of unforeseen risks and it is difficult to predict the types of challenges and risks that we may encounter during development of our product candidates.

Given the novelty of our technology platforms, we intend to work closely with the FDA and comparable foreign regulatory authorities to perform the requisite scientific analyses and evaluation of our methods to obtain regulatory approval for our product candidates; however, due to a lack of relevant experiences, the regulatory pathway with the FDA and comparable regulatory authorities may be more complex and time-consuming relative to other more well-known therapeutics. Even if we obtain human data to support our product candidates, the FDA or comparable foreign regulatory agencies may lack experience in evaluating the safety and efficacy of our product candidates developed using our technology platforms, which could result in a longer than expected regulatory review process, increase our expected development costs and delay or prevent commercialization of our product candidates. The validation process takes time and resources, may require independent third-party analyses and may not be accepted or approved by the FDA and comparable foreign regulatory authorities. There can be no assurance as to the length of clinical development, that number of patients that the FDA may require to be enrolled in clinical trials to establish the safety, purity and potency of our product candidates, or that the data generated in these clinical trials will be acceptable to the FDA to support marketing approvals. We cannot be certain that our approach will lead to the development of approvable or marketable products, alone or in combination with other therapies.

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific, and medical personnel. We are highly dependent on our management, manufacturing, scientific and medical

personnel. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business. We conduct substantially all of our operations at our facilities in the San Francisco and Seattle metropolitan areas. These regions are headquarters to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel in these markets is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all. To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options or other equity incentives that vest over time may be significantly affected by factors beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain “key man” insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain, and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel.

Any future litigation or adversarial proceedings against us could be costly and time-consuming to defend.

We may in the future become subject to legal proceedings and claims that arise in the ordinary course of business, such as claims brought by third parties in connection with commercial disputes or employment claims made by our current or former employees. Litigation or adversarial proceedings might result in substantial costs and may divert management’s attention and resources, which might seriously harm our business, reputation, overall financial condition and operating results. Insurance might not cover such claims, might not provide sufficient payments to cover all the costs to resolve one or more such claims and might not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, thereby harming our business.

If we cannot maintain our company culture as we grow, our success and our business may be harmed.

We believe our culture has been a key contributor to our success to date. Any failure to preserve our culture could negatively affect our ability to retain and recruit personnel, which is critical to our growth, and to effectively focus on and pursue our objectives. As we grow and are required to implement more complex organizational management structures, we may find it increasingly difficult to maintain the beneficial aspects of our culture. If we fail to maintain our company culture, our business may be adversely affected.

We currently have no marketing, sales, or distribution infrastructure and we intend to either establish a sales and marketing infrastructure or outsource this function to a third party. Either of these commercialization strategies carries substantial risks to us.

We currently have no marketing, sales and distribution capabilities because all of our product candidates are still in preclinical development. If any of our product candidates complete clinical development and are approved, we intend to either establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product candidates in a legally compliant manner, or to outsource this function to a third party. There are risks involved if we decide to establish our own sales and marketing capabilities or enter into arrangements with third

parties to perform these services. To the extent that we enter into collaboration agreements with respect to marketing, sales or distribution, our product revenue may be lower than if we directly marketed or sold any approved products. Such collaborative arrangements with partners may place the commercialization of our products outside of our control and would make us subject to a number of risks including that we may not be able to control the amount or timing of resources that our collaborative partner devotes to our products or that our collaborator's willingness or ability to complete its obligations, and our obligations under our arrangements may be adversely affected by business combinations or significant changes in our collaborator's business strategy.

If we are unable to enter into these arrangements on acceptable terms or at all, we may not be able to successfully commercialize any approved products. If we are not successful in commercializing any approved products, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses, which would have a material adverse effect on our business, financial condition and results of operations.

Our business could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of potential clinical trial sites or other business operations.

Our business could be adversely affected by health epidemics, including the COVID-19 pandemic, in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of potential clinical trial sites or other business operations. It is not possible at this time to estimate the overall impact that the COVID-19 pandemic could have on our business. For example, as a result of the COVID-19 pandemic, the States of California and Washington, where our operations are located, have issued orders limiting activities to varying levels, including at the most restrictive level, an order for all residents to remain at home, except for the performance of essential activities, which include biomedical research. We have implemented policies that enable some of our employees to work in the research laboratories and for other employees to work remotely, and such policies may continue for an indefinite period. We have also implemented various safety protocols for all on-site personnel, including the requirement to wear masks and maintain social distance. We continue to evaluate the impact COVID-19 may have on our ability to effectively conduct our business operations as planned, and there can be no assurance that we will be able to avoid part or all of any impact from the spread of COVID-19 or its consequences.

In addition, our preclinical study and future clinical trial plans may be affected by the COVID-19 outbreak. Site initiation and patient enrollment may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic, which may delay enrollment in our future global clinical trials, and some patients may not be able to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services, and we may be unable to obtain blood samples for testing.

The ultimate impact of the COVID-19 outbreak or a similar health epidemic is highly uncertain and subject to change. Several measures are currently being implemented by the United States and other governments to address the current COVID-19 pandemic and its economic impacts. At this time, it is impossible to predict the success of these measures and whether or not they will have unforeseen negative consequences for our business. We do not yet know the full extent of potential delays or impacts on our business, our planned preclinical studies or clinical trials, healthcare systems or the global economy as a whole. Nor do we know when and how such regulations may be eased. The foregoing and other continued disruptions to our business as a result of COVID-19 could result in an adverse effect on our business, results of operations, financial condition and cash flows. Furthermore, the COVID-19 pandemic could heighten the risks in certain of the other risk factors described herein.

Risks Related to Manufacturing

We intend to manufacture at least a portion of our product candidates ourselves. Delays in commissioning and receiving regulatory approvals for our manufacturing facility could delay our development plans and thereby limit our ability to generate product revenues.

We have built our own manufacturing facility in Bothell, Washington. The facility is expected to support preclinical and development product candidates, and product-specific qualification to support clinical production is needed. If we are not able to qualify a specific product candidate or the appropriate regulatory approvals for the new facility are delayed, we may be unable to manufacture sufficient quantities of our product candidates, if at all, which would limit our development activities and our opportunities for growth.

In addition, our manufacturing facility will be subject to ongoing, periodic inspection by the FDA, EMA, or other applicable regulatory agencies to ensure compliance with cGMPs and current Good Tissue Practices (cGTPs). Our failure to follow and document our adherence to these regulations or other regulatory requirements may lead to significant delays in the availability of products for clinical or, in the future, commercial use. This may result in the termination of or a hold on a clinical trial, or may delay or prevent filing or approval of commercial marketing applications for our product candidates. We also may encounter problems with the following:

- achieving adequate or clinical-grade materials that meet regulatory agency standards or specifications with consistent and acceptable production yield and costs;
- shortages of qualified personnel, raw materials or key contractors; and
- ongoing compliance with cGMP regulations and other requirements of the FDA, EMA, or other comparable regulatory agencies.

Failure to comply with applicable regulations could also result in sanctions being imposed on us, including fines, injunctions, civil penalties, a requirement to suspend or put on hold one or more of our clinical trials, failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates, operating restrictions and criminal prosecutions, any of which could harm our business.

Developing advanced manufacturing techniques and process controls is required to fully utilize our facility. Without further investment, advances in manufacturing techniques may render our facility and equipment inadequate or obsolete. We may also require further investment to build additional manufacturing facilities or expand the capacity of our existing ones.

The manufacturing of cellular therapies is very complex. We are subject to a multitude of manufacturing risks, any of which could substantially increase our costs, delay our programs or limit supply of our product candidates.

Developing commercially viable manufacturing processes for cellular therapies is a difficult and uncertain task and requires significant expertise and capital investment. We are still in the early stages of developing and implementing manufacturing processes for our product candidates. In particular, for autologous cell therapies the starting material is the patient's own cells which inherently adds complexity and variability to the manufacturing process, and we have not yet manufactured a cellular therapy for a patient with cancer. In addition, we have only recently completed construction of our Bothell, Washington manufacturing facility and have not commenced any clinical scale operations. Our ability to consistently and reliably manufacture our cellular therapy product candidates is essential to our success, and there are risks associated with scaling to the level required for advanced clinical trials or commercialization, including cost overruns, potential problems with process scale-up,

process reproducibility, stability issues, consistency and timely availability of reagents or raw materials. Furthermore, our manufacturing processes may have significant dependencies on third parties, which will pose additional risks to our manufacturing capabilities. Additionally, we do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing and processing of our product candidates, and the actual cost to manufacture and process our product candidates could materially and adversely affect the commercial viability of our product candidates. As a result, we may never be able to develop a commercially viable product.

In addition to the factors mentioned above, the overall process of manufacturing cellular therapies is extremely susceptible to product loss due to low cell viability, contamination, equipment failure or improper installation or operation of equipment, or vendor or operator error. Even minor deviations from normal manufacturing and distribution processes for any of our product candidates could result in reduced production yields, impact to key product quality attributes and other supply disruptions. Product defects can also occur unexpectedly. These deviations and disruptions could delay our programs. If we are not able to capably manage this complexity and variability, our ability to timely and successfully provide our products candidates to patients could be delayed. In addition, the complexities of utilizing a patient's own cells as the starting material requires that we have suitable cells capable of yielding a viable cellular therapy product, which may not be possible for severely immune-compromised or heavily pre-treated patients.

The process of successfully manufacturing products for clinical testing and commercialization may be particularly challenging, even if such products otherwise prove to be safe and effective. The manufacture of these product candidates involves complex processes. Some of these processes require specialized equipment and highly skilled and trained personnel. The process of manufacturing these product candidates will be susceptible to additional risks, given the need to maintain aseptic conditions throughout the manufacturing process. Contamination with microbials, viruses or other pathogens in either the donor material or materials utilized in the manufacturing process or ingress of microbiological material at any point in the process may result in contaminated, unusable product or necessitate the closing of a manufacturing facility for an extended period of time to allow us to investigate and remedy the contamination. These types of contaminations could result in delays in the manufacture of products which could result in delays in the development of our product candidates. These contaminations could also increase the risk of adverse side effects.

Any adverse developments affecting manufacturing operations for our product candidates may result in lot failures, inventory shortages, shipment delays, product withdrawals or recalls or other interruptions in supply which could delay the development of our product candidates. If we are unable to obtain sufficient supply of our product candidates, whether due to production shortages or other supply interruptions resulting from the ongoing COVID-19 pandemic or otherwise, our clinical trials or regulatory approval may be delayed. We may also have to write off inventory, incur other charges and expenses for supply of product that fails to meet specifications, undertake costly remediation efforts, or seek more costly manufacturing alternatives. In addition, parts of the supply chain may have long lead times or may come from a small number of suppliers. If we are not able to appropriately manage our supply chain our ability to successfully produce our product candidates could be delayed or harmed. Inability to meet the demand for our product candidates could damage our reputation and the reputation of our products among physicians, healthcare payors, patients or the medical community that supports our product development efforts, including hospitals and outpatient clinics.

Furthermore, the manufacturing facilities in which our product candidates will be made could be adversely affected by earthquakes and other natural disasters, equipment failures, labor shortages, power failures, health epidemics and numerous other factors. If any of these events were to occur and impact our manufacturing facilities, our business would be materially and adversely affected.

If our sole clinical or commercial manufacturing facility or our contract manufacturing organization is damaged or destroyed or production at these facilities is otherwise interrupted, our business would be negatively affected.

If any manufacturing facility in our manufacturing network, or the equipment in these facilities, is either damaged or destroyed, we may not be able to quickly or inexpensively replace our manufacturing capacity, if we are able to replace it at all. In the event of a temporary or protracted loss of a facility or its equipment, we may not be able to transfer manufacturing to a third party in the time required to maintain supply. Even if we could transfer manufacturing to a third party, the shift would likely be expensive and time-consuming, particularly since the new facility would need to comply with the necessary regulatory requirements or may require regulatory approval before selling any products manufactured at that facility. Such an event could substantially delay our clinical trials or commercialization of our product candidates.

Currently, we maintain insurance coverage against damage to our property and to cover business interruption and research and development restoration expenses. However, our insurance coverage may not reimburse us, or may not be sufficient to reimburse us, for any expenses or losses we may suffer. We may be unable to meet our requirements for our product candidates if there were a catastrophic event or failure of our current manufacturing facility or processes.

If we are unable to develop or scale our own manufacturing, we may have to rely on third parties to manufacture our product candidates, which subjects us to risks and could delay or prevent our development and/or commercialization, if approved, of our product candidates.

If we are unable to develop or scale or own manufacturing capabilities for our product candidates, we will be reliant on third parties to manufacture our product candidates. We may be unable to identify manufacturers for our product candidates or the materials required to develop the cellular therapy on acceptable terms or at all because the number of potential manufacturers is limited. Engaging a third party manufacturer will require testing and regulatory interactions, and a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of FDA questions, if any. Our third-party manufacturers may be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.

Furthermore, the facilities used by manufacturers are subject to ongoing periodic unannounced inspections by the FDA and corresponding state agencies to ensure strict compliance with government regulations and corresponding foreign standards, and we do not have control over third-party manufacturers' compliance with cGMPs for the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, we will not be able to obtain and/or maintain regulatory approval for our product candidates manufactured in these facilities. In addition, we have no control over the ability of our third-party manufacturers to maintain adequate control, quality assurance and qualified personnel required to meet our clinical and commercial needs, if any. If the FDA or a comparable foreign regulatory authority does not approve the manufacture of our product candidates at these facilities or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. In addition, any failure to achieve and maintain compliance with these laws, regulations and standards could subject us to the risk that we may have to suspend the manufacturing of our product candidates or that any approvals we have obtained could be revoked, which would adversely affect our business and reputation.

We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our products. Also, our third-

party manufacturers could breach or terminate their agreement with us because of their own financial difficulties or business priorities, at a time that is costly or otherwise inconvenient for us. If we were unable to find adequate replacement or another acceptable solution in time, our clinical trials could be delayed or our commercial activities could be harmed.

Furthermore, our third-party manufacturers would also be subject to the same risks we face in developing our own manufacturing capabilities, as described above. Each of these risks could delay our clinical trials, the approval, if any, of our product candidates by the FDA or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenue.

Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Our product candidates require many specialty raw materials. As a result, we may be required to outsource aspects of our manufacturing supply chain. Many of the specialty raw materials may be manufactured by small companies with limited resources and experience to support a commercial product, and the suppliers may not be able to deliver raw materials to our specifications. In such case, identifying and engaging an alternative supplier or manufacturer could result in delay, and we may not be able to find other acceptable suppliers or manufacturers on acceptable terms, or at all. Switching suppliers or manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines. If we change suppliers or manufacturers for commercial production, applicable regulatory agencies may require us to conduct additional studies or trials. If key suppliers or manufacturers are lost, or if the supply of the materials is diminished or discontinued, we may not be able to develop, manufacture and market our product candidates in a timely and competitive manner, or at all. An inability to continue to source product from any of these suppliers, which could be due to a number of issues, including regulatory actions or requirements affecting the supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, unexpected demands or quality issues, could adversely affect our ability to satisfy demand for our product candidates, which could adversely and materially affect our product sales and operating results or our ability to conduct clinical trials, either of which could significantly harm our business.

In addition, those suppliers may not have the capacity to support commercial products manufactured by biopharmaceutical firms. The suppliers may be ill-equipped to support our needs, especially in non-routine circumstances like an FDA inspection, or medical crises such as widespread contamination. We may not be able to contract with these companies on acceptable terms or at all. Accordingly, we may experience delays in receiving key raw materials to support clinical or commercial manufacturing. In addition, some raw materials are currently available from a single supplier, or a small number of suppliers. We cannot be sure that these suppliers will remain in business, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose. These factors could cause the delay of studies or trials, regulatory submissions, required approvals or commercialization of product candidates that we develop, cause us to incur higher costs and prevent us from commercializing our product candidates successfully.

Risks Related to Our Dependence on Third-Parties

We intend to rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We do not currently have the ability to independently conduct any clinical trials. We intend to rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as

contract research organizations (CROs), to conduct GCP-compliant clinical trials on our product candidates properly and on time. Negotiating budgets and contracts with CROs and study sites may result in delays to our development timelines and increased costs. While we will control only certain aspects of these third parties' activities, nevertheless, we will be responsible for ensuring that each of our trials are conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMPs and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials will not be our employees and, except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully
carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

If any of our relationships with trial sites or any CRO that we may use in the future terminates, we may not be able to enter into arrangements with alternative trial sites or CROs or do so on commercially reasonable terms. Switching or adding third parties to conduct clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet desired clinical development timelines.

We do and will continue to or intend to rely on outside scientists and their third-party research institutions for research and development and early clinical testing of our product candidates. These scientists and institutions may have other commitments or conflicts of interest, which could limit our access to their expertise and harm our ability to leverage our technology platforms.

We rely on our third-party research institution collaborators for some research capabilities. However, the research we are funding constitutes only a small portion of the overall research of each research institution. Other research being conducted by these institutions may at times receive higher priority than research on the programs we are funding. We typically have less control of the research, clinical trial protocols and patient enrollment than we might with activity led by our employees.

The outside scientists who conduct the research and development upon which portions of our product candidate pipeline depends, are not our employees; rather, they serve as either independent contractors or the primary investigators under research collaboration agreements that we have with their sponsoring academic or research institution. Such scientists and collaborators may have other commitments that would limit their availability to us. Although our scientific advisors generally agree not to do competing work, if an actual or potential conflict of interest between their work for us and their work for another entity arises, we may lose their services. These factors could adversely affect the timing of the clinical trials, the timing of receipt and reporting of clinical data, the timing of our IND submissions, and our ability to conduct future planned clinical trials. It is also possible that some of our valuable proprietary knowledge may become publicly known through these scientific advisors if they breach their confidentiality agreements with us, which would cause competitive harm to, and have an adverse effect on, our business.

We have entered into a collaboration with GlaxoSmithKline (GSK) and may form or seek collaborations or strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We have entered into a research and development collaboration with GSK for our NY-ESO-1 program and other potential product opportunities. In the future, we may also enter into additional license and collaboration arrangements. Any collaboration arrangement that we enter into is subject to numerous risks, which may include the following:

- the collaborator has significant discretion in determining the efforts and resources that they will apply to a program or product candidate under the collaboration;
- the collaborator may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in their strategic focus due to the acquisition of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;
- the collaborator may delay clinical trials, provide insufficient funding for a clinical trial, preferentially enroll patients on a portion of a clinical trial not testing our product candidates, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials, or require a new formulation of a product candidate for clinical testing;
- the collaborator could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates;
- the collaborator may not commit sufficient resources to marketing and distribution of our products;
- the collaborator may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and the collaborator that cause the delay or termination of the research, development or commercialization of our product candidates, or that result in costly litigation or arbitration that diverts management attention and resources;
- the collaboration may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates; and
- the collaborator may own or co-own intellectual property covering our product candidates that results from our collaborating with them, and in such cases, we would not have the exclusive right to commercialize such intellectual property.

In particular, failure by GSK to meet each of its obligations under our collaboration agreement or failure by GSK to apply sufficient efforts at developing and commercializing collaboration products may adversely affect our business and our results of operations. GSK could independently develop, or develop with its other third party collaborators, products or product candidates that compete directly or indirectly with our products or product candidates and that could adversely impact GSK's willingness to exercise an option under our collaboration or GSK's level of diligence for our collaboration products for which it has exercised an option. Additionally, GSK's exercise of an option for a program that includes a given product candidate may also lead to changes to clinical and regulatory development strategy for such product candidate, at GSK's discretion, which may impact development timelines for such product candidate and may adversely affect the value of our stock. GSK will also require some level of assistance from us with respect to product candidates for which it exercises an option, and this assistance could be burdensome on our organization and resources and disrupt our own development and commercialization activities for product candidates for which we retain rights.

We may form or seek further strategic alliances, create joint ventures or collaborations, or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates our research, and any future product candidates that we may pursue. Such alliances will be subject to many of the risks set forth above. Moreover, any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders, or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex.

As a result of these risks, we may not be able to realize the benefit of our existing collaboration or any future collaborations or licensing agreements we may enter into. Any delays in entering into new collaborations or strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

We may not realize the benefits of potential future collaborations, licenses, product acquisitions or other strategic transactions.

We have entered into, and may desire to enter into in the future, collaborations, licenses or other strategic transactions for the acquisition of products or business opportunities, in each case where we believe such arrangement will complement or augment our existing business. These relationships or transactions, or those like them, may require us to incur nonrecurring and other charges, increase our near- and long-term expenditures, issue securities that dilute our existing stockholders, reduce the potential profitability of the products that are the subject of the relationship or disrupt our management and business. For example, we entered into a collaboration agreement and stock purchase agreement with PACT Pharma, Inc. (PACT) in June 2020, and in February 2021, we filed a demand for arbitration seeking to, among other things, rescind the agreements with PACT and recover the consideration paid thereunder. In addition, we face significant competition in seeking appropriate strategic alliances and transactions and the negotiation process is time-consuming and complex and there can be no assurance that we can enter into any of these transactions even if we desire to do so. Moreover, we may not be successful in our efforts to establish a strategic alliance or other alternative arrangements for any future product candidates and programs because our research and development pipeline may be insufficient, our product candidates or programs may be deemed to be at too early a stage of development for collaborative effort and third parties may not view our product candidates and programs as having the requisite potential to demonstrate a positive benefit/risk profile. Any delays in entering into new strategic alliance agreements related to our product candidates could also delay the development and commercialization of our product candidates and reduce their competitiveness even if they reach the market.

If we license products or acquire businesses, we may not be able to realize the benefit of these transactions if we are unable to successfully integrate them with our existing operations and company culture. There are other risks and uncertainties involved in these transactions, including unanticipated liabilities related to acquired intellectual property rights, products or companies and disruption in our relationship with collaborators or suppliers as a result of such a transaction. We cannot be certain that, following an acquisition or license, we will achieve the financial or strategic results that would justify the transaction.

We will depend on enrollment and retention of patients in our clinical trials for our product candidates. If we experience delays or difficulties enrolling or retaining patients in our clinical trials, our research and development efforts and business, financial condition, and results of operations could be materially adversely affected.

Successful and timely completion of clinical trials will require that we enroll and retain a sufficient number of patient candidates. Any clinical trials we conduct may be subject to delays for a variety of reasons, including as a result of patient enrollment taking longer than anticipated, patient withdrawal, or adverse events. These types of developments could cause us to delay the trial or halt further development.

Our clinical trials will compete with other clinical trials that are in the same therapeutic areas as our product candidates, and this competition reduces the number and types of patients available to us, as some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Moreover, enrolling patients in clinical trials for diseases in which there is an approved standard of care is challenging, as patients will first receive the applicable standard of care. Many patients who respond positively to the standard of care do not enroll in clinical trials. This may limit the number of eligible patients able to enroll in our clinical trials who have the potential to benefit from our product candidates and could extend development timelines or increase costs for these programs. Patients who fail to respond positively to the standard of care treatment will be eligible for clinical trials of unapproved drug candidates. However, these prior treatment regimens may render our therapies less effective in clinical trials.

Because the number of qualified clinical investigators and clinical trial sites is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites.

Patient enrollment depends on many factors, including:

- the size and nature of the patient population;
- the severity of the disease under investigation;
- eligibility criteria for the trial;
- the proximity of patients to clinical sites;
- the design of the clinical protocol;
- the ability to obtain and maintain patient consents;
- perceived risks and benefits of the product candidate under evaluation, including any perceived risks associated with genetically modified product candidates;
- the ability to recruit clinical trial investigators with the appropriate competencies and experience;

- the risk that patients enrolled in clinical trials will drop out of the trials before the administration of our product candidates or trial completion;
- the availability of competing clinical trials;
- the availability of such patients during the COVID-19 pandemic;
- the availability of new drugs approved for the indication the clinical trial is investigating; and
- clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies.

These factors may make it difficult for us to enroll enough patients to complete our clinical trials in a timely and cost-effective manner. Delays in the completion of any clinical trial of our product candidates will increase our costs, slow down our product candidate development and approval process, and delay or potentially jeopardize our ability to commence product sales and generate revenue. In addition, some of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.

We face competition from numerous pharmaceutical and biotechnology enterprises, as well as from academic institutions, government agencies and private and public research institutions. Our ability to enroll clinical trials or our commercial opportunities will be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects or are less expensive than any products that we may develop. Additionally, our commercial opportunities will be reduced or eliminated if novel upstream products or changes in treatment protocols reduce the overall incidence or prevalence of our current or future target diseases. Competition could result in reduced sales and pricing pressure on our product candidates, if approved by applicable regulatory authorities. In addition, significant delays in the development of our product candidates could allow our competitors to bring products to market before us and impair any ability to commercialize our product candidates.

Risks Related to Regulation and Legal Compliance

All of our product candidates are currently in preclinical development, and our future success is dependent on the successful development and regulatory approval of our product candidates.

We currently have no products approved for commercial sale, and all of our product candidates are currently in preclinical development. The future success of our business is substantially dependent on our ability to obtain regulatory approval for our product candidates for the indications we seek, and, if approved, to successfully commercialize one or more product candidates in a timely manner. Each of our programs and product candidates will require additional preclinical and clinical development, regulatory approval, obtaining manufacturing supply, capacity and expertise, building a commercial organization or successfully outsourcing commercialization, substantial investment and significant marketing efforts before we generate any revenue from product sales. We do not have any products that are approved for commercial sale, and we may never be able to develop or commercialize marketable products.

We cannot commercialize product candidates in the United States without first obtaining regulatory approval for the product from the FDA; similarly, we cannot commercialize product

candidates outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities. Before obtaining regulatory approvals for the commercial sale of any product candidate for a target indication, we must demonstrate with substantial evidence from and to the satisfaction of the FDA and foreign regulatory authorities, that the product candidate is safe, pure and potent for use for that target indication and that the manufacturing facilities, processes and controls are adequate with respect to such product candidate to assure safety, purity and potency.

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that none of our existing product candidates or any future product candidates will ever obtain regulatory approval. Furthermore, the regulatory approval process for novel product candidates, such as T cell product candidates and next-generation T cell programs, can be more complex and consequently more expensive and take longer than for other, better known or extensively studied pharmaceutical or other product candidates.

Even if a product candidate were to successfully obtain approval from the FDA and comparable foreign regulatory authorities, any approval might contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for one of our product candidates in one or more jurisdictions, or any approval contains significant limitations, we may not be able to obtain sufficient funding to continue the development of that product or generate revenues attributable to that product candidate. Also, any regulatory approval of our current or future product candidates, once obtained, may be withdrawn.

Our cellular therapy product candidates represent new therapeutic approaches that could result in heightened regulatory scrutiny, delays in clinical development or delays in or our inability to achieve regulatory approval, commercialization or payor coverage of our product candidates.

Our future success is dependent on the successful development of our cellular therapies in general and our development product candidates in particular. Because these programs represent a new approach to the treatment of cancer, developing and, if approved, commercializing our product candidates subject us to a number of challenges. Moreover, we cannot be sure that the manufacturing processes used in connection with our cellular therapy product candidates will yield a sufficient supply of satisfactory products that are safe, pure and potent, scalable or profitable.

In addition to FDA oversight and oversight by institutional review boards (IRBs) under guidelines promulgated by the National Institutes of Health (NIH), gene therapy clinical trials are also subject to review and oversight by an institutional biosafety committee (IBC), a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment. While the NIH guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. Although the FDA decides whether trials of cell therapies that involve genetic engineering may proceed, the review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical trial, even if the FDA has reviewed the trial and approved its initiation.

Actual or perceived safety issues, including adoption of new therapeutics or novel approaches to treatment, may adversely influence the willingness of subjects to participate in clinical trials, or if approved by applicable regulatory authorities, of physicians to subscribe to the novel treatment mechanics. The FDA or other applicable regulatory authorities may ask for specific post-market requirements, and additional information informing benefits or risks of our products may emerge at any time prior to or after regulatory approval.

Physicians, hospitals and third-party payors often are slow to adopt new products, technologies and treatment practices that require additional upfront costs and training. Physicians may not be willing to undergo training to adopt this novel therapy, may decide the therapy is too complex to adopt without appropriate training or not cost-efficient, and may choose not to administer the therapy. Based on these and other factors, hospitals and payors may decide that the benefits of this new therapy do not or will not outweigh its costs.

The results of research, preclinical studies or earlier clinical trials are not necessarily predictive of future results. Any product candidate we advance into clinical trials may not have favorable results in later clinical trials or receive regulatory approval.

Success in research, preclinical studies and early clinical trials does not ensure that later clinical trials will generate similar results and otherwise provide adequate data to demonstrate the efficacy and safety of an investigational product. Likewise, a number of companies in the pharmaceutical and biotechnology industries, including those with greater resources and experience than us, have suffered significant setbacks in late-stage clinical trials, even after seeing promising results in earlier preclinical studies or clinical trials. Thus, even if the results from our initial research and preclinical activities appear positive, we do not know whether subsequent late-stage clinical trials we may conduct will demonstrate adequate efficacy and safety to result in regulatory approval to market any product candidates.

Moreover, final study results may not be consistent with interim study results. If later-stage clinical trials do not produce favorable results, our ability to achieve regulatory approval for any of our product candidates may be adversely impacted. Even if we believe that we have adequate data to support an application for regulatory approval to market any of our product candidates, the FDA or other regulatory authorities may not agree and may require that we conduct additional clinical trials.

Clinical development involves a lengthy and expensive process with an uncertain outcome.

All of our product candidates are in preclinical development and their risk of failure is high. The clinical trials and manufacturing of our product candidates are, and the manufacturing and marketing of our products, if approved, will be, subject to extensive and rigorous review and regulation by numerous government authorities in the United States and in other countries where we intend to test and market our product candidates. Before obtaining regulatory approvals for the commercial sale of any of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. In particular, because our product candidates are subject to regulation as biological products, we will need to demonstrate that they are safe, pure and potent for use in their target indications. Each product candidate must demonstrate an adequate risk versus benefit profile in its intended patient population and for its intended use.

The clinical testing that will be required for any product candidates we choose to advance is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. Failure can occur at any time during the clinical trial process. Even if our future clinical trials are

completed as planned, we cannot be certain that their results will support the safety and effectiveness of our product candidates for their targeted indications or support continued clinical development of such product candidates. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical and clinical trials.

In addition, even if such trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. Moreover, results acceptable to support approval in one jurisdiction may be deemed inadequate by another regulatory authority to support regulatory approval in that other jurisdiction. To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, we may be required to expend significant resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

To date, we have not completed any clinical trials required for the approval of our product candidates. We may experience delays in initiating or conducting any future clinical trials, and we do not know whether clinical trials will begin or enroll subjects on time, will need to be redesigned, will achieve expected enrollment rates or will be completed on schedule, if at all. For example, obtaining sufficient and specific tumor tissues will be needed for the anticipated TIL clinical trial. Our inability to obtain the specific tumor tissues or sufficient amount of tumor tissues could delay the clinical trial. There can be no assurance that the FDA or comparable foreign regulatory authorities will not put clinical trials of any of our product candidates on clinical hold in the future. Clinical trials can be delayed, suspended or terminated for a variety of reasons, including in connection with:

- inability to generate sufficient preclinical, toxicology, or other in vivo or in vitro data to support the initiation of clinical trials;
- delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for advanced clinical trials;
- delays in reaching agreement with the FDA or other regulatory authorities as to the design or implementation of our clinical trials;
- obtaining regulatory authorization to commence a clinical trial;
- reaching an agreement on acceptable terms with clinical trial sites or prospective CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- obtaining IRB or ethics committee approval at each trial site;
- recruiting suitable patients to participate in a clinical trial;
- having patients complete a clinical trial or return for post-treatment follow-up;
- inspections of clinical trial sites or operations by applicable regulatory authorities, or the imposition of a clinical hold;
- clinical sites, CROs or other third parties deviating from trial protocol or dropping out of a trial;
- failure to perform in accordance with applicable regulatory requirements, including the FDA's GCP requirements, or applicable regulatory requirements in other countries;
- addressing patient safety concerns that arise during the course of a trial, including occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- adding a sufficient number of clinical trial sites;

- manufacturing sufficient quantities of product candidate for use in clinical trials; or
- suspensions or terminations by IRBs of the institutions at which such trials are being conducted, by the Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities due to a number of factors, including those described above.

Further, a clinical trial may be suspended or terminated by us, the institutional review boards for the institutions in which such trials are being conducted, the Data Monitoring Committee for such trial, or the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

We cannot predict with any certainty whether or when we might complete a given clinical trial, if at all. If we experience delays or quality issues in the conduct, completion or termination of any clinical trial of our product candidates, the approval and commercial prospects of such product candidate will be harmed, and our ability to generate product revenues from such product candidate will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label or result in significant negative consequences following any regulatory approval. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authority. As a result of safety or toxicity issues that we may experience in our clinical trials, we may not continue the development of nor receive approval to market any product candidates, which could prevent us from ever generating product revenues or achieving profitability. For example, previous clinical trials utilizing a CAR T cell to treat hematologic tumors have shown an increased risk of cytokine release syndrome and immune effector cell-associated neurotoxicity syndrome. Adverse events may also be associated with the lymphodepletion regimen utilized with cellular therapies. Additionally, ROR1 is expressed on a number of normal tissues. As a result, ROR1 could cause on-target, off-tumor toxicity. c-JUN is also potentially an oncogene and could cause healthy cells to transform into malignant cells. Results of our trials could reveal an unacceptably high severity and incidence of side effects, or side effects outweighing the benefits of our product candidates. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development or deny approval of our product candidates for any or all targeted indications. The side effects experienced could affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims.

In the event that any of our product candidates receives regulatory approval and we or others later identify undesirable or unacceptable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit approvals of such products and require us to take our approved product off the market;

- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies, or issue other communications containing warnings or other safety information about the product;
- regulatory authorities may require a medication guide outlining the risks of such side effects for distribution to patients, or that we implement a risk evaluation and mitigation strategy (REMS) plan to ensure that the benefits of the product outweigh its risks;
- we may be required to change the dose or the way the product is administered, conduct additional clinical trials, or change the labeling of the product;
- we may be subject to limitations on how we may promote or manufacture the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of any products.

Interim, topline, or preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data becomes available or as we make changes to our manufacturing processes and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose interim, topline, or preliminary data from our preclinical studies and clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. Further, modifications or improvements to our manufacturing processes for a therapy may result in changes to the characteristics or behavior of the product candidate that could cause our product candidates to perform differently and affect the results of our ongoing clinical trials. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available.

From time to time, we may also disclose preliminary or interim data from our preclinical studies and clinical trials. Preliminary or interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Additionally, disclosure of preliminary or interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions, or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate and our company in general. If the interim,

topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, any of our potential product candidates may be harmed, which could harm our business, operating results, prospects, or financial condition.

The FDA regulatory approval process is lengthy, time-consuming and inherently unpredictable. If we are not able to obtain required regulatory approval of our product candidates, our business will be substantially harmed.

We expect the novel nature of our product candidates to create challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of T cell therapies for cancer. Accordingly, the regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

Prior to obtaining approval to commercialize any drug product candidate in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or foreign regulatory agencies, that such product candidates are safe, pure and potent for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe the preclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or after approval, or it may object to elements of our clinical development programs.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Of the large number of products in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval and marketing authorization process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval and marketing authorization to market our product candidates, which would significantly harm our business, financial condition, results of operations and prospects.

We could also encounter delays if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that

have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the institutional review boards for the institutions in which such trials are being conducted, the Data Monitoring Committee for such trial, or the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or a regulatory authority concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection of the marketing application we submit. Any such delay or rejection could prevent or delay us from commercializing our current or future product candidates.

If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates.

Even if our product candidates obtain regulatory approval, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, testing, labeling, packaging, distribution, import, export, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. In addition, any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations, as well as, for the manufacture of certain of our product candidates, the FDA's cGTPs for the use of human cellular and tissue products to prevent the introduction, transmission or spread of communicable diseases. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMPs, cGTPs and adherence to commitments made in any approved marketing application. Accordingly, we

and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, quality control and distribution.

If there are changes in the application of legislation or regulatory policies, or if problems are discovered with a product or our manufacture of a product, or if we or one of our distributors, licensees or co-marketers fails to comply with regulatory requirements, the regulators could take various actions. These include issuing warning letters or untitled letters, imposing fines on us, imposing restrictions on the product or its manufacture, and requiring us to recall or remove the product from the market. The regulators could also suspend or withdraw our marketing authorizations, requiring us to conduct additional clinical trials, change our product labeling, or submit additional applications for marketing authorization. If any of these events occurs, our ability to sell such product may be impaired, and we may incur substantial additional expense to comply with regulatory requirements, which could materially adversely affect our business, financial condition and results of operations.

In addition, if we have any product candidate approved, our product labeling, advertising and promotion will be subject to regulatory requirements and continuing regulatory review. In the United States, the FDA and the Federal Trade Commission (FTC) strictly regulate the promotional claims that may be made about pharmaceutical products to ensure that any claims about such products are consistent with regulatory approvals, not misleading or false in any particular, and adequately substantiated by clinical data. The promotion of a drug product in a manner that is false, misleading, unsubstantiated, or for unapproved (or off-label) uses may result in enforcement letters, inquiries and investigations and civil and criminal sanctions by the FDA, FTC and other regulatory authorities. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant sanctions and may result in false claims litigation under federal and state statutes, which can lead to consent decrees, civil monetary penalties, restitution, criminal fines and imprisonment, and exclusion from participation in Medicare, Medicaid and other federal and state healthcare programs. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The government has also required that companies enter into consent decrees and/or imposed permanent injunctions under which specified promotional conduct is changed or curtailed.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- issue, or require us to issue, safety-related communications, such as safety alerts, field alerts, "Dear Doctor" letters to healthcare professionals, or import alerts;
- impose civil or criminal penalties;
- suspend, limit, or withdraw regulatory approval;
- suspend any of our preclinical studies and clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;

- impose restrictions on our operations, including closing our and our contract manufacturers' facilities; or
- seize or detain products, refuse to permit the import or export of products, or require us to conduct a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products, if approved. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Moreover, the policies of the FDA and of comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit, or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature, or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration took several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. In addition, if we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

We may be subject to applicable fraud and abuse, including anti-kickback and false claims, transparency, health information privacy and security and other healthcare laws. Failure to comply with such laws, may result in substantial penalties.

We may be subject to broadly applicable healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we conduct research, market, sell and distribute any product candidates for which we obtain marketing approval. The healthcare laws that may affect us include: the federal fraud and abuse laws, including the federal anti-kickback, and false claims and civil monetary penalties laws; federal data privacy and security laws; and federal transparency laws related to ownership and investment interests and payments and/or other transfers of value made to or held by physicians (including doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals and, beginning in 2022, information regarding payments and transfers of value provided to and other healthcare professionals during the previous year. In addition, many states have similar laws and regulations that may differ from each other and federal law in significant ways, thus complicating compliance efforts. Moreover, several states require biopharmaceutical companies to comply with the biopharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures. Additionally, some state and local laws require the registration of biopharmaceutical sales representatives in the jurisdiction.

Ensuring that our operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that

governmental authorities will conclude that our business practices, including our relationships with physicians and other healthcare providers, some of whom are compensated in the form of stock options for consulting services provided, may not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, disgorgement, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and/or oversight if a corporate integrity agreement or similar agreement is executed to resolve allegations of non-compliance with these laws and the curtailment or restructuring of operations. In addition, violations may also result in reputational harm, diminished profits and future earnings.

Changes in healthcare policies, laws and regulations may impact our ability to obtain approval for, or commercialize our product candidates, if approved.

In the United States and some foreign jurisdictions there have been, and continue to be, several legislative and regulatory changes and proposed reforms of the healthcare system in an effort to contain costs, improve quality and expand access to care. In the United States, there have been and continue to be a number of healthcare-related legislative initiatives, as well as executive, judicial and Congressional challenges to existing healthcare laws that have significantly affected, and could continue to significantly affect, the healthcare industry. For example, the U.S. Supreme Court is currently reviewing the constitutionality of the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, together with subsequent amendments and regulations (collectively, the ACA); it is unclear when a decision will be made. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under government payor programs and review the relationship between pricing and manufacturer patient programs. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

The successful commercialization of our product candidates will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels and pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability and adequacy of coverage and reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford prescription medications such as our product candidates, assuming FDA approval. Our ability to achieve acceptable levels of coverage and reimbursement for products by governmental authorities, private health insurers and other organizations will have an effect on our ability to successfully commercialize our product candidates. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a payor-by-payor basis. Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor’s determination that a procedure is safe, effective and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and

neither cosmetic, experimental, nor investigational. Assuming we obtain coverage for our product candidates by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available for our product candidates or any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Similarly, a significant trend in the healthcare industry is cost containment. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. As such, cost containment reform efforts may result in an adverse effect on our operations. Obtaining coverage and adequate reimbursement for our product candidates may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Similarly, because our product candidates are physician-administered, separate reimbursement for the product itself may or may not be available. Instead, the administering physician may or may not be reimbursed for providing the treatment or procedure in which our product is used.

We intend to rely on third parties to conduct, supervise and monitor a significant portion of our research and preclinical testing and clinical trials for our product candidates, and if those third parties do not successfully carry out their contractual duties, comply with regulatory requirements or otherwise perform satisfactorily, we may not be able to obtain regulatory approval or commercialize product candidates, or such approval or commercialization may be delayed, and our business may be substantially harmed.

We intend to engage CROs and other third parties to conduct our planned preclinical studies or clinical trials. If any of our relationships with these third parties terminate, we may not be able to timely enter into arrangements with alternative third parties or to do so on commercially reasonable terms, if at all. Switching or adding CROs involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects. Further, the performance of our CROs and other third parties conducting our trials may also be interrupted by the ongoing COVID-19 pandemic, including due to travel or quarantine policies, heightened exposure of CRO or clinical site or other vendor staff who are healthcare providers to COVID-19 or prioritization of resources toward the pandemic.

In addition, any third parties conducting our clinical trials will not be our employees, and except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our clinical programs. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. Consequently, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase substantially and our ability to generate revenue could be delayed significantly.

We rely on these parties for execution of our preclinical studies and clinical trials, and generally do not control their activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For

example, we will remain responsible for ensuring that each of our clinical trials are conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. If we or any of our CROs or other third parties, including trial sites, fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP conditions. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA. The FDA may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the trial. The FDA may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA and may ultimately lead to the denial of marketing approval for product candidates.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new biologics or modifications to cleared or approved biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough FDA employees and stop critical activities.

Separately, in response to the COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most inspections of foreign manufacturing facilities, and on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020 the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission critical inspections to resumption of all regulatory activities. Additionally, on April 15, 2021, the FDA issued a guidance document in which the FDA described its plans to conduct voluntary remote interactive evaluations of certain drug manufacturing facilities and clinical research sites. According to the guidance, the FDA intends to request such remote interactive evaluations in situations where an in-person inspection would not be prioritized, deemed mission-critical, or where direct inspection is otherwise limited by travel restrictions, but where

the FDA determines that remote evaluation would still be appropriate. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks Relating to Our Intellectual Property

If we are unable to obtain and maintain sufficient intellectual property protection for our product candidates, or if the scope of the intellectual property protection is not sufficiently broad, our ability to commercialize our product candidates successfully and to compete effectively may be adversely affected.

We rely upon a combination of patents, trademarks, trade secrets and confidentiality agreements to protect the intellectual property related to our technology and product candidates. We own or possess certain intellectual property, and other intellectual property are owned or possessed by our partners and are in-licensed to us. When we refer to “our” technologies, inventions, patents, patent applications or other intellectual property rights, we are referring to both the rights that we own or possess as well as those that we in-license, many of which are critical to our intellectual property protection and our business. If the intellectual property that we rely on is not adequately protected, competitors may be able to use our technologies and erode or negate any competitive advantage we may have.

The patentability of inventions and the validity, enforceability and scope of patents in the biotechnology field is uncertain because it involves complex legal, scientific and factual considerations, and it has in recent years been the subject of significant litigation. Moreover, the standards applied by the U.S. Patent and Trademark Office (USPTO) and non-U.S. patent offices in granting patents are not always applied uniformly or predictably. There is also no assurance that all potentially relevant prior art relating to our patents and patent applications is known to us or has been found in the instances where searching was done. We may be unaware of prior art that could be used to invalidate an issued patent or prevent a pending patent application from issuing as a patent. There also may be prior art of which we are aware, but which we do not believe affects the validity, enforceability or patentability of a claim of one of our patents or patent applications, which may, nonetheless, ultimately be found to affect the validity, enforceability or patentability of such claim. As a consequence of these and other factors, our patent applications may fail to result in issued patents with claims that cover our product candidates in the United States or in other countries.

Even if patents have issued or do successfully issue from patent applications, and even if these patents cover our product candidates, third parties may challenge the validity, enforceability or scope thereof, which may result in these patents being narrowed, invalidated or held to be unenforceable. No assurance can be given that if challenged, our patents would be declared by a court to be valid or enforceable. Even if unchallenged, our patents and patent applications or other intellectual property rights may not adequately protect our intellectual property, provide exclusivity for our product candidates or prevent others from designing around our claims. The possibility exists that others will develop products on an independent basis which have the same effect as our product candidates and which do not infringe our patents or other intellectual property rights, or that others will design around the claims of patents that we have had issued that cover our product candidates. If the breadth or strength of protection provided by our patents and patent applications with respect to our product candidates is threatened, it could jeopardize our ability to commercialize our product candidates and dissuade companies from collaborating with us.

We may also desire to seek licenses from third parties who own or have rights to intellectual property that may be useful for providing exclusivity for our product candidates, or for providing the ability to develop and commercialize a product candidate in an unrestricted manner. There is no guarantee that we will be able to obtain such licenses from third parties on commercially reasonable terms, or at all.

In addition, the USPTO and various foreign governmental or inter-governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during and after the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete, irreversible loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market, which could have a material adverse effect on our business.

United States patent applications containing or that at any time contained a claim not entitled to a priority date before March 16, 2013 are subject to the “first to file” system implemented by the America Invents Act (2011). The first to file system requires us to be cognizant going forward of the time from invention to filing of a patent application. Because patent applications in the U.S. and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we or our partners were the first to file any patent application related to a product candidate.

In addition, our registered or unregistered trademarks or trade names may be challenged, infringed or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we view as valuable to building name recognition among potential partners and customers in our markets of interest. At times, competitors or other third parties have adopted or may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion and/or litigation. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce, protect, or defend our proprietary rights related to trademarks may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and prospects.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its first nonprovisional effective filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from biosimilar or generic medications. In addition, although upon issuance in the United States a patent’s life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. The patent term of certain patents can also be extended with respect to a specific product to recapture time lost in clinical trials and regulatory review by the FDA. A patent’s life also can be shortened by a terminal disclaimer over an earlier filed patent or patent application. If we do not have sufficient patent life to protect our products, our business and results of operations will be adversely affected.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, enforcing and defending patents on all of our product candidates in all countries throughout the world would be prohibitively expensive. Our intellectual property rights in certain countries outside the United States may be less extensive than those in the United States. In addition, the laws of certain foreign countries do not protect intellectual property rights to the same extent as laws in the United States. Consequently, we and our partners may not be able to prevent third parties from practicing our inventions in countries outside the United States, or from selling or importing infringing products made using our inventions in other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection or where we do not have exclusive rights under the relevant patents to develop their own products and, further, may export otherwise-infringing products to territories where we and our partners have patent protection but where enforcement is not as strong as that in the U.S. These infringing products may compete with our product candidates in jurisdictions where we or our partners have no issued patents or where we do not have exclusive rights under the relevant patents, or our patent claims and other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us and our partners to stop the infringement of our patents or marketing of competing products in violation of our intellectual property rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us or our partners. We or our partners may not prevail in any lawsuits that we or our licensors initiate, and even if we or our licensors are successful the damages or other remedies awarded, if any, may not be commercially meaningful.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, we or our partners may have limited remedies, which could materially diminish the value of such patent. If we or our partners are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

If we are sued for infringing or misappropriating the intellectual property rights of third parties, the resulting litigation could be costly and time-consuming and could prevent or delay our development and commercialization efforts.

Our commercial success depends, in part, on us and our partners not infringing the patents and proprietary rights of third parties. There is a substantial amount of litigation and other adversarial proceedings, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interference or derivation proceedings, oppositions, and inter partes and post-grant review proceedings before the USPTO and non-U.S. patent offices. Numerous U.S. and non-U.S. issued patents and pending patent applications owned by third parties exist in the fields in which we are developing, and may develop, product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of third parties' patent rights, as it may not always be clear to industry participants, including us, which patents cover various types of products, methods of making, or methods of use.

The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform or predictable.

Third parties may assert infringement or misappropriation claims against us based on existing or future intellectual property rights, alleging that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacturing of our product candidates that we failed to identify. For example, patent applications covering our product candidates could have been filed by others without our knowledge, since these applications generally remain confidential for some period of time after their filing date. Even pending patent applications that have been published, including some of which we are aware, could be later amended in a manner that could cover our product candidates or their use or manufacture. In addition, we may have analyzed patents or patent applications of third parties that we believe are relevant to our activities and believe that we are free to operate in relation to any of our product candidates, but our competitors may obtain issued claims, including in patents we consider to be unrelated, which may block our efforts or potentially result in any of our product candidates or our activities infringing their claims.

If we or our partners are sued for patent infringement, we would need to demonstrate that our product candidates, products and methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving that a patent is invalid is difficult and even if we are successful in the relevant proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted from other activities. If one or more claims of any issued third-party patents were held by a court of competent jurisdiction to cover aspects of our materials, formulations, methods of manufacture or methods for treatment, we could be forced, including by court order, to cease developing, manufacturing or commercializing the relevant product candidate until the relevant patent expired. Alternatively, we may desire or be required to obtain a license from such third party in order to use the infringing technology and to continue developing, manufacturing or marketing the infringing product candidate. However, we may not be able to obtain any required license on commercially reasonably terms, or at all. Even if we were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property licensed to us. If we are unable to obtain a necessary license on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

We may face claims that we misappropriated the confidential information or trade secrets of a third party. If we are found to have misappropriated a third-party's trade secrets, we may be prevented from further using these trade secrets, which could limit our ability to develop our product candidates.

Defending against intellectual property claims, regardless of their merit, could be costly and time consuming, regardless of the outcome. Thus, even if we were to ultimately prevail, or to settle before a final judgment, any litigation could burden us with substantial unanticipated costs. In addition, litigation or threatened litigation could result in significant demands on the time and attention of our management team, distracting them from the pursuit of other company business. During the course of any intellectual property litigation, there could be public announcements of the results of hearings, rulings on motions and other interim proceedings in the litigation and these announcements may have negative impact on the perceived value of our product candidates, programs or intellectual property. In the event of a successful intellectual property claim against us, we may have to pay substantial damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent, or to redesign our infringing product candidates, which may be impossible or require substantial time and monetary expenditure. In addition to paying monetary damages, we may lose valuable intellectual property rights or personnel and the parties

making claims against us may obtain injunctive or other equitable relief, which could impose limitations on the conduct of our business. We may also elect to enter into license agreements in order to settle patent infringement claims prior to litigation, and any of these license agreements may require us to pay royalties and other fees that could be significant. As a result of all of the foregoing, any actual or threatened intellectual property claim could prevent us from developing or commercializing a product candidate or force us to cease some aspect of our business operations.

We have in-licensed a significant portion of our intellectual property from our partners. If we breach any of our license agreements with these partners, we could potentially lose the ability to continue the development and potential commercialization of one or more of our product candidates.

We hold rights under license agreements with our partners. Our discovery and development technology platforms are built, in part, around intellectual property rights in-licensed from our partners. Under our existing license agreements, we are subject to various obligations, which may include diligence obligations with respect to development and commercialization activities, payment obligations upon achievement of certain milestones and royalties on product sales. If there is any conflict, dispute, disagreement or issue of nonperformance between us and our counterparties regarding our rights or obligations under these license agreements, including any conflict, dispute or disagreement arising from our failure to satisfy diligence or payment obligations, we may be liable to pay damages and our counterparties may have a right to terminate the affected license. The termination of any license agreement with one of our partners could adversely affect our ability to utilize the intellectual property that is subject to that license agreement in our discovery and development efforts, our ability to enter into future collaboration, licensing and/or marketing agreements for one or more affected product candidates and our ability to commercialize the affected product candidates. Furthermore, disagreements under any of these license agreements may arise, including those related to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and to the extent to which our technology and processes may infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

These disagreements may harm our relationship with the partner, which could have negative impacts on other aspects of our business.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Presently we have rights to the intellectual property, through licenses from third parties and under patent applications that we own or will own, to develop our product candidates. Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license or use these proprietary rights.

Our product candidates may also require specific formulations, manufacturing methods, or technologies to work effectively and efficiently, and these rights may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third party intellectual property rights from third parties that we identify. We may fail to obtain any of these

licenses at a reasonable cost or on reasonable terms; such failure would harm our business. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies that may be more established or have greater resources than we do may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

Intellectual property discovered through government funded programs may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers.

We have acquired or licensed, or may require in the future, intellectual property rights that have been generated through the use of U.S. government funding or grant. Pursuant to the Bayh-Dole Act of 1980, the U.S. government has certain rights in inventions developed with government funding. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if the grant recipient fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have an adverse effect on the success of our business.

Third parties may infringe our patents or misappropriate or otherwise violate our intellectual property rights. Our patent applications cannot be enforced against third parties practicing the technology claimed in these applications unless and until a patent issues from the applications, and then only to the extent the issued claims cover the technology. In the future, we or our partners may elect to initiate legal proceedings to enforce or defend our or our partners' intellectual property rights, to protect our or our partners' trade secrets or to determine the validity or scope of our intellectual property rights. Any claims that we or our partners assert against perceived infringers could also provoke these parties to assert counterclaims against us or our partners alleging that we or our

partners infringe their intellectual property rights or that our intellectual property rights are invalid. In patent litigation in the United States, defendant counterclaims alleging noninfringement, invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert noninfringement, invalidity or unenforceability of a patent. The outcome following legal assertions of noninfringement, unpatentability, invalidity and unenforceability is unpredictable. With respect to the validity of patent rights, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of unpatentability, invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Interference, derivation or opposition proceedings provoked by third parties, brought by us or our partners, or brought by the USPTO or any non-U.S. patent authority, may be necessary to determine the priority of inventions or matters of inventorship with respect to our patents or patent applications. We or our partners may also become involved in other proceedings, such as reexamination or opposition proceedings, inter partes review, post-grant review or other preissuance or post-grant proceedings in the USPTO or its foreign counterparts relating to our intellectual property or the intellectual property of others. Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover and protect our product candidates. An unfavorable outcome in any of these proceedings could require us or our partners to cease using the related technology and commercializing our product candidates, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our partners a license on commercially reasonable terms if any license is offered at all. Even if we or our licensors obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our licensors. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

Any intellectual property proceedings can be expensive and time-consuming. Our or our partners' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our partners can. Accordingly, despite our or our partners' efforts, we or our partners may not be able to prevent third parties from infringing upon or misappropriating our intellectual property rights, particularly in countries where the laws may not protect our rights as fully as in the U.S. Even if we are successful in the relevant proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted from other activities. In addition, in an infringement proceeding, a court may decide that one or more of our patents is invalid or unenforceable, in whole or in part, may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question, and/or may require us to pay the other party attorneys' fees. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

We may in the future be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. For

example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

If we are unable to protect the confidentiality of our trade secrets and other proprietary information, the value of our technology could be adversely affected and our business could be harmed.

In addition to seeking the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce, and other elements of our technology, discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, including by enabling them to develop and commercialize products substantially similar to or competitive with our product candidates, thus eroding our competitive position in the market.

Trade secrets can be difficult to protect. We seek to protect our proprietary, confidential technology and processes, in part, by entering into confidentiality agreements and invention assignment agreements with our employees, consultants and outside scientific advisors, contractors and collaborators. These agreements are designed to protect our proprietary information. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, or outside scientific advisors might intentionally or inadvertently disclose our trade secrets or confidential, proprietary information to competitors. In addition, competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position.

Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, the laws of certain foreign countries do not protect proprietary rights such as trade secrets to the same extent or in the same manner as the laws of the U.S. Misappropriation or unauthorized disclosure of our trade secrets to third parties could impair our competitive advantage in the market and could adversely affect our business, results of operations and financial condition.

We may be subject to claims that our employees, consultants or independent contractors have breached non-compete or non-solicit obligations and/or wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise breached non-compete or non-solicit obligations with respect to such individuals' prior employers, or used or disclosed confidential information of these third parties or such individuals' former employers. Dealing with such claims and negotiating with potential claimants could result in substantial cost and be a distraction to our management and employees. In addition, litigation may be necessary to defend against these claims, and even if we are successful in

defending against these claims, such litigation could result in further costs to us and distraction to our management and employees.

Risks Related to This Offering and Ownership of Our Common Stock

We do not know whether a market will develop for our common stock or what the market price of our common stock will be. As a result, it may be difficult for you to sell your shares of our common stock.

There is currently no public trading market for our common stock. If a market for our common stock does not develop or is not sustained, it may be difficult for you to sell your shares of common stock at an attractive price, or at all. We cannot predict the prices at which our common stock will trade. It is possible that in one or more future periods our results of operations, clinical trial results, regulatory approval process and progression of our product pipeline may not meet the expectations of securities research analysts and investors. As a result of these and other factors, the price of our common stock may fall.

You will incur immediate and substantial dilution as a result of this offering.

If you purchase common stock in this offering, you will incur immediate and substantial dilution of $12.60 per share, representing the difference between the assumed initial public offering price of $17.00 per share, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and our pro forma net tangible book value per share after giving effect to this offering and reclassification of all of our outstanding common stock and redeemable convertible preferred stock into a single class of common stock prior to the closing of the offering. As of March 31, 2021, there were 40,556,956 shares of common stock issuable upon exercise of outstanding stock options with a weighted-average exercise price of $3.92 per share. Subsequent to March 31, 2021, we granted an additional 1,930,000 shares of common stock with a weighted-average exercise price of $13.20 per share. To the extent that these outstanding options are exercised, or we issue additional equity or convertible securities in the future, or the underwriters exercise their option to purchase additional shares, you will incur further dilution. See the section titled “Dilution” for a further description of the dilution you will experience immediately after this offering.

Insiders will continue to have substantial influence over us after this offering, which could limit your ability to affect the outcome of key transactions, including a change of control.

After this offering, our directors, executive officers, holders of more than 5% of our outstanding stock and their respective affiliates will beneficially own shares representing approximately 28.2% of our outstanding common stock, excluding any shares of common stock that may be purchased pursuant to our directed share program described in “Underwriting.” As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change in control of our company and might affect the market price of our common stock.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds, including for any of the purposes described in the section titled “Use of Proceeds” in this prospectus. Our management may spend a portion or all of the net proceeds from this offering in ways that our stockholders may not desire or that may not yield a favorable return. The failure by our management to apply these funds effectively could harm our business, financial condition, results of operations and

prospects. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

Participation in this offering by our existing stockholders and their affiliated entities may reduce the public float for our common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our shares, meaning the number of shares of our common stock that are not held by officers, directors and controlling stockholders. A reduction in the public float could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

We do not anticipate paying any dividends on our common stock for the foreseeable future. Investors in this offering may never obtain a return on their investment.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Instead, we plan to retain any earnings to maintain and expand our existing operations. In addition, any future credit facility or debt securities may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. If we do not pay cash dividends, you could receive a return on your investment in our common stock only if you are able to sell your shares in the future and the market price of our common stock has increased when you sell your shares. As a result, investors seeking cash dividends should not purchase our common stock.

Delaware law and provisions in our amended and restated certificate of incorporation and bylaws that will be in effect prior to the closing of this offering might discourage, delay, or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions in our amended and restated certificate of incorporation and bylaws that will be in effect prior to the closing of this offering may discourage, delay, or prevent a merger, acquisition, or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our organizational documents will:

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered three-year terms;
- provide that our directors may be removed only for cause;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- eliminate cumulative voting in the election of directors;
- authorize our board of directors to issue shares of preferred stock and determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval;
- permit stockholders to take actions only at a duly called annual or special meeting and not by unanimous written consent;
- prohibit stockholders from calling a special meeting of stockholders;

- require that stockholders give advance notice to nominate directors or submit proposals for consideration at stockholder meetings;
- authorize our board of directors, by a majority vote, to amend certain provisions of the bylaws; and
- require the affirmative vote of at least 66 2/3% or more of the outstanding shares of common stock to amend many of the provisions described above.

In addition, Section 203 of the General Corporation Law of the State of Delaware (DGCL) prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, which is generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws, or Delaware law that has the effect of delaying or preventing a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees, or stockholders to us or our stockholders;
- any action asserting a claim arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation and bylaws; and
- any action asserting a claim governed by the internal affairs doctrine.

Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended (Securities Act). However, these provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Any person purchasing or otherwise acquiring or holding any interest in shares of our capital stock is deemed to have received notice of and consented to the foregoing provisions. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds more favorable for disputes with us or with our directors, officers, other employees or agents, or our other stockholders, which may discourage such lawsuits against us and such other persons, or may result in additional expense to a stockholder seeking to bring a claim against us. Alternatively, if a court were to find this choice of forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, results of operations and financial condition.

We have in the past identified a material weakness in our internal control over financial reporting. If we identify additional material weaknesses in the future or otherwise fail to maintain effective internal control over financial reporting, we may not be able to accurately or timely report our financial condition or results of operations, which may significantly harm our business and the value of our common stock.

As a public company, we will be required to maintain internal control over financial reporting and to report any material weaknesses in such internal control. Section 404 of the Sarbanes-Oxley Act (Section 404) requires that we evaluate and determine the effectiveness of our internal control over financial reporting. This assessment will need to include the disclosure of any material weaknesses in such internal control. A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis.

In connection with the finalization of our consolidated financial statements as of and for the year ended December 31, 2019, we and our independent auditors concluded that a material weakness existed in our internal control over financial reporting relating to the review of the technical accounting for settlement of tranche liabilities. Specifically, in connection with our Series A preferred stock financing in 2019, we recorded a correcting adjustment to increase other non-operating expense for the change in fair value of the Series A preferred tranche liability after we initially recorded the amount as a deemed dividend. There were and have been no other tranche liabilities after the settlement of this liability in February 2019.

Although we believe that we have remediated this material weakness by hiring additional accounting and financial reporting personnel and have not identified any material weaknesses in connection with the finalization of our consolidated financial statements as of and for the year ended December 31, 2020, we cannot assure you that we will not identify other material weaknesses in the future. Furthermore, we may not have identified all material weaknesses, and our current controls and any new controls that we develop may become inadequate because of changes in personnel or conditions in our business or otherwise. Accordingly, we cannot assure you that any future material weaknesses will not result in a material misstatement of our consolidated financial statements and/or our failure to meet our public reporting obligations. In addition, if we and/or our independent registered public accounting firm are unable to conclude that our internal control over financial reporting is effective in the future, investor confidence in the accuracy and completeness of our consolidated financial statements would be adversely affected, which could significantly harm our business and the value of our common stock.

General Risk Factors

If we fail to maintain proper and effective internal controls over financial reporting our ability to produce accurate and timely consolidated financial statements could be impaired.

Pursuant to Section 404, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2021. When we lose our status as an “emerging growth company” and become an “accelerated filer” or a “large accelerated filer,” our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we will need to implement additional financial and management controls, reporting systems and procedures, and hire additional accounting and finance staff.

We cannot assure you that there will not be future material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations, or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by The Nasdaq Stock Market, the U.S. Securities and Exchange Commission (SEC), or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the completion of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We must design our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make a required related party transaction disclosure. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

The market price of our common stock may be volatile, which could result in substantial losses for investors purchasing shares in this offering.

The initial public offering price for our common stock will be determined through negotiations with the underwriters. This initial public offering price may differ from the market price of our common stock after the offering. As a result, you may not be able to sell your common stock at or above the initial public offering price. Some of the factors that may cause the market price of our common stock to fluctuate include:

- the timing and results of preclinical studies and clinical trials for our product candidates;
- failure or discontinuation of any of our product development and research programs;
- the success of existing or new competitive product candidates or technologies;
- results of clinical trials, or regulatory approvals of our competitors;
- commencement or termination of collaborations for our product development and research programs;
- regulatory or legal developments in the United States and other countries;
- the recruitment or departure of key personnel;
- developments or disputes including those concerning patent applications, issued patents, or other proprietary rights;

- the impact of COVID-19 on our business and on global economic conditions;
- the level of expenses related to any of our research programs or clinical development programs;
- actual or anticipated changes in our estimates as to our financial results or development timelines;
- whether our financial results, forecasts and development timelines meet the expectations of securities analysts or investors;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders, or other stockholders and the expiration of market standoff or lock-up agreements;
- changes in estimates or recommendations by securities analysts, if any, that cover our stock;
- market conditions in the healthcare sector;
- general economic, industry and market conditions; and
- the other factors described in this “Risk Factors” section.

In recent years, stock markets in general, and the market for healthcare companies in particular, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. Following periods of such volatility in the market price of a company’s securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management’s attention and resources from our business.

If securities analysts do not publish research or reports about our business or if they publish negative or neutral evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely in part on the research and reports that industry or securities analysts publish about us or our business. We do not currently have, and may never obtain, research coverage by industry or securities analysts. If no or few analysts commence coverage of us, the trading price of our stock could decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business initiate coverage with a neutral or sell rating or downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

Sales of a substantial number of shares of our common stock by our existing stockholders following this offering could cause the price of our common stock to decline.

Sales of a substantial number of shares of our common stock in the public market could occur at any time following the expiration of the market standoff and lock-up agreements or the early release of these agreements or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, and could reduce the market price of our common stock. After this offering, we will have 242,829,956 shares of common stock that will be outstanding. Of these shares, the 25,000,000 shares we are selling in this offering may be resold in the public market immediately, unless purchased by our affiliates. Substantially all of the remaining shares of our common stock that

will be outstanding after this offering are currently prohibited or otherwise restricted under securities laws, market standoff agreements entered into by our stockholders with us, or lock-up agreements entered into by our stockholders with the underwriters; however, subject to applicable securities law restrictions and excluding shares of restricted stock that will remain unvested, these shares will be able to be sold in the public market beginning 180 days after the date of this prospectus. The representatives may, in their sole discretion, release all or some portion of the shares subject to lock-up agreements at any time and for any reason. Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, any applicable market standoff and lock-up agreements, and Rule 144 and Rule 701 under the Securities Act. See the section titled “Shares Eligible for Future Sale” for additional information.

Moreover, after this offering, holders of an aggregate of approximately 194.5 million shares of our common stock will have rights, subject to conditions, to require us to file registration statements with the SEC covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also plan to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance and once vested, subject to volume limitations applicable to affiliates and the lock-up agreements described in the section titled “Underwriting” in this prospectus. If any of these additional shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations, or require us to relinquish rights to our technologies or our products.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. We, and indirectly, our stockholders, will bear the cost of issuing and servicing securities issued in any such transactions. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future offerings. To the extent that we raise additional capital through the sale of equity or debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell, or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Additionally, any future collaborations we enter into with third parties may provide capital in the near term but limit our potential cash flow and revenue in the future. If we raise additional funds through strategic partnerships, alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or our products, or grant licenses on terms unfavorable to us. Certain of the foregoing transactions may require us to obtain stockholder approval, which we may not be able to obtain.

We are an “emerging growth company,” and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an “emerging growth company” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC-registered public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 not being required to comply with the auditor requirements to

communicate critical audit matters in the auditor's report on the financial statements, reduced disclosure obligations regarding executive compensation, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. We have taken advantage of reduced reporting burdens in this prospectus. In particular, in this prospectus, we have provided only two years of audited financial statements and we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Future acquisitions, strategic investments, partnerships, or alliances could be difficult to identify and integrate, divert the attention of management, disrupt our business, dilute stockholder value and adversely affect our operating results and financial condition.

We may in the future seek to acquire or invest in businesses, products or technologies that we believe could complement or expand our technology platforms, enhance our technical capabilities, or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not such acquisitions are completed. In addition, we have only limited experience in acquiring other businesses, and we may not successfully identify desirable acquisition targets, or if we acquire additional businesses, we may not be able to integrate them effectively. following the acquisition. Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, as well as unfavorable accounting treatment and exposure to claims and disputes by third parties, including intellectual property claims. We also may not generate sufficient financial returns to offset the costs and expenses related to any acquisitions. In addition, if an acquired business fails to meet our expectations, our business, operating results and financial condition may suffer.

We will incur increased costs as a result of operating as a public company. Our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting, and other expenses that we did not incur as a private company. Section 404, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements and rules of The Nasdaq Stock Market LLC (Nasdaq Listing Rules), and other applicable U.S. rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. We expect that we will need to hire additional accounting, finance and other personnel in connection with our becoming, and our efforts to comply with the requirements of being, a public company, and our management and other personnel will need to devote a substantial amount of time towards maintaining compliance with these requirements. These requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we

expect that the rules and regulations applicable to us as a public company may make it more difficult and more expensive for us to obtain director and officer liability insurance, which could make it more difficult for us to attract and retain qualified members of our board of directors. We cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404, we will be required to furnish a report by our management on our internal control over financial reporting beginning with our second filing of an Annual Report on Form 10-K with the SEC after we become a public company. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants, adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2020, we had federal and state net operating loss (NOLs) carryforwards of approximately $116.1 million and $61.2 million, respectively. Under the Tax Cuts and Jobs Act of 2017 (the Tax Act), as modified by the Coronavirus Aid, Relief, and Economic Security Act (the CARES Act), our NOLs generated in tax years beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Act or the CARES Act. In addition, under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended (the Code), if a corporation undergoes an “ownership change,” generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation’s ability to use its pre-change NOLs and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. We may have experienced ownership changes in the past and may experience ownership changes as a result of this offering and/or subsequent shifts in our stock ownership (some of which may be outside our control). As a result, our ability to use our pre-change NOLs and tax credits to offset post-change taxable income, if any, could be subject to limitations. Similar provisions of state tax law may also apply. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. For example, California recently imposed limits on the usability of California state NOLs and tax credits to offset California taxable income in tax years beginning after December 31, 2019 and before January 1, 2023. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and tax credits.

Our business and operations would suffer in the event of computer system failures or security breaches.

Our internal computer systems, and those of our partners, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, fire, terrorism, war and telecommunication and electrical failures. We exercise little or no control over these third parties, which increases our vulnerability to problems with their systems. To the extent that any disruption or security breach results in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, the further development of our product candidates could be delayed and our business could be otherwise adversely affected.

While we have not experienced any material system failure, accident or security breach to date, we cannot assure you that our data protection efforts and our investment in information technology will prevent significant breakdowns, data leakages, breaches in our systems or other cyber incidents that could have a material adverse effect upon our reputation, business, operations or financial condition. For example, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs and the development of our product candidates could be delayed. In addition, the loss of clinical trial data for our product candidates could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Furthermore, significant disruptions of our internal information technology systems or security breaches could result in the loss, misappropriation, and/or unauthorized access, use, or disclosure of, or the prevention of access to, confidential information (including trade secrets or other intellectual property, proprietary business information, and personal information), which could result in financial, legal, business, and reputational harm to us. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our clinical trial subjects or employees, could harm our reputation directly, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business.

Indemnity provisions in various agreements potentially expose us to substantial liability for intellectual property infringement, data protection and other losses.

Our agreements with third parties may include indemnification provisions under which we agree to indemnify them for losses suffered or incurred as a result of claims of intellectual property infringement or other liabilities relating to or arising from our contractual obligations. Large indemnity payments could harm our business and financial condition. Although we normally contractually limit our liability with respect to such obligations, we may still incur substantial liability. Any dispute with a third party with respect to such obligations could have adverse effects on our relationship with that third party and relationships with other existing or new partners, harming our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, product candidates, planned nonclinical studies and clinical trials, results of nonclinical studies, clinical trials, research and development costs, regulatory approvals, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “would,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “believe,” “estimate,” “predict,” “potential,” or “continue” or the negative of these terms or other similar expressions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the sufficiency of our existing cash to fund our future operating expenses and capital expenditure requirements;
- the accuracy of our estimates regarding expenses, revenue opportunities, capital requirements and needs for additional financing;
- the scope, progress, results and costs of developing LYL797, LYL845 or any other product candidates we may develop, and conducting preclinical studies and clinical trials, including for LYL797 and LYL845;
- the timing and costs involved in obtaining and maintaining regulatory approval of LYL797, LYL845 or any other product candidates we may develop, and the timing or likelihood of regulatory filings and approvals, including our expectation to seek special designations for our product candidates for various diseases;
- our expectations regarding GSK’s plans for the NY-ESO-1 program;
- our plans relating to commercializing LYL797, LYL845 or any other product candidates we may develop, if approved, including the geographic areas of focus and our ability to grow a sales force;
- the size of the market opportunity for LYL797, LYL845 or any other product candidates we may develop in each of the diseases we target;
- our reliance on third parties to conduct nonclinical research activities for LYL797, LYL845 or any other product candidates we may develop;
- the characteristics, safety, efficacy and therapeutic effects of LYL797, LYL845 or any other product candidates we may develop;
- our estimates of the number of patients in the United States who suffer from the diseases we target and the number of subjects that will enroll in our clinical trials;
- the progress and focus of our current and future clinical trials, and the reporting of data from those trials, including the timing thereof;
- the ability of our clinical trials to demonstrate the safety and efficacy of LYL797, LYL845 or any other product candidates we may develop, and other positive results;
- the success of competing therapies that are, or may become, available;
- developments relating to our competitors and our industry, including competing product candidates and therapies;

- our plans relating to the further development and manufacturing of LYL797, LYL845 or any other product candidates we may develop, including additional indications that we may pursue;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- our potential and ability to successfully manufacture and supply LYL797, LYL845 or any other product candidates we may develop for clinical trials and for commercial use, if approved;
- the rate and degree of market acceptance of LYL797, LYL845 or any other product candidates we may develop, as well as the pricing and reimbursement of LYL797, LYL845 or any other product candidates we may develop, if approved;
- our continued reliance on third parties to conduct additional clinical trials of LYL797, LYL845 or any other product candidates we may develop, and for the manufacture of our product candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights, including LYL797, LYL845 or any other product candidates we may develop;
- our ability to retain the continued service of our key personnel and to identify, hire, and then retain additional qualified personnel;
- our expectations regarding the impact of the COVID-19 pandemic on our business and operations, including clinical trials, manufacturing suppliers, collaborators, use of contract research organizations (CROs) and employees;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of our existing cash, cash equivalents and marketable securities and the proceeds from this offering.

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein until after we distribute this prospectus, whether as a result of any new information, future events or otherwise.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

MARKET, INDUSTRY AND OTHER DATA

We obtained the industry, market and competitive position data used throughout this prospectus from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. In addition, while we believe the industry, market and competitive position data included in this prospectus is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

USE OF PROCEEDS

We estimate that we will receive net proceeds from this offering of approximately $391.4 million (or approximately $450.7 million if the underwriters' option to purchase 3,750,000 additional shares of our common stock is exercised in full) based on the assumed initial public offering price of $17.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $17.00 per share would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $23.3 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares of common stock offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $15.8 million, assuming the initial public offering price of $17.00 per share remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, establish a public market for our common stock and facilitate our future access to the public capital markets.

We currently intend to use the net proceeds we receive from this offering, together with our existing cash, cash equivalents and marketable securities, as follows:

- approximately $130.0 million to fund through completion of the Phase 1 clinical trial of LYL797;
- approximately $130.0 million to fund through completion of the Phase 1 clinical trial of LYL845;
- approximately $100.0 million to fund other research and development efforts to further advance our Gen-R, Epi-R and cell rejuvenation technology platforms;
- approximately $100.0 million to further expand our manufacturing capabilities for our product candidates; and
- the remainder for general corporate purposes, including working capital, operating expenses and other capital expenditures.

We may also use a portion of the net proceeds and our existing cash, cash equivalents and marketable securities to in-license, acquire, or invest in complementary businesses, technology platforms, products or assets. However, we have no current commitments or obligations to do so.

We believe, based on our current operating plan, that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will be sufficient to fund our operations into 2025. In particular, we expect that the net proceeds from this offering will allow us to further advance our Gen-R, Epi-R and cell rejuvenation technology platforms as well as progress the development of LYL797 and LYL845. However, our expected use of proceeds from this offering described above represents our current intentions based on our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the proceeds to be received upon the closing of this offering or the actual amounts that we will spend on the uses set forth above. The net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will not be sufficient for us to fund LYL797 and LYL845 through regulatory approval, and we anticipate needing to raise additional capital to complete the development and commercialization of LYL797 and LYL845 and any future product candidates we may develop.

The amounts and timing of our actual expenditures will depend on numerous factors, including the time and cost necessary to conduct our planned clinical trials, the results of our planned clinical trials and other factors described in the section titled “Risk Factors” in this prospectus, as well as the amount of cash used in our operations and any unforeseen cash needs. Therefore, our actual expenditures may differ materially from the estimates described above. We may find it necessary or advisable to use the net proceeds for other purposes. We will have broad discretion over how to use the net proceeds to us from this offering. We intend to invest the net proceeds to us from this offering that are not used as described above in short-term, investment-grade, interest-bearing instruments.

DIVIDEND POLICY

We do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our capital stock. We intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends, if any, will be at the discretion of our board of directors, subject to applicable laws, and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant. In addition, our ability to pay cash dividends on our capital stock in the future may be limited by the terms of any future debt or preferred securities we issue or any credit facilities we enter into.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and marketable securities and capitalization as of March 31, 2021:

- on an actual basis;
- on a pro forma basis, giving effect to the (i) automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 194,474,431 shares of our common stock which will occur upon the closing of this offering, and the related reclassification of the carrying value of our convertible preferred stock to permanent equity upon the closing of this offering, and (ii) filing and effectiveness of our amended and restated certificate of incorporation that will be in effect immediately after the closing of this offering; and
- on a pro forma as adjusted basis, giving effect to the (i) pro forma adjustments set forth above and (ii) our receipt of net proceeds from the sale of 25,000,000 shares of common stock in this offering at the assumed initial public offering price of $17.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with the sections titled “Selected Consolidated Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Description of Capital Stock,” and our unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus.

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share amounts)		
Cash, cash equivalents and marketable securities	$ 640,137	$ 640,137	$ 1,031,574
Series A convertible preferred stock, $0.0001 par value per share; 97,933,475 shares authorized, 97,386,669 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 210,158	$ —	$ —
Series AA convertible preferred stock, $0.0001 par value per share; 30,253,189 shares authorized, 30,253,189 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	146,325	—	—
Series B convertible preferred stock, $0.0001 par value per share; 23,929,531 shares authorized, 23,929,531 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	162,018	—	—
Series C convertible preferred stock, $0.0001 par value per share; 42,905,042 shares authorized, 42,905,042 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	492,467	—	—

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share amounts)		
Stockholders' (deficit) equity:			
Preferred stock, $0.0001 par value per share; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized, pro forma and pro forma as adjusted; no shares issued or outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.0001 par value per share; 264,905,000 shares authorized, 17,830,523 shares issued and outstanding, actual; 500,000,000 shares authorized, pro forma and pro forma as adjusted; 217,829,956 shares issued and outstanding, pro forma; 242,829,956 shares issued and outstanding, pro forma as adjusted	2	22	24
Additional paid-in capital	54,973	1,065,921	1,457,323
Accumulated other comprehensive income	163	163	163
Accumulated deficit	(389,186)	(389,186)	(389,186)
Total stockholders' (deficit) equity	(334,048)	676,920	1,068,324
Total capitalization	$ 676,920	$ 676,920	$1,068,324

The pro forma as adjusted information above is illustrative only, and our capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $17.00 per share would increase or decrease, as applicable, each of our pro forma as adjusted cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' deficit and total capitalization by approximately $23.3 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares common stock offered by us would increase or decrease, as applicable, each of our pro forma as adjusted cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' deficit and total capitalization by approximately $15.8 million, assuming the assumed initial public offering price of $17.00 per share remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock to be issued and outstanding, pro forma and pro forma as adjusted in the table above is based on 217,829,956 shares of common stock outstanding as of March 31, 2021 (including (i) 194,474,431 shares issuable upon the conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 and (ii) 5,525,002 shares of unvested restricted common stock subject to repurchase as of such date, but which are not considered outstanding for accounting purposes), and excludes:

- 40,556,956 shares of our common stock issuable upon the exercise of outstanding stock options as of March 31, 2021, with a weighted-average exercise price of $3.92 per share;
- 1,930,000 shares of our common stock issuable upon the exercise of outstanding stock options granted subsequent to March 31, 2021, with a weighted-average exercise price of $13.20 per share;

- 24,700,000 shares of our common stock reserved for future issuance under our 2021 Plan, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for issuance under our 2021 Plan; and
- 2,470,000 shares of our common stock reserved for issuance under our ESPP, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for future issuance under our ESPP.

DILUTION

If you invest in our common stock in this offering, your interest will be diluted to the extent of the difference between the initial public offering price per share of common stock and the pro forma as adjusted net tangible book value per share immediately after this offering.

As of March 31, 2021, we had a historical net tangible book value (deficit) of ($334.3) million, or ($14.31) per share of common stock based on the 23,355,525 shares of common stock outstanding as of such date, including 5,525,002 shares subject to repurchase as of such date. Our historical net tangible book value per share represents total tangible assets less total liabilities and convertible preferred stock, which is not included within permanent equity, divided by the number of shares of common stock outstanding as of March 31, 2021, including 5,525,002 shares subject to repurchase as of such date.

Our pro forma net tangible book value as of March 31, 2021 was $676.7 million, or $3.11 per share. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by 217,829,956 shares of common stock outstanding as of such date, including 5,525,002 shares subject to repurchase as of such date, after giving effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 194,474,431 shares of our common stock and the related reclassification of the carrying value of our convertible preferred stock to permanent equity upon the closing of this offering, and (ii) the filing and effectiveness of our amended and restated certificate of incorporation that will be in effect immediately after the closing of this offering.

After giving effect to the sale by us of 25,000,000 shares of common stock in this offering at the assumed initial public offering price of $17.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2021 would have been $1,068.1 million, or $4.40 per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $1.29 per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value of $12.60 per share to investors purchasing common stock in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this offering from the amount of cash paid by an investor for a share of common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$17.00
Historical net tangible book deficit per share as of March 31, 2021	$(14.31)	—
Pro forma increase in historical net tangible book value per share attributable to the pro forma transaction described in the preceding paragraphs	17.42	—
Pro forma net tangible book value per share as of March 31, 2021	3.11	—
Increase in pro forma as adjusted net tangible book value per share attributable to investors purchasing shares in this offering	$ 1.29	—
Pro forma as adjusted net tangible book value per share after this offering		$ 4.40
Dilution in pro forma as adjusted net tangible book value per share to investors purchasing shares in this offering		$12.60

The dilution information discussed above is illustrative only and may change based on the actual initial public offering price and other terms of this offering. Each $1.00 increase or decrease in the assumed initial public offering price of $17.00 per share would increase or decrease, as applicable, our pro forma as adjusted net tangible book value per share after this offering by $0.10 per share and

increase or decrease, as applicable, the dilution to investors purchasing shares in this offering by $0.90 per share, in each case assuming the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares of common stock offered by us would increase or decrease our pro forma as adjusted net tangible book value by approximately $0.05 per share and decrease or increase, as applicable, the dilution to investors purchasing shares in this offering by approximately $0.05 per share, in each case assuming the assumed initial public offering price of $17.00 per share remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of common stock in full, the pro forma net tangible book value per share, as adjusted to give effect to this offering, would be $4.57 per share, and the dilution in pro forma net tangible book value per share to investors in this offering would be $12.43 per share.

The foregoing discussion and tables above (other than the historical net tangible book value calculation) are based on 217,829,956 shares of common stock outstanding as of March 31, 2021 (including (i) 194,474,431 shares issuable upon the conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 and (ii) 5,525,002 shares of unvested restricted common stock subject to repurchase as of such date), and excludes:

- 40,556,956 shares of our common stock issuable upon the exercise of outstanding stock options as of March 31, 2021, with a weighted-average exercise price of $3.92 per share;
- 1,930,000 shares of our common stock issuable upon the exercise of outstanding stock options granted subsequent to March 31, 2021, with a weighted-average exercise price of $13.20 per share;
- 24,700,000 shares of our common stock reserved for future issuance under our 2021 Plan, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for issuance under our 2021 Plan; and
- 2,470,000 shares of our common stock reserved for issuance under our ESPP, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for future issuance under our ESPP.

To the extent that any outstanding options are exercised or new options are issued under our stock-based compensation plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated financial data for the periods and as of the dates indicated. The following selected consolidated statements of operations and comprehensive loss data for the years ended December 31, 2019 and 2020, except for pro forma amounts, and our selected consolidated balance sheet data as of December 31, 2019 and 2020, have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The selected consolidated statements of operations and comprehensive loss data for the three months ended March 31, 2020 and 2021, except for pro forma amounts, and the selected consolidated balance sheet data as of March 31, 2021, have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. Our unaudited condensed consolidated financial statements were prepared on a basis consistent with our audited consolidated financial statements and include, in our opinion, all adjustments of a normal and recurring nature that are necessary for the fair statement of the financial information set forth in those statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected for any period in the future and our interim results are not necessarily indicative of the results that may be expected for the full year. You should read the following selected financial data together with the sections titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Summary Consolidated Financial Data” and our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus. The selected consolidated financial data included in this section are not intended to replace the audited consolidated financial statements and unaudited condensed consolidated financial statements and are qualified in their entirety by our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except per share data)			
Consolidated Statements of Operations and Comprehensive Loss Data				
Revenue	$ 657	$ 7,756	$ 1,256	$ 2,445
Operating expenses (income):				
Research and development	63,595	182,243	25,500	41,529
General and administrative	39,151	46,881	8,880	16,831
Other operating income, net	—	(9,431)	(120)	(545)
Total operating expenses	102,746	219,693	34,260	57,815
Loss from operations	(102,089)	(211,937)	(33,004)	(55,370)
Interest income, net	8,121	5,939	2,341	354
Other (expense) income, net	(35,409)	1,526	1,423	(27)
Net loss	(129,377)	(204,472)	(29,240)	(55,043)
Other comprehensive gain (loss):				
Net unrealized gain (loss) on marketable securities	454	(198)	632	(93)
Net comprehensive loss	$(128,923)	$(204,670)	$(28,608)	$(55,136)
Net loss attributed to common stockholders:				
Net loss	$(129,377)	$(204,472)	$(29,240)	$(55,043)
Deemed dividends upon issuance or repurchase of convertible preferred stock	(1,144)	(3,582)	(3,582)	—
Net loss attributed to common stockholders	$(130,521)	$(208,054)	$(32,822)	$(55,043)

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except per share data)			
Net loss per common share, basic and diluted(1)	$(24.04)	$ (15.69)	$ (2.82)	$ (3.19)
Weighted-average shares used to compute net loss per common share, basic and diluted(1)	5,429	13,258	11,656	17,272
Pro forma net loss per common share, basic and diluted (unaudited)(2)		$ (1.04)		$ (0.26)
Weighted-average shares used to compute pro forma net loss per common share, basic and diluted (unaudited)(2)		200,327		211,746

(1) See Note 14 to our audited consolidated financial statements and Note 11 to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for a description of how we compute basic and diluted net loss per common share and the number of shares used in computing these amounts.

(2) See the subsection titled "Management's Discussion and Analysis of Financial Conditions and Results of Operations—Unaudited Pro Forma Information" for an explanation of the calculations of our basic and diluted pro forma net loss per common share and the weighted-average number of shares outstanding used in the computation of the per share amount.

	As of December 31,		As of March 31,
	2019	2020	2021
	(in thousands)		
Consolidated Balance Sheet Data			
Cash, cash equivalents and marketable securities	$ 471,032	$ 692,614	$ 640,137
Working capital(1)	418,214	568,262	552,923
Total assets	555,631	908,280	877,189
Total liabilities	147,576	189,840	200,269
Convertible preferred stock	519,163	1,010,968	1,010,968
Accumulated deficit	(129,671)	(334,143)	(389,186)
Total stockholders' deficit	(111,108)	(292,528)	(334,048)

(1) Working capital is defined as current assets less current liabilities. See our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

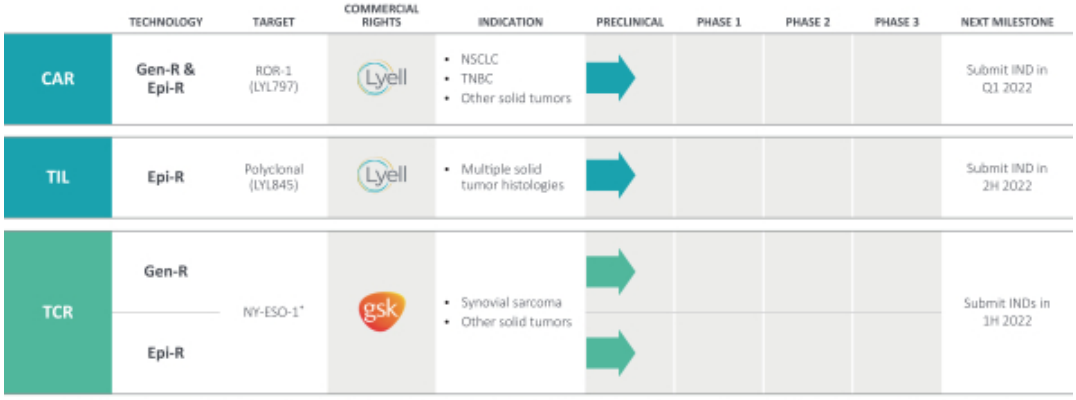
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section titled "Selected Consolidated Financial Data," and our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon current beliefs, plans and expectations related to future events and our future financial performance that involve risks, uncertainties and assumptions, such as statements regarding our intentions, plans, objectives and expectations for our business. Our actual results and the timing of selected events could differ materially from those described in or implied by these forward-looking statements as a result of several factors, including those set forth in the section titled "Risk Factors." See also the section titled "Special Note Regarding Forward-Looking Statements."

Overview

We are a T cell reprogramming company dedicated to the mastery of T cells to cure patients with solid tumors. We have assembled a world-class team, comprising some of the foremost scientific leaders in the fields of oncology and ACT, including Drs. Rick Klausner, Nick Restifo, Stan Riddell and Crystal Mackall, who have each interrogated and elucidated the mechanisms of T cell biology and its interactions with cancer for decades. We believe the key to effective cell therapy is the mastery of the identity, fate and function of cells to create living medicines. We take a systematic, interrogative, cell biology-driven approach to overcome what we view as the two major barriers to successful ACT – (1) T cell exhaustion and (2) lack of durable stemness – through the application of our proprietary epigenetic and genetic reprogramming technology platforms, Gen-R and Epi-R. Our technology platforms are designed to be applied in a target and modality agnostic manner to CAR, TIL and TCR therapies to fundamentally improve the properties of T cells needed to eradicate solid tumors. We believe our autologous T cell therapies will generate improved, durable clinical outcomes that are potentially curative for patients with solid tumors.

We are utilizing our Gen-R and Epi-R technology platforms to develop a multi-modality product pipeline across several solid tumor indications with high unmet needs and anticipate having four IND submissions by the end of 2022. Each of our programs provide opportunities to expand into additional indications beyond the patient populations we are initially targeting. Our product candidates are summarized in the table below:



* Our collaborator, GlaxoSmithKline (GSK), is developing an NY-ESO-1 TCR T cell product candidate, currently in pivotal development. While we are currently evaluating Gen-R and Epi-R in separate preclinical programs for this product candidate, together these programs could represent a single future product opportunity for GSK utilizing one or both of our technology platforms.

We were incorporated in June 2018. Our primary activities to date have included developing T cell therapies, performing research and development, acquiring technology, entering into strategic collaboration and license agreements, enabling manufacturing activities in support of our product candidate development efforts, organizing and staffing the company, business planning, establishing our intellectual property portfolio, raising capital and providing general and administrative support for these activities. All of our programs are currently in preclinical development, and we have not yet tested any product candidates in humans and do not have any products approved for sale. Since our inception, we have incurred net losses each year. Our net losses were $129.4 million and $204.5 million for the years ended December 31, 2019 and 2020, respectively, and $29.2 million and $55.0 million for the three months ended March 31, 2020 and 2021, respectively. As of March 31, 2021, we had an accumulated deficit of $389.2 million. Our net losses resulted primarily from our research and development programs and, to a lesser extent, general and administrative costs associated with our operations.

To date, we have funded our operations primarily from the issuance and sale of our convertible preferred stock and to a lesser extent from a collaboration, and we have not generated any revenue from product sales. From June 29, 2018 (inception) through March 31, 2021, we raised an aggregate of $980.7 million in gross proceeds from the sales of our convertible preferred stock. As of March 31, 2021, we had cash, cash equivalents and marketable securities of $640.1 million. Based on our current operating plan, we believe that our existing cash, cash equivalents and marketable securities, together with the net proceeds from this offering, will be sufficient to meet our working capital and capital expenditure needs into 2025.

We anticipate that our expenses and operating losses will increase substantially over the foreseeable future. The expected increase in expenses will be driven in large part by our ongoing activities, if and as we:

- continue preclinical development of our current and future product candidates and initiate additional preclinical studies;
- commence clinical trials of our current and future product candidates;
- advance our Gen-R, Epi-R and cell rejuvenation technology platforms as well as other research and development efforts;
- attract, hire and retain qualified personnel;
- seek regulatory approval of our current and future product candidates;
- expand our manufacturing and process development capabilities;
- expand our operational, financial and management systems;
- acquire and license technology platforms;
- continue to develop, protect and defend our intellectual property portfolio; and
- incur additional legal, accounting, or other expenses in operating our business, including the additional costs associated with operating as a public company.

We believe it is critically important to own, control and continuously monitor all aspects of the cell therapy manufacturing process in order to mitigate risks the field has seen, including challenges in managing production, supply chain, patient specimen chain of custody and quality control. We made a strategic decision to invest substantial capital in building our own manufacturing facility to control our supply chain, maximize efficiencies in cell product production time, cost and quality and have the ability to rapidly incorporate disruptive advancements and new innovations. Controlling manufacturing also enables us to protect proprietary aspects of our Gen-R and Epi-R technology platforms. We view our manufacturing team and capabilities as a significant competitive advantage.

In 2019, we entered into two operating lease agreements for a combined approximately 73,000 square feet of space to develop a cell therapy manufacturing facility located in Bothell, Washington. This LyFE manufacturing center has a flexible and modular design allowing us to produce plasmid, viral vector and T cell product to control and de-risk the sequence and timing of production of the major components of our supply chain related to our product candidates. At full staffing and capacity, we expect to be able to manufacture approximately 500 infusions per year depending on product candidate mix. We anticipate the facility to be cGMP qualified by the end of 2021. We believe this capacity is sufficient to support our pipeline programs through pivotal trials and, if approved, early commercialization. We anticipate continued investment in our manufacturing facility and capabilities to support our operating strategy.

The global COVID-19 pandemic continues to evolve rapidly, and we will continue to monitor it closely. The extent of the impact of the COVID-19 pandemic on our business, operations and development timelines and plans remains uncertain and will depend on certain developments, including the duration and spread of the outbreak and its impact on our clinical trial plans, CROs, contract manufacturing organizations and other third parties with whom we do business, as well as its impact on regulatory authorities and our key scientific and management personnel. While the implications of the COVID-19 pandemic on our operations remain uncertain, to date, we have not experienced delays in our discovery and development activities as a result of the COVID-19 pandemic. We have closely monitored the COVID-19 pandemic and have strived to follow recommended containment and mitigation measures, including the guidance from the Centers for Disease Control and Prevention (CDC) as well as the states of California and Washington and applicable counties. For most of the pandemic, essential laboratory and support employees worked in our facilities to continue and progress experiments. We implemented preventative measures at our facilities in order to minimize the risk of employee exposure to the virus, including the following requirements: that each employee who entered a facility agreed to comply with social distancing, frequent hand washing and the requirement to wear masks. We also increased cleaning of high touch areas, provided hand sanitizing stations and implemented an employee questionnaire to ensure employee health status and to provide for limited on-site tracing if needed. Finally, commencing in early March 2020, we suspended all non-essential business travel and directed all employees who are not essential laboratory personnel to work from home. We expect to continue such measures for the near foreseeable future. We will continue to actively monitor the situation related to COVID-19 and may take further actions that alter our operations, including those that may be required by federal, state, or local authorities, or that we determine are in the best interests of our employees and other third parties with whom we do business.

We anticipate that we will need to raise additional capital in the future to fund our operations, including the commercialization of any approved product candidates. Until such time, if ever, as we can generate significant product revenue, we expect to finance our operations with our existing cash, cash equivalents and marketable securities, the net proceeds from this offering, any future equity or debt financings and upfront and milestone and royalties payments, if any, received under future licenses or collaborations. We may not be able to raise additional capital on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

Collaboration, License and Success Payment Agreements

Below is a summary of the key terms for certain of our collaboration and license agreements. For a more detailed description of these and our collaboration, license and success payment agreements, see the section titled “Business—Collaboration, License and Success Payment Agreements” and Notes 2 and 3 to our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Fred Hutch

In December 2018, we entered into an exclusive license agreement with Fred Hutch to access certain intellectual property for the development of CARs and TCRs. In connection with this agreement, we paid $150,000 in cash and issued to Fred Hutch 1,075,000 shares of our common stock for total consideration of $0.8 million.

In December 2018, we entered into a research and collaboration agreement with Fred Hutch for the development of cellular immunotherapy products. Pursuant to this agreement, we are required to fund $12.0 million in research performed by Fred Hutch, and we recorded research and development expense of $3.7 million and $4.1 million for the years ended December 31, 2019 and 2020, respectively, and $1.0 million for both the three months ended March 31, 2020 and 2021.

We also entered into a letter agreement with Fred Hutch in December 2018, pursuant to which we may be required to make success payments (Fred Hutch Success Payments) up to an aggregate of $200.0 million based on increases in the fair market value of our Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. All shares of Series A convertible preferred stock will automatically convert into shares of common stock upon the closing of this offering on a one-for-one basis. The potential Fred Hutch Success Payments are based on multiples of increased value ranging from 10x to 50x based on a comparison of the fair value of the Series A convertible preferred stock (or common stock into which it is converted upon the closing of this offering) relative to its original issuance price at pre-determined valuation measurement dates. The Fred Hutch Success Payments can be achieved over a maximum of nine years from the effective date of the agreement. The following table summarizes the potential success payments, which are payable in cash, cash equivalents or, at our discretion, publicly-tradeable shares of our common stock:

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

The valuation measurement dates are triggered by the following events: the one-year anniversary of an initial public offering of our common stock and each two-year anniversary of the initial public offering thereafter, the closing of a change in control transaction, and the last day of the term of the success payment agreement, unless the term has ended due to the closing of a change of control transaction.

The estimated fair value of the Fred Hutch Success Payments as of December 31, 2019 and 2020 and March 31, 2021 was $3.8 million, $8.0 million and $18.2 million, respectively. With respect to Fred Hutch Success Payments, we recognized expense of $0.4 million and $4.8 million for the years ended December 31, 2019 and 2020, respectively, and $2.1 million and $8.1 million for the three months ended March 31, 2020 and 2021, respectively.

Stanford

In January 2019, we entered into an exclusive license agreement with Stanford to access certain intellectual property for the development of CARs and TCRs. In connection with this agreement, we paid $400,000 in cash and issued Stanford 910,000 shares of our common stock, for total consideration of $3.0 million, which was recorded as research and development expense for the year ended December 31, 2019. We are also required to pay Stanford an annual maintenance fee on the second anniversary of the agreement date, and each anniversary thereafter until the date of the first commercial sale of a licensed product. Under the agreement, we may also be required to make certain

pre-specified development milestone payments up to an aggregate of $3.7 million for the first licensed product for each target, and pre-specified commercial milestone payments up to an aggregate of $2.5 million for all licensed products.

In October 2020, we entered into a research and collaboration agreement with Stanford for the development of cellular immunotherapy products. Pursuant to this agreement, we are required to fund $12.0 million in research performed by Stanford, and we recorded research and development expense of $0.8 million for both the year ended December 31, 2020 and the three months ended March 31, 2021. There was no expense recorded associated with the research and collaboration agreement with Stanford for the year ended December 31, 2019 and the three months ended March 31, 2020.

We also entered into a letter agreement with Stanford in October 2020, pursuant to which we may be required to make success payments (Stanford Success Payments) up to an aggregate of $200.0 million based on increases in the fair market value of our Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. All shares of Series A convertible preferred stock will automatically convert into shares of common stock upon the closing of this offering on a one-for-one basis. The potential Stanford Success Payments are based on multiples of increased value ranging from 10x to 50x based on a comparison of the fair value of the Series A convertible preferred stock (or common stock into which it is converted upon the closing of this offering) relative to its original issuance price at pre-determined valuation measurement dates. The Stanford Success Payments can be achieved over a maximum of nine years from the effective date of the agreement. The following table summarizes the potential success payments, which are payable in cash, cash equivalents or, at our discretion, publicly-tradeable shares of our common stock:

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

The valuation measurement dates are triggered by the following events: the one-year anniversary of an initial public offering of our common stock and each two-year anniversary of the initial public offering thereafter, the closing of a change in control transaction, and the last day of the term of the success payment agreement, unless the term has ended due to the closing of a change of control transaction.

The estimated fair value of the Stanford Success Payments as of December 31, 2020 and March 31, 2021 was $8.9 million and $19.6 million, respectively. With respect to Stanford Success Payments, we recognized expense of $0.6 million for the year ended December 31, 2020 and $1.9 million for the three months ended March 31, 2021. There was no expense recorded associated with the Stanford Success Payments for the year ended December 31, 2019 and the three months ended March 31, 2020.

GSK Collaboration Agreement

In May 2019, we entered into a collaboration agreement with GSK, amended in June 2020 (the GSK Agreement), for potential T cell therapies that apply our platform technologies and cell therapy innovations to TCRs or CARs under distinct collaboration programs. Pursuant to the GSK Agreement, we received an upfront payment of $45.0 million, which was recorded as deferred revenue and revenue is recognized as the research and development services are rendered. For potential TCR or CAR therapies that are the subject of a collaboration program under the GSK Agreement, we are responsible for certain research and development activities, at our cost, up to GSK's option point. These are expensed as research and development as incurred. Generally, each party is responsible for its own cost and expense to conduct each collaboration program. In April 2021, GSK exercised its

option to the NY-ESO-1 TCR with Gen-R program and GSK will assume responsibility for future research and development of this program at its cost and expense. We are eligible to receive up to two one-time payments, totaling approximately $200.0 million in aggregate, for technology validation of Lyell's cell therapy innovations. For each cell therapy target for which there has been a joint collaboration program, we also could receive up to approximately $400.0 million in aggregate in development and sales milestones for a target that is already within GSK's pipeline and meets certain criteria, up to approximately $900.0 million in aggregate in development and sales milestones for all other targets, and tiered royalties on a per-product basis ranging from low to high single digits for targets that are already within GSK's pipeline and meet certain criteria, or from high single digit to low teens for all other targets. Royalties and milestones are paid once per target, even if there is more than one Lyell innovation applied to a T cell therapy directed to that target.

NCI License Agreement

In December 2020, we entered into a license agreement with NCI to access certain intellectual property for the development of treatment of human cancers. In connection with this agreement, we paid $100,000 upfront, and a prorated annual maintenance payment for 2020 of approximately $3,100, for total consideration of approximately $103,100, which was recorded in research and development expense for the year ended December 31, 2020. We are also required to pay NCI annual maintenance payments which may be credited against earned royalties. Under the agreement, we may also be required to make certain prespecified development milestone payments up to an aggregate of $3.1 million, and pre-specified commercial milestone payments up to a maximum aggregate of $12.0 million for all licensed products.

Components of Operating Results

Revenue

We have no products approved for sale and have never generated any revenue from product sales.

To date, we have generated revenue primarily from the recognition of a portion of the upfront payment under the GSK Agreement that we entered into in May 2019. As we continue to conduct research under the GSK Agreement, we will recognize revenue based upon our estimate of the progress made. In the future, we may generate additional revenue from other collaborations, strategic alliances, licensing agreements, product sales, or a combination of these.

Operating Expenses

Research and Development

To date, research and development expenses consist of costs incurred by us for the discovery and development of our technology platforms and product candidates and includes costs incurred in connection with strategic collaborations, costs to license technology, personnel-related costs, including stock-based compensation expense, facility and technology related costs, research and laboratory expenses, as well as other expenses, which include consulting fees and other costs. Upfront payments and milestones paid to third parties in connection with technology platforms which have not reached technological feasibility and do not have an alternative future use are expensed as incurred.

Research and development expenses also include non-cash expense related to the change in the estimated fair value of the liabilities associated with our success payments granted to Fred Hutch and Stanford. See the subsection titled "—Critical Accounting Policies and Significant Judgments and Estimates—Success Payments" below. Research and development expenses related to our success payment liabilities are unpredictable and may vary significantly from quarter to quarter and year to year due to changes in our assumptions used in the calculation.

We deploy our employee and infrastructure resources across multiple research and development programs for identifying and developing product candidates and establishing manufacturing capabilities. Due to the stage of development and number of ongoing programs and our ability to use resources across several programs, most of our research and development costs are not recorded on a program-specific basis. These include costs for personnel, laboratory and other indirect facility and operating costs.

Research and development activities account for a significant portion of our operating expenses. We anticipate that our research and development expenses will increase over the foreseeable future as we expand our research and development efforts including completing preclinical studies, commencing clinical trials, completing clinical trials, seeking regulatory approval of our product candidates, identifying new product candidates, and incurring costs to acquire and license technology platforms. A change in the outcome of any of these variables could mean a significant change in the costs and timing associated with the development of our product candidates. Because all of our product candidates are still in preclinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the preclinical development, clinical development and commercialization of product candidates or whether, or when, we may achieve profitability.

Our research and development expenses may vary significantly based on factors such as:

- the number and scope of preclinical and IND-enabling studies;
- per patient trial costs;
- the number of trials required for approval;
- the number of sites included in the trials;
- the countries in which the trials are conducted;
- the length of time required to enroll eligible patients;
- the number of patients that participate in the trials;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring requested by regulatory agencies;
- the duration of patient participation in the trials and follow-up;
- the cost and timing of manufacturing our product candidates;
- the phase of development of our product candidates;
- the efficacy and safety profile of our product candidates;
- the extent to which we establish additional collaboration or license agreements; and
- whether we choose to partner any of our product candidates and the terms of such partnership.

A change in the outcome of any of these variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate. We may never succeed in obtaining regulatory approval for any of our product candidates. We may obtain unexpected results from our preclinical studies and future clinical trials.

General and Administrative

General and administrative costs include personnel-related expenses, including stock-based compensation expense, for personnel in executive, legal, finance and other administrative functions,

legal costs, transaction costs related to collaboration and licensing agreements, as well as fees paid for accounting and tax services, consulting fees and facilities costs not otherwise included in research and development expenses. Legal costs include those related to corporate and patent matters.

We anticipate that our general and administrative expenses will increase over the foreseeable future to support our continued research and development activities, operations generally, future business development opportunities, consulting fees, as well as due to the increased costs of operating as a public company such as costs related to accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance costs and investor and public relations costs.

Other Operating Income, Net

Other operating income, net consists primarily of gains recorded on the sale of assets and upon lease remeasurement.

Interest Income, Net

Interest income, net consists primarily of interest earned on our cash, cash equivalents and marketable securities balance.

Other (Expense) Income, Net

Other (expense) income, net consists primarily of the changes in the fair value of our convertible preferred tranche liabilities and an equity warrant investment held.

Deemed Dividends Upon Issuance or Repurchase of Convertible Preferred Stock

For the year ended December 31, 2019, deemed dividends upon issuance or repurchase of convertible preferred stock consists of the amount by which the fair value of the convertible preferred stock, not subject to our convertible preferred stock tranche liabilities from our Series A convertible preferred stock financing, exceeded the cash proceeds from the sale and issuance of such convertible preferred stock. For the three months ended March 31, 2020 and the year ended December 31, 2020, deemed dividends upon issuance or repurchase of convertible preferred stock consists of the amount by which the cash paid for the repurchase of convertible preferred stock exceeded the carrying value of such convertible preferred stock.

Results of Operations

Comparison of the Three Months Ended March 31, 2020 and 2021

The following table summarizes our results of operations for the periods presented (in thousands):

	Three Months Ended March 31,		
	2020	2021	Change
Revenue	$ 1,256	$ 2,445	$ 1,189
Operating expenses (income):			
Research and development	25,500	41,529	16,029
General and administrative	8,880	16,831	7,951
Other operating income, net	(120)	(545)	(425)
Total operating expenses	34,260	57,815	23,555
Loss from operations	(33,004)	(55,370)	(22,366)
Interest income, net	2,341	354	(1,987)
Other income (expense), net	1,423	(27)	(1,450)
Net loss	$(29,240)	$(55,043)	$(25,803)
Net loss attributed to common stockholders:			
Net loss	$(29,240)	$(55,043)	$(25,803)
Deemed dividends upon issuance or repurchase of convertible preferred stock	(3,582)	-	3,582
Net loss attributed to common stockholders	$(32,822)	$(55,043)	$(22,221)

Revenue

Revenue was $1.3 million and $2.4 million for the three months ended March 31, 2020 and 2021, respectively. Revenue recognized for the three months ended March 31, 2020 and 2021 was primarily related to the recognized portion of the upfront license fee pursuant to the GSK Agreement, which was effective in July 2019. The increase of $1.2 million is due to increased research and development activities under the GSK Agreement for the three months ended March 31, 2021 compared to the three months ended March 31, 2020.

Research and Development Expenses

The following table summarizes the components of our research and development expenses for the periods presented (in thousands):

	Three Months Ended March 31,		
	2020	2021	Change
Personnel	$10,755	$14,833	$ 4,078
Success payments	2,070	9,967	7,897
Facilities and technology	5,628	7,537	1,909
Research and laboratory	4,944	4,476	(468)
Collaborations and licenses	1,843	4,013	2,170
Other	260	703	443
Total research and development expenses	$25,500	$41,529	$16,029

Research and development expenses were $25.5 million and $41.5 million for the three months ended March 31, 2020 and 2021, respectively. The increase of $16.0 million was primarily due to:

- an increase of $7.9 million associated with our Fred Hutch and Stanford success payments liabilities primarily due to the increase in the estimated per share fair value of our Series A preferred stock (or common stock into which it is converted upon the closing of this offering);
- an increase in personnel-related expenses of $4.1 million, including $2.8 million of stock- based compensation expense, which was primarily related to an increase in headcount to expand our research and development capabilities;
- an increase in collaborations and licenses costs of $2.2 million, including costs incurred in connection with strategic collaborations and costs to license technology; and
- an increase in facilities and technology costs of $1.9 million including rent, depreciation, information technology related expenses and other allocated overhead costs.

General and Administrative Expenses

General and administrative expenses were $8.9 million and $16.8 million for the three months ended March 31, 2020 and 2021, respectively. The increase of $7.9 million was primarily due to an increase of $6.7 million in stock-based compensation expense primarily related to award modifications and new awards granted. Additionally, consulting and legal costs increased $0.7 million.

Interest Income, Net

Interest income, net, was $2.3 million and $0.4 million for the three months ended March 31, 2020 and 2021, respectively. The decrease of $1.9 million was primarily due to lower interest rates on cash, cash equivalents and marketable securities balances.

Other Income (Expense), Net

For the three months ended March 31, 2020 and 2021, other income (expense), net consisted primarily of the addition in 2020, and the subsequent changes in fair value, of an equity warrant investment held.

Comparison of the Years Ended December 31, 2019 and 2020

The following table summarizes our results of operations for the periods presented (in thousands):

	Year Ended December 31,		
	2019	2020	Change
Revenue	$ 657	$ 7,756	$ 7,099
Operating expenses (income):			
Research and development	63,595	182,243	118,648
General and administrative	39,151	46,881	7,730
Other operating income, net	—	(9,431)	(9,431)
Total operating expenses	102,746	219,693	116,947
Loss from operations	(102,089)	(211,937)	(109,848)
Interest income, net	8,121	5,939	(2,182)
Other (expense) income, net	(35,409)	1,526	36,935
Net loss	$(129,377)	$(204,472)	$ (75,095)
Net loss attributed to common stockholders:			
Net loss	$(129,377)	$(204,472)	$ (75,095)
Deemed dividends upon issuance or repurchase of convertible preferred stock	(1,144)	(3,582)	(2,438)
Net loss attributed to common stockholders	$(130,521)	$(208,054)	$ (77,533)

Revenue

Revenue was $0.7 million and $7.8 million for the years ended December 31, 2019 and 2020, respectively. Revenue recognized for the years ended December 31, 2019 and 2020 was related to the recognized portion of the upfront license fee pursuant to the GSK Agreement, which was effective in July 2019. The increase of $7.1 million is due to the longer recognition period as we performed a full year of research and development activities under the GSK Agreement for the year ended December 31, 2020 compared to only a portion of the year for the year ended December 31, 2019.

Research and Development Expenses

The following table summarizes the components of our research and development expenses for the periods presented (in thousands):

	Year Ended December 31,		
	2019	2020	Change
Collaborations and licenses	$10,392	$ 79,015	$ 68,623
Personnel	31,634	54,112	22,478
Facilities and technology	11,378	24,560	13,182
Research and laboratory	8,355	17,914	9,559
Success payments	436	5,337	4,901
Other	1,400	1,305	(95)
Total research and development expenses	$63,595	$182,243	$118,648

Research and development expenses were $63.6 million and $182.2 million for the years ended December 31, 2019 and 2020, respectively. The increase of $118.6 million was primarily due to:

- an increase of $68.6 million associated with collaborative agreements and license agreements primarily related to the commitment agreement upfront payment to PACT of $63.6 million, consisting of the $50.0 million upfront payment and $13.6 million deemed to be the difference between the purchase price of the preferred stock shares we purchased from PACT and the associated value of the preferred shares, and $7.5 million in acquired in-process research and development expense related to the asset acquisition of Immulus, Inc. (Immulus), recorded for the year ended December 31, 2020;
- an increase in personnel-related expenses of $22.5 million, including $10.1 million of stock-based compensation expense, which was primarily related to an increase in headcount to expand our research and development capabilities;
- an increase in facilities and technology costs of $13.2 million including rent, depreciation, information technology related expenses and other allocated overhead costs;
- an increase in research and laboratory of $9.6 million, including laboratory supplies, preclinical studies, and other external research expenses; and
- an increase of $4.9 million associated with our Fred Hutch and Stanford success payments liabilities.

General and Administrative Expenses

General and administrative expenses were $39.2 million and $46.9 million for the years ended December 31, 2019 and 2020, respectively. The increase of $7.7 million was primarily due to an increase of $7.4 million in stock-based compensation expense primarily related to award modifications. Additionally, facilities and information technology related expenses increased $2.9 million. These increases were partially offset by a decrease in consulting and legal costs of $1.6 million.

Other Operating Income, Net

For the year ended December 31, 2020, other operating income, net consisted primarily of a gain recorded on the sale of assets of $4.9 million and a gain recorded upon lease remeasurement of $2.9 million.

Interest Income, Net

Interest income, net, was $8.1 million and $5.9 million for the years ended December 31, 2019 and 2020, respectively. The decrease of $2.2 million was due to lower interest rates on cash, cash equivalents, and marketable securities balances, partially offset by higher average cash, cash equivalents and marketable securities balances in 2020 compared to 2019.

Other (Expense) Income, Net

For the year ended December 31, 2019, other (expense) income, net consisted primarily of expense recorded due to the change in fair value of our convertible preferred tranche liabilities of $35.4 million. For the year ended December 31, 2020, other (expense) income, net consisted primarily of the addition and the change in fair value of an equity warrant investment held of $1.3 million.

Unaudited Pro Forma Information

Immediately prior to the completion of this offering, all outstanding shares of our convertible preferred stock will convert into shares of our common stock. The unaudited pro forma basic and

diluted net loss per common share for the year ended December 31, 2020 and the three months ended March 31, 2021 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later. Pro forma net loss per share does not include the shares expected to be sold in this offering.

The following table sets forth the computation of the unaudited pro forma basic and diluted net loss per common share for the periods presented:

	Year Ended December 31, 2020	Three Months Ended March 31, 2021
Numerator		
Net loss attributed to common stockholders	$ (208,054)	$ (55,043)
Denominator		
Weighted-average common shares outstanding	13,258	17,272
Weighted-average convertible preferred stock	187,069	194,474
Pro forma weighted-average shares outstanding, basic and diluted	200,327	211,746
Pro forma net loss per common share, basic and diluted	$ (1.04)	$ (0.26)

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have funded our operations primarily through the sale and issuance of convertible preferred stock. As of March 31, 2021, we had $640.1 million in cash, cash equivalents and marketable securities. Since our inception, we have incurred significant operating losses. We have not yet commercialized any product candidates and we do not expect to generate revenue from sales of any product candidates for a number of years, if ever. We had an accumulated deficit of $389.2 million as of March 31, 2021. From June 29, 2018 (inception) through March 31, 2021, we raised an aggregate of $980.7 million in gross proceeds from the sales of our convertible preferred stock.

Future Funding Requirements

We expect to incur additional losses in the foreseeable future as we conduct and expand our research and development efforts, including conducting preclinical studies and clinical trials, developing new product candidates, establishing internal manufacturing capabilities and funding our operations generally. Based on our current operating plan, we believe that our existing cash, cash equivalents and marketable securities, together with the net proceeds from this offering, will be sufficient to meet our working capital and capital expenditure needs into 2025. However, we anticipate that we will need to raise additional capital in the future to fund our operations, including the commercialization of any approved product candidates. We are subject to the risks typically related to the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business.

Our future capital requirements will depend on many factors, including:

- the scope, timing, progress, costs and results of discovery, preclinical development and clinical trials for our current and future product candidates;

- the number of clinical trials required for regulatory approval of our current and future product candidates;
- the costs, timing and outcome of regulatory review of any of our current and future product candidates;
- the cost of manufacturing clinical and commercial supplies of our current and future product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- further investment to build additional manufacturing facilities or expand the capacity of our existing ones;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- our ability to maintain existing, and establish new, collaborations, licenses, product acquisitions or other strategic transactions and the fulfillment of our financial obligations under any such agreements, including the timing and amount of any success payment, future contingent, milestone, royalty, or other payments due under any such agreement;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- expenses to attract, hire and retain, skilled personnel;
- the costs of operating as a public company;
- addressing any potential interruptions or delays resulting from factors related to the COVID-19 pandemic;
- addressing or responding to any potential disputes or litigation; and
- the extent to which we acquire or invest in businesses, products and technology platforms.

Until such time as we complete preclinical and clinical development and receive regulatory approval of our product candidates and can generate significant revenue from product sales, if ever, we expect to finance our operations from the sale of additional equity or debt financings, or other capital which come in the form of strategic collaborations, licensing, or other arrangements. In the event that additional capital is required, we may not be able to raise it on terms acceptable to us, or at all. If we raise additional funds through the issuance of equity or convertible debt securities, it may result in dilution to our existing stockholders. Debt financing or preferred equity financing, if available, may result in increased fixed payment obligations, and the existence of securities with rights that may be senior to those of our common stock. If we incur indebtedness, we could become subject to covenants that would restrict our operations. If we raise funds through strategic collaboration, licensing, or other arrangements, we may relinquish significant rights or grant licenses on terms that are not favorable to us. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic and otherwise. If we are unable to raise additional capital when desired, our business, results of operations and financial condition would be adversely affected.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Years Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
Net cash provided by (used in):				
Operating activities	$ 39,474	$(160,874)	$ (23,592)	$ (33,597)
Investing activities	(422,433)	(273,516)	(116,079)	136,677
Financing activities	351,156	476,790	476,419	884
Net (decrease) increase in cash, cash equivalents and restricted cash	$ (31,803)	$ 42,400	$ 336,748	$103,964

Operating Activities

During the three months ended March 31, 2020, net cash used in operating activities was $23.6 million, consisting primarily of our net loss of $29.2 million, partially offset by non-cash adjustments to reconcile net loss to net cash used in operating activities of $6.2 million. These adjustments consisted primarily of stock-based compensation expense of $3.3 million, $2.1 million for revaluation of our success payment liabilities to Fred Hutch and $1.6 million in non-cash lease expense, partially offset by a non-cash income of $1.4 million associated with the equity warrant investment. Additionally, net operating assets decreased $0.5 million, which included $1.3 million of non-cash revenue recognized for the three months ended March 31, 2020.

During the three months ended March 31, 2021, net cash used in operating activities was $33.6 million, consisting primarily of our net loss of $55.0 million, partially offset by non-cash adjustments to reconcile net loss to net cash used in operating activities of $26.2 million. These adjustments consisted primarily of stock-based compensation expense of $12.7 million, $10.0 million for revaluation of our success payment liabilities to Fred Hutch and Stanford, depreciation and amortization of $2.0 million and $1.0 million in non-cash lease expense. Additionally, net operating assets decreased $4.8 million, which included $2.4 million of non-cash revenue recognized for the three months ended March 31, 2021.

During the year ended December 31, 2019, net cash provided by operating activities was $39.5 million, consisting primarily of the upfront payment received in connection with the GSK Agreement of $103.6 million. This was partially offset by our net loss of $129.4 million reduced by non-cash adjustments to reconcile net loss to net cash provided by operating activities of $58.0 million. The non-cash adjustments to reconcile net loss to net cash provided by operating activities consisted primarily of a loss of $35.4 million associated with the remeasurement of our convertible preferred stock tranche liabilities from our Series A convertible preferred stock financing, stock-based compensation expense of $15.7 million, $3.6 million for the issuance of stock in connection with license agreements and $3.1 million in non-cash lease expense.

During the year ended December 31, 2020, net cash used in operating activities was $160.9 million, consisting primarily of our net loss of $204.5 million, partially offset by non-cash adjustments to reconcile net loss to net cash used in operating activities of $43.9 million. These adjustments consisted primarily of stock-based compensation expense of $33.3 million, $5.3 million for revaluation of our success payment liabilities to Fred Hutch and Stanford, depreciation and amortization of $4.3 million, $3.5 million in non-cash acquired in-process research and development expense related to the asset acquisition of Immulus, and non-cash lease expense, net of gain on lease

remeasurement, of $3.2 million, partially offset by a non-cash gain of $4.9 million recorded on the sale of assets to Outpace Bio, Inc. (Outpace). Additionally, we recognized $7.8 million of non-cash revenue for the year ended December 31, 2020.

Investing Activities

During the three months ended March 31, 2020, cash used in investing activities was $116.1 million, consisting of net purchases of marketable securities of $109.2 million and purchases of property and equipment of $6.9 million.

During the three months ended March 31, 2021, cash provided by investing activities was $136.7 million, consisting of net sales and maturities of marketable securities of $155.9 million, partially offset by purchases of property and equipment of $19.2 million.

During the year ended December 31, 2019, cash used in investing activities was $422.4 million, consisting of net purchases, sales and maturities of marketable securities of $372.4 million, purchases of other investments of $34.0 million and purchases of property and equipment of $16.0 million.

During the year ended December 31, 2020, cash used in investing activities was $273.5 million, consisting of net purchases, sales and maturities of marketable securities of $178.6 million, purchases of other investments of $43.4 million and purchases of property and equipment of $51.5 million.

Financing Activities

During the three months ended March 31, 2020, cash provided by financing activities was $476.4 million, consisting of $492.5 million in net proceeds from the sale of our convertible preferred stock, partially offset by the repurchase of preferred and common stock of $16.1 million.

During the three months ended March 31, 2021, cash provided by financing activities was $0.9 million, consisting of proceeds from the exercise of stock options.

During the year ended December 31, 2019, cash provided by financing activities was $351.2 million, consisting primarily of net proceeds from the sale of our convertible preferred stock.

During the year ended December 31, 2020, cash provided by financing activities was $476.8 million, consisting primarily of $492.5 million in net proceeds from the sale of our convertible preferred stock, partially offset by the repurchase of preferred and common stock of $16.1 million.

Contractual Obligations and Commitments

The following table summarizes our significant contractual obligations and commitments as of December 31, 2020 (in thousands):

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
Operating lease obligations(1)	$10,096	$ 21,788	$ 23,283	$58,962	$114,129
Collaboration minimum funding(2)	7,362	6,857	1,714	—	15,933
Total contractual obligations	$17,458	$ 28,645	$ 24,997	$58,962	$130,062

(1) Represents future minimum lease payments under our operating leases as of December 31, 2020, excluding expected tenant incentives to be received. The minimum lease payments above do not include any related common area maintenance charges, real estate taxes and other executory costs.

(2) Represents non-cancellable minimum funding requirements related to certain collaboration agreements.

Other than disclosed in the table above, payment obligations under our license, collaboration and acquisition agreements as of December 31, 2020 are contingent upon future events such as our achievement of pre-defined development, regulatory and commercial milestones, or royalties on net product sales. See the section titled “Business—Collaboration, License and Success Payment Agreements” for more information about these payment obligations. As described under the subsection titled “—Critical Accounting Policies and Significant Judgments and Estimates—Success Payments” below, we are also obligated to make up to $200.0 million in success payments to Fred Hutch and up to $200.0 million in success payments to Stanford based on increases in the per share fair value of our Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged. The success payments are payable in cash or cash equivalents or, at our discretion, publicly-tradeable shares of our common stock. As of December 31, 2020, the timing and likelihood of achieving the milestones and success payments and generating future product sales are uncertain and therefore, any related payments are not included in the table above.

Off-Balance Sheet Arrangements

Since our inception, we did not have, and we do not currently have, any off-balance sheet arrangements as defined under the rules and regulations of the SEC.

JOBS Act Accounting Election

We are an “emerging growth company,” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted and intend to rely on certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statement, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. In particular, in this prospectus, we have provided only two years of audited consolidated financial statements and have not included all of the executive compensation-related information that would be required if we were not an emerging growth company. In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use the extended transition period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

Critical Accounting Policies and Significant Judgments and Estimates

Our audited consolidated financial statements and unaudited condensed consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the audited consolidated financial statements and the unaudited condensed consolidated financial statements, as well as the reported revenue and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are

described in more detail in the notes to our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Revenue

We recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods and services. To determine revenue recognition for arrangements within the scope of Accounting Standards Codification (ASC) 606*, Revenue from Contracts with Customers*, (ASC 606), we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the performance obligation is satisfied.

In applying the ASC 606 framework, we must apply judgment to determine the nature of the promises within a revenue contract and whether those promises represent distinct performance obligations. In determining the transaction price, we do not include amounts subject to uncertainties unless it is probable that there will be no significant reversal of cumulative revenue when the uncertainty is resolved. Milestone and other forms of variable consideration that we may earn are subject to significant uncertainties of research and development related achievements, which generally are deemed to be not probable until such milestones are actually achieved. Additionally, we develop assumptions that require judgment to determine the standalone selling price of each performance obligation identified in the contract. We then allocate the total transaction price to each performance obligation based on the estimated standalone selling prices of each performance obligation, for which we recognize revenue as or when the performance obligations are satisfied. At the end of each subsequent reporting period, we re-evaluate the variable consideration and any related constraint and, if necessary, adjust our estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis.

Revenue allocated to performance obligations is recognized using an estimate of the percentage of completion of the project based on the costs incurred on the project as a percentage of the total expected costs. The determination of the percentage of completion requires management to estimate the costs to complete the project. A detailed estimate of the costs to complete is reassessed every reporting period based on the latest project plan and discussions with project teams. If a change in facts or circumstances occurs, the estimate will be adjusted and the revenue will be recognized based on the revised estimate. The difference between the cumulative revenue recognized based on the previous estimate and the revenue recognized based on the revised estimate would be recognized as an adjustment to revenue in the period in which the change in estimate occurs. Determining the estimate of the cost-to-complete requires significant judgment and may have a significant impact on the amount and timing of revenue recognition.

Research and Development Expenses

We record research and development costs in the periods in which they are incurred. We accrue for research and development costs based on the estimated services performed, but not yet invoiced, pursuant to contracts with research institutions or other service providers that conduct and manage preclinical studies and other research services on our behalf and record these costs in accrued liabilities and other current liabilities. We make judgments and estimates in determining the accrued liabilities balance at each reporting period. Payments made prior to the receipt of goods or services to be used in research and development are recorded as prepaid expenses until the goods or services are received.

Research and development costs also include the estimated fair value of the potential liabilities associated with the rights to success payments granted to Fred Hutch and Stanford.

To date, we have not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed may vary from our estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to our accruals could materially affect our results of operations.

Success Payments

We granted rights to success payments to Fred Hutch and Stanford pursuant to the terms of our collaboration agreements with each of those entities. Pursuant to the terms of these agreements, on each contractually prescribed measurement date, we may be required to make success payments based on increases in the estimated per share fair value of our Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged, payable in cash or cash equivalents or, at our discretion, publicly-tradeable shares of our common stock. The success payments are accounted for under ASC 718, *Compensation – Stock Compensation*, with the expense being recorded in research and development expenses. Once the service period is complete, the instrument will be accounted for under ASC 815, *Derivatives and Hedging*, and continue to be remeasured each reporting period with all changes in value recognized immediately in other income or expense.

The success payment liability is estimated at fair value at inception and at each reporting period, and the expense is accreted over the remaining service period of the collaboration agreement. To determine the estimated fair value of the success payments, we use a Monte Carlo simulation methodology which models the future movement of stock prices based on several key variables combined with empirical knowledge of the process governing the behavior of the stock price. The following variables were incorporated in the estimated fair value of the success payment liability: estimated fair value of the Series A convertible preferred stock, expected volatility, risk-free interest rate and the estimated number and timing of valuation measurement dates on the basis of which payments may be triggered. The computation of expected volatility was estimated based on available information about the historical volatility of stocks of similar publicly traded companies for a period matching the expected term assumption.

The assumptions used to estimate the fair value of the success payment liability are subject to a significant amount of judgment including the estimated fair value of the Series A convertible preferred stock, expected volatility of our common stock, estimated term and estimated number of valuation measurement dates. A small change in the assumptions, or a change in our stock price, may have a relatively large change in the estimated fair value of the success payment liability.

Stock-Based Compensation

We recognize compensation costs related to restricted stock awards and stock options granted to employees and nonemployees based on the estimated fair value of the awards on the date of grant, and we recognize forfeitures as they occur. For restricted stock awards the fair value of our common stock is used to determine the resulting stock-based compensation expense. For stock options we estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option pricing model. The fair value of the stock-based awards is recognized as an expense on a straight-line basis over the requisite service period, which is generally the vesting period.

The Black-Scholes option pricing model requires the use of highly subjective assumptions to determine the fair value of stock-based awards. These assumptions include:

- *Fair Value of Common Stock*—See the subsection titled “—Common Stock Valuations” below.

- *Expected Term*—The expected term represents the period that the stock-based awards are expected to be outstanding. We use the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- *Expected Volatility*—Since we are not yet a public company and do not have any trading history for our common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a time period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle and area of specialty. We will continue to apply this process until sufficient historical information regarding the volatility of our own stock price becomes available.
- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- *Expected Dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

See Note 12 to our audited consolidated financial statements and Note 10 to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options granted in the years ended December 31, 2019 and 2020, and the three months ended March 31, 2020 and 2021. Such assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation expense could be materially different.

The intrinsic value of all outstanding options as of March 31, 2021 was approximately $530 million, based on the assumed initial public offering price of $17.00 per share, of which approximately $198 million is related to vested options and approximately $332 million is related to unvested options.

Common Stock Valuations

Prior to this offering, we were a privately-held company with no active public market for our common stock. Therefore, our board of directors, with the assistance and upon the recommendation of management, has for financial reporting purposes periodically determined the estimated per share fair value of our common stock on the date of grant in part using contemporaneous independent third-party valuations consistent with the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation* (Practice Aid). Within the contemporaneous valuations performed by our board of directors, a range of factors, assumptions and methodologies were used. The significant objective and subjective factors included, but are not limited to:

- our most recently available valuations of our common stock performed by an independent third-party valuation firm;
- the prices of shares of our convertible preferred stock sold to investors in arm's length transactions, and the rights, preferences, and privileges of our convertible preferred stock relative to our common stock;
- committed future rounds of funding;
- our stage of development and material risks related to our business;

- our results of operations and financial position, including our levels of available capital resources;
- progress of our research and development activities;
- the lack of marketability of our common stock as a private company;
- the hiring of key personnel and the experience of management;
- the likelihood of achieving a liquidity event of an initial public offering for our stockholders, given prevailing market conditions;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors;
- the status of strategic transactions, including the acquisition of intellectual property and technology;
- trends and developments in our industry; and
- external market conditions affecting the life sciences and biotechnology industry sectors.

Our board of directors exercises significant judgment in estimating the fair value of our common stock. Such estimates involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different. Changes in judgments could have a material impact on our results of operations.

For our valuations performed in 2019 and prior to September 2020, in accordance with the Practice Aid, we determined the option pricing model (OPM) method was the most appropriate method for determining the fair value of our common stock based on our stage of development and other relevant factors. In an OPM framework, the backsolve method for inferring the equity value implied by a recent financing transaction involves making assumptions for the expected time to liquidity, volatility, discount for lack of marketability and risk-free rate and then solving for the value of equity such that value for the most recent financing equals the amount paid.

For our valuations performed in or subsequent to September 2020, in accordance with the Practice Aid, we determined the hybrid method of the OPM method and an initial public offering scenario was the most appropriate method for determining the fair value of our common stock based on our stage of development and other relevant factors. The initial public offering scenario reflected the value of our common shares assuming we complete a near-term initial public offering. Under the hybrid OPM and initial public offering scenario method, the per share value calculated under the OPM and the initial public offering scenario are weighted based on expected exit outcomes and the quality of the information specific to each allocation methodology to arrive at a final estimated fair value per share value of the common stock before a discount for lack of marketability is applied.

Following the closing of this offering, our board of directors will determine the fair market value of our common stock based on its closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Internal Control over Financial Reporting

In connection with the audit of our 2019 consolidated financial statements, we and our independent registered public accounting firm identified a material weakness in our internal control over financial reporting relating to the review of the technical accounting for settlement of tranche liabilities. While we believe that we have remediated this material weakness by hiring additional

accounting and financial reporting personnel and have not identified any material weaknesses in connection with the finalization of our 2020 consolidated financial statements, we cannot assure you that we will not identify other material weaknesses in the future. See the section titled “Risk Factors— We have in the past identified a material weakness in our internal control over financial reporting. If we identify additional material weaknesses in the future or otherwise fail to maintain effective internal control over financial reporting, we may not be able to accurately or timely report our financial condition or results of operations, which may significantly harm our business and the value of our common stock.” Pursuant to Section 404, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2022. When we lose our status as an “emerging growth company” and become an “accelerated filer” or a “large accelerated filer,” our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting.

Recently Adopted and Recent Accounting Pronouncements

See Note 2 to our audited consolidated financial statements included elsewhere in this prospectus for information about recent accounting pronouncements, the timing of their adoption, and our assessment, to the extent we have made one yet, of their potential impact on our financial condition or results of operations.

Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks in the ordinary course of our business. Our primary risks include interest rate sensitivities.

Interest Rate Risk

We had cash, cash equivalents and restricted cash of $244.8 million as of March 31, 2021, which consisted of bank deposits, money market funds and highly liquid investments purchased with original maturities of three months or less from the purchase date. We also had marketable securities of $395.8 million as of March 31, 2021. The primary objective of our investment activities is to preserve capital to fund our operations while earning a low-risk return. Because our marketable securities are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant, and a hypothetical 1% change in market interest rates during any of the periods presented would not have had a material effect on our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus. We had no debt outstanding as of March 31, 2021.

Foreign Currency Exchange Risk

All of our employees and our operations are currently located in the United States and our expenses are generally denominated in U.S. dollars. We therefore are not currently exposed to significant market risk related to changes in foreign currency exchange rates. However, we have contracted with and may continue to contract with non-U.S. vendors who we may pay in local currency. Our operations may be subject to fluctuations in foreign currency exchange rates in the future. To date, foreign currency transaction gains and losses have not been material to our consolidated financial statements, and we have not had a formal hedging program with respect to foreign currency. We believe a hypothetical 1% chance in exchange rates during any of the periods presented would not have a material effect on our consolidated financial statements included elsewhere in this prospectus.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and in the future our clinical trial costs. We believe that inflation has not had a material effect on our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus.

JOBS Act

As an emerging growth company under the JOBS Act, we can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use this extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates. We also intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404.

We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, or (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

FOUNDER'S VISION

One of the most dramatic advances in medicine over the past decade has been the emergence of immunotherapy for cancer. The development of checkpoint blockade therapy by Jim Allison, the development of TIL therapy by Steve Rosenberg and the development of CAR-T therapy by Carl June and others have taught us that autologous T cells are capable of treating and sometimes eradicating cancer. Lyell is a next generation autologous T cell therapy company whose goal is to bring to patients—simply stated—curative therapy for any solid tumor.

While our goal is ambitious, it is actually grounded in the abundant evidence that autologous T cells can eradicate even advanced and refractory cancer, but only occasionally and only in a few cancers. Our goal is therefore not to prove this possibility, but to make it reliably and predictably effective, widely applicable and practicable for any cancer in any patient!

Our approach has been to examine currently available human data to understand the underlying reasons and correlates of why and when autologous T cell therapy against solid tumors is sometimes successful and more often fails.

Through this, we have identified what we believe are the two most important barriers to successful therapy:

- Exhaustion of T cells
- Ability to create the effective and self-renewing—properties which we term durable stemness—therapeutic product in each dose we give to patients

The primacy of these barriers and the solutions for them that we have developed come from the labs of our three scientific founders, Nick Restifo, Stan Riddell and Crystal Mackall. We are striving to overcome these two barriers with our ability to reprogram T cells to adopt those qualities correlated with, and thus necessary for, successful solid tumor eradication. The pursuit to elucidate and overcome these barriers is our foundation and ethos.

We have created T Cell Reprogramming Platforms that we believe can be directed at almost any cancer. While many are exploring new ways to manufacture T cell therapies, we are asking not "how" to manufacture cell preparations, but "what" T cells and their properties we need to manufacture. Our goal is to fundamentally redefine the very composition of adoptive cell therapy preparations, and therefore their reliable efficacy. We believe that these platforms are applicable to any modality for targeting tumors, be they CARs, TILs or cloned TCRs and our clinical programs will incorporate each of these targeting modalities.

Our story is the story of our science. The execution of that science has been the product of one of the most remarkable teams that I have ever worked with. We are committed to continued scientific innovation, and so while our first two T cell reprogramming platforms are ready to be tested in the clinic, we continue to develop next generation reprogramming platforms, including one based on our ability to rejuvenate, or turn back the age of, T cells.

We have built an end-to-end company capable of discovering new science, designed to translate that science into products, manufacture those products and clinically test our science and products.

We believe that the use of living cells as therapies will be a big part of the future of medicine, representing the third evolution in therapeutics, the first being the use of small molecules which defined the pharmaceutical industry, the second, the use of biologic macromolecules which defined the biotech industry and finally, cell therapy—living, dynamic therapy to confront an always-evolving disease. It will be our ability to define and control the identity, fate and function of these cells that will enable us to create cell-based curative therapies and it is within this new paradigm of medicine that we have built Lyell.

For me personally, Lyell represents the culmination of a long journey—from the work in my own lab in the 1980's that helped define how T cells are turned on, and the discovery of the molecular engine that underlies CAR T cells and the activity of all T cells when they see their target antigens; to overseeing the nation's cancer program as NCI Director in the 1990s; to my co-founding of Juno Therapeutics.

The dream of creating curative therapies for cancer for the many patients and families confronting this disease has inspired and motivated me to stay on that journey. It is the privilege of building companies that can take science into the clinic, with aspirations to change the lives of those patients, that I hope will be the beginning of the end of that journey.

Richard D. Klausner, M.D.
Founder and Executive Chairman

BUSINESS

Overview

We are a T cell reprogramming company dedicated to the mastery of T cells to cure patients with solid tumors. We have assembled a world-class team, comprising some of the foremost scientific leaders in the fields of oncology and ACT, including Drs. Rick Klausner, Nick Restifo, Stan Riddell and Crystal Mackall, who have each interrogated and elucidated the mechanisms of T cell biology and its interactions with cancer for decades. We believe the key to effective cell therapy is the mastery of the identity, fate and function of cells to create living medicines. We take a systematic, interrogative, cell biology-driven approach to overcome what we view as the two major barriers to successful ACT – (1) T cell exhaustion and (2) lack of durable stemness – through the application of our proprietary epigenetic and genetic reprogramming technologies, Gen-R and Epi-R. Our technologies are designed to be applied in a target and modality agnostic manner to CAR, TIL and TCR therapies to fundamentally improve the properties of T cells needed to eradicate solid tumors. We believe our autologous T cell therapies will generate improved, durable clinical outcomes that are potentially curative for patients with solid tumors. We are building a multi-modality product pipeline across several solid tumor indications with high unmet needs and anticipate making four IND submissions by the end of 2022.

Our Technology Platforms

ACT has demonstrated profound results in some patients suffering from hematologic tumors, but solid tumors are more complex and have evolved multiple mechanisms to evade and ultimately overcome the immune system. This has limited the use of ACTs in non-hematologic settings. We believe T cell exhaustion and lack of durable stemness – the T cell's loss of continual proliferative capacity, and abilities of self-renewal and differentiation to effector states to eliminate solid tumors – are two major barriers limiting the efficacy of ACT in solid tumors.

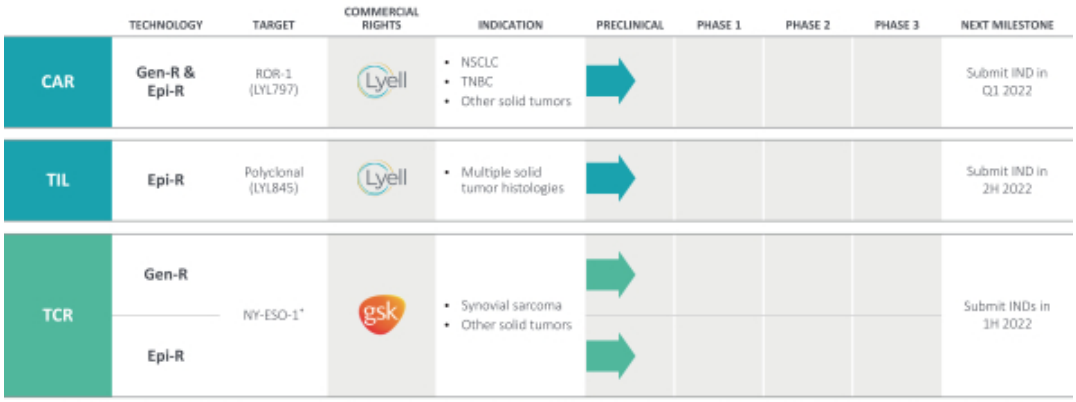
We endeavor to overcome these two major barriers to ACT in solid tumors through our proprietary Gen-R and Epi-R technology platforms.

- **Gen-R** – our proprietary *ex vivo* genetic reprogramming technology to overcome T cell exhaustion, which results from transcriptional and epigenetic changes that occur as T cells differentiate into a dysfunctional state. Our scientific co-founders discovered T cell exhaustion occurs more frequently in solid tumors than in hematologic cancers where CAR T cells have demonstrated efficacy. The discovery of Gen-R came from the realization that chronic antigen stimulation, or when the T cell is always "on," combined with an immunosuppressive solid TME, likely promotes the development of T cell exhaustion. In preclinical solid tumor models, Gen-R overcame T cell exhaustion and restored antitumor activity through the optimized overexpression of c-JUN, a protein which, when dysregulated, has been shown to play a crucial role in T cell exhaustion.
- **Epi-R** – our proprietary *ex vivo* epigenetic reprogramming technology to create a novel population of T cells with durable stemness. Stemness, the quality of T cells capable of self-renewal, expansion, persistence and anti-tumor response has been reported in the literature to correlate with clinical responses to immunotherapy. However, we believe *durable* stemness is required for long-term efficacy against solid tumors. Durable stemness relates to the ability of T cells to maintain their stemness until the tumor is eradicated, that is, they have the ability to self-renew despite continued persistent signals from the tumor driving activation, proliferation and differentiation. We believe that as these cells proliferate, they generate progeny cells that can both differentiate to polyfunctional effector cells, and/or re-populate the population of less differentiated T cell states as they continue to divide, thereby maintaining stemness. Epi-R is

designed to intentionally and reproducibly generate populations of T cells which have this property of durable stemness. Furthermore, relating specifically to TIL, application of Epi-R has generated T cell preparations that exhibit increased polyclonality, i.e. the retention of a broad repertoire of TCR clonotypes.

Our Pipeline

We are utilizing our Gen-R and Epi-R technology platforms to develop a multi-modality product pipeline with four IND submissions expected by the end of 2022. Each of our programs provide opportunities to expand into additional indications beyond the patient populations we are initially targeting. Our product candidates are summarized in the table below:



* Our collaborator, GlaxoSmithKline (GSK), is developing an NY-ESO-1 TCR T cell product candidate, currently in pivotal development. While we are currently evaluating Gen-R and Epi-R in separate preclinical programs for this product candidate, together these programs could represent a single future product opportunity for GSK utilizing one or both of our technology platforms.

LYL797: ROR1 + Gen-R + Epi-R

We are applying our Gen-R and Epi-R technology platforms to our lead CAR program, LYL797, which is expected to be an IV administered CAR T cell product candidate targeting ROR1 with a single-chain variable fragment derived from rabbit anti-R12 antibody that recognizes and binds to ROR1 and a proprietary optimized EGFRopt safety switch. We are initially developing LYL797 for the treatment of ROR1+ NSCLC and TNBC. ROR1 expression is associated with poor prognosis. Significant subsets of patients with common cancers express ROR1, including TNBC (~60%) and NSCLC (~40%), two of the highest ROR1 expressing indications. If successful, we anticipate expanding into other ROR1+ cancers with a lower incidence of ROR1 expression, including potentially HR+ breast cancer, ovarian and other solid tumors. We expect to submit an IND for LYL797 in the first quarter of 2022.

LYL845: TIL + Epi-R

We are applying our Epi-R technology to develop our product candidate, LYL845, which is expected to be an IV administered autologous TIL therapy in multiple solid tumors. TIL have previously shown clinical benefit in patients with melanoma as well as other solid tumors with high mutation burdens including advanced cervical, lung, breast and gastrointestinal cancers. TILs target a variety of tumor antigens, but it is thought that the clinical efficacy of TILs is largely driven by specific recognition of mutated tumor neoantigens. Further, broad TIL efficacy has been limited by poor enrichment of tumor-reactive T cells, poor quality and growth potential of expanded T cells, and failure to maintain polyclonality of TILs during production. We have designed LYL845 to incorporate our Epi-R technology to result in enhanced T cell potency, antitumor activity and polyclonality of TILs. If successful, we

expect to expand development broadly to potentially include melanoma, cervical, head and neck, pancreatic, breast, colorectal and NSCLC. We expect to submit an IND for LYL845 in the second half of 2022.

NY-ESO-1

Our collaborator, GSK, is developing a NY-ESO-1 TCR T cell product candidate, NY-ESO-1 ^{C239}, currently in pivotal development. We are collaborating with them to potentially enhance this product candidate with Gen-R and Epi-R. Preclinical efforts and IND-enabling studies are underway. We anticipate GSK will conduct initial clinical trials with an enhanced product candidate in synovial sarcoma and multiple other solid tumor indications. We anticipate an IND submission in the first half of 2022.

Our Manufacturing Capabilities

We believe it is critically important to own, control and continuously monitor all aspects of the cell therapy manufacturing process in order to mitigate risks the field has seen, including challenges in managing production, supply chain, patient specimen chain of custody and quality control. We made a strategic decision to invest in building our own manufacturing facility to control our supply chain, maximize efficiencies in cell product production time, cost and quality, and have the ability to rapidly incorporate disruptive advancements and new innovations. Controlling manufacturing also enables us to protect proprietary aspects of our Gen-R and Epi-R technology platforms. We view our manufacturing team and capabilities as a significant competitive advantage.

Our LyFE manufacturing center is approximately 73,000 square feet and comprises laboratories, offices and manufacturing suites. LyFE has a flexible and modular design allowing us to produce plasmid, viral vector and T cell product to control and de-risk the sequence and timing of production of the major components of our supply chain related to our product candidates. At full staffing and capacity, we expect to be able to manufacture approximately 500 infusions per year depending on product candidate mix. We believe this capacity is sufficient to support our pipeline programs through pivotal trials and, if approved, early commercialization. We anticipate the facility to be cGMP qualified by the end of 2021.

Our Team

The scientific and leadership team we have assembled comprise some of the foremost leaders in the fields of oncology and ACT. These thought leaders have each interrogated and elucidated the mechanisms of T cell biology and its interactions with cancer for decades and have authored over 1,000 publications focused on the interaction between the immune system and cancer. Our management team is comprised of experienced executives who come from academia and industry-leading cell and gene therapy companies including Atara, Juno Therapeutics and Sangamo; oncology therapeutic development companies including Amgen, AstraZeneca, Genentech, Incyte and Seagen; and cancer diagnostic companies including Genomic Health, GRAIL and Illumina. The core members of our scientific and leadership team include:

- ***Dr. Rick Klausner*.** We were founded in 2018 by Dr. Rick Klausner, former Director of the NCI, co-founder of Juno and GRAIL and whose lab in the 1980s isolated the critical components of the TCR that enabled the creation of CAR T cells. Dr. Klausner is our Executive Chairman. He is well known for his work in cell and molecular biology, immunology and human genetics, and has been the author of more than 300 scientific articles and several books, in addition to receiving numerous awards, honorary degrees and other honors. He oversaw the writing of The National Science Education Standards, the first such standards for U.S. Science

Education, and served as Liaison to the White House Office of Science & Technology Policy. He is a member of the National Academy of Sciences, the Institute of Medicine and the American Academy of Arts and Sciences.

- ***Liz Homans.*** Our CEO, Ms. Homans, brings over 30 years of strategy, product development and commercialization experience. She spent over a decade at Genentech in multiple divisions including global product development, regulatory operations and U.S. sales and marketing. She spent most of her Genentech career leading large complex oncology development programs from Phase 2 through completion of pivotal trials submission, approval and launch. She is also an experienced commercial leader having led the U.S. Xolair franchise through two years of double-digit growth. She completed her tenure at Genentech by managing the U.S. HER2+ breast cancer franchise. Ms. Homans also led global regulatory operations for Roche. Prior to Genentech she spent four years at Jazz Pharmaceuticals where she built the project leadership and portfolio strategy team, and she also has nearly a decade of business strategy consulting experience.
- ***Dr. Nick Restifo.*** Prior to joining Lyell as our Executive Vice President of Research, Dr. Restifo spent 31 years at the NCI with a sole focus on the development of immunotherapeutic treatments for patients with cancer. His contributions to the field include the molecular definition of the qualities of highly effective antitumor T cells; identification of the gene expression within tumors that is required for successful immunotherapy; and understanding the impact of host factors in cancer immunotherapy. His basic and clinical findings of how immune cells can destroy tumors have become mainstays of cell-based immunotherapies being used worldwide, documented in more than 340 publications and numerous book chapters on cancer immunotherapy.
- ***Dr. Stan Riddell.*** Dr. Riddell is a Founder of Lyell and Head of our R&D Executive Committee. He is also a Professor, Program in Immunology and the Immunotherapy Integrated Research Center at the Fred Hutchinson Cancer Research, Professor of Medicine at the University of Washington, Distinguished Affiliate Professor at the Technical University of Munich, and a cofounder of Juno Therapeutics. Dr. Riddell has designed multiple clinical trials of adoptive T cell therapy using unmodified and genetically modified T cells including the first trial of CD19 CAR modified T cells of defined subset composition, which formed the foundation for Liso-Cel, which is FDA approved for treatment of diffuse large B cell lymphoma. He has more than 225 publications and his research has contributed to understanding the role of human T cell subsets in protective immunity to pathogens and tumors.
- ***Dr. Crystal Mackall.*** Dr. Mackall, a Founder of Lyell, is the Ernest and Amelia Gallo Family Professor of Pediatrics and Medicine at Stanford University. She serves as Founding Director of the Stanford Center for Cancer Cell Therapy, Associate Director of Stanford Cancer Institute, Leader of the Cancer Immunology and Immunotherapy Program and Director of the Parker Institute for Cancer Immunotherapy at Stanford. During a 27-year tenure culminating as Chief of the Pediatric Oncology Branch, NCI, and now at Stanford, she has led an internationally recognized translational research program focused on immune-oncology.

Our Strategy

Our goal is to utilize our proprietary technology platforms to develop curative ACT for patients with solid tumors. Key components of our business strategy to achieve this goal include:

- ***Leverage our two proprietary, cell reprogramming technology platforms to fundamentally improve T cell efficacy and eradicate solid tumors.*** We seek to produce T cell therapies that eradicate solid tumors by addressing the major barriers to ACT efficacy, including overcoming exhaustion of T cells, establishing durable stemness and targeting cancer cells safely

and with high specificity. We are advancing two primary technology platforms for reprogramming T cells to be effective in eradicating tumors: Gen-R and Epi-R.

- ***Rapidly advance our deep multi-modality pipeline of product candidates.*** Our proprietary technology platforms are designed to be applied in a target and modality agnostic manner to CAR, TIL and TCR cell therapies. We believe our autologous T cell therapies will generate improved, durable clinical outcomes that are potentially curative for patients with solid tumors. We expect four IND submissions by the end of 2022 from our multi-modality product pipeline.
- ***Continually innovate to develop and advance disruptive, next generation platform technologies for cell-based therapy.*** We are committed to continuing to discover, develop and advance disruptive technologies that have the potential to revolutionize ACT and its promise to cure patients with solid tumors. For example, we believe our T cell rejuvenation platform technology may represent the next frontier of epigenetic reprogramming for cell-based therapy.
- ***Establish proprietary state of the art manufacturing infrastructure and capabilities to control all aspects of cell product preparations.*** We have and will continue to invest in manufacturing to mitigate the risks the field has seen, including challenges in managing production, supply chain, patient specimen chain of custody and quality control. Controlling manufacturing also enables us to protect proprietary aspects of Gen-R and Epi-R, and rapidly incorporate new innovations. We expect our multi-product manufacturing facility, which can produce plasmid, lentivirus and cells, to be cGMP qualified by the end of 2021.
- ***Implement digital technologies and cloud solutions to accelerate and enhance our science and operations.*** High-performance cloud computing, scalable cloud storage, robotic and artificial intelligence, coupled with our collaboration with Amazon Web Services (AWS), enable real time monitoring of our manufacturing process and deep insights from our research, manufacturing and future clinical development efforts. This approach is being leveraged to inform our next generation cell therapies.
- ***Aggressively generate, secure and defend intellectual property on our differentiated technology platforms and product candidates.*** We have developed and secured intellectual property, including know-how, through our internal research efforts, licensing agreements and collaborations. We rigorously analyze, file and protect our intellectual property.

Background

The Third Wave of Medicine: Cells as Therapeutics

We are at the beginning of the third wave of modern therapeutic innovation where researchers are exploring approaches to harness the power of living immune cells to treat disease. The first wave of therapeutic innovation started with the mastery of small molecule chemistry which created the pharmaceutical industry. The second wave of modern medicine began in the 1980s with the birth of biotechnology and was based on the ability to master the design and production of protein-based macromolecules.

With some notable exceptions, the first and second wave approaches have not been able to cure patients with late stage, metastatic cancer. We believe the third wave of innovation, one utilizing living immune cells, has the potential to deliver the promise of curative therapies for cancer patients with late-stage solid tumors. The recent development and approvals of T cells engineered with CARs targeting CD19 in B-cell hematologic cancers demonstrated that complete responses could be achieved in a significant percentage of late-stage patients with large treatment-refractory tumor burdens. That said, the promise of cell therapy has not proven to be reliable in solid tumors broadly, which represent over 90% of cancers.

We are pioneering the reprogramming of living cells to become therapeutic agents for solid tumors. We believe the key to the development of cell therapy is the mastery of the identity, fate and function of cells to create living medicines. Our goal is to create curative therapies for solid tumor patients, and we believe the utilization of living immune cells has the potential to deliver, consistently and reliably, on the promise of ACT.

Targeting Cancer Cells: ACT Modalities and Their Limited Efficacy Against Solid Tumors to Date

Most of the activity in ACT for cancer has focused on ways to provide the requisite specificity of the T cells to cancer: identifying appropriate tumor-specific targets, evaluating their frequency on cancers versus healthy tissues, and evaluating the best ways to traffic immune cells to them and attack the cancer. There are three main modalities to achieve target specificity in ACT today: CARs, TCRs, and TILs, and unfortunately, with very few exceptions, they have not meaningfully improved clinical outcomes in patients suffering from solid tumor cancers.

- ***CARs***: Chimeric antigen receptors are artificial cell surface receptors that are genetically engineered onto T cells and comprise an extracellular binding domain specific to a surface molecule on tumor cells. CARs are linked to an intracellular activation domain that turns the T cells “on” to kill target tumor cells when the antibody portion binds to the tumor cell target.

  CAR-based ACT has shown efficacy in some cancers, including durable complete remissions. The greatest clinical benefit has been demonstrated in B cell malignancies where the adoptive transfer of autologous T cells engineered with a CAR targeting CD19 has been shown to induce complete remission in 40 – 90% of patients resulting in the approval of four CD19 CAR T cell therapies. However, CAR T cells have thus far demonstrated limited efficacy in solid tumors. Furthermore, the identification of targets with sufficient differential expression between tumor and normal tissues has limited the broader development of CAR T cell therapies in solid tumors.

- ***TCRs***: T cell receptors are directed against fragments of intracellular proteins that are presented by the human leukocyte antigen (HLA) complex on the surface of target cells. T cells can be engineered with a cloned TCR that mono-specifically directs the T cell to recognize a neoantigen that arises from the tumor’s mutated proteins or to recognize an aberrant or overexpressed self-protein. TCRs specific for neoantigens have the advantage of being tumor specific, meaning that normal tissues do not express these neoantigens thereby reducing the risk of normal tissue toxicity.

  TCR-based ACT has been utilized clinically to treat a limited number of cancers. Although there has been some clinical success in treating cancer patients with TCR-engineered T cell products, most patients infused with these cells do not experience durable, complete responses to therapy.

- ***TILs***: Tumor infiltrating lymphocytes are T cells which have entered and reside within the tumor. They are polyclonal in nature, i.e. they are able to recognize multiple tumor neoantigens. A TIL-based ACT approach isolates and expands TILs from tumor masses and reinfuses the expanded cells into the patient. The polyclonality of TILs is a major advantage to address the heterogeneity and antigen loss challenges of solid tumors. As with TCRs, the risk of normal tissue toxicity is mitigated because the targets for these T cells are directed against neoantigens which arise from the accumulation of mutations in genes unique to the cancer.

  While a handful of clinical trials, primarily academic, have demonstrated TILs may generate durable responses in certain tumor types such as melanoma, they have shown limited efficacy in patients with other prevalent solid tumor cancers. Regardless, most patients treated with TIL therapy do not respond to treatment, and most patients who do respond will eventually relapse.

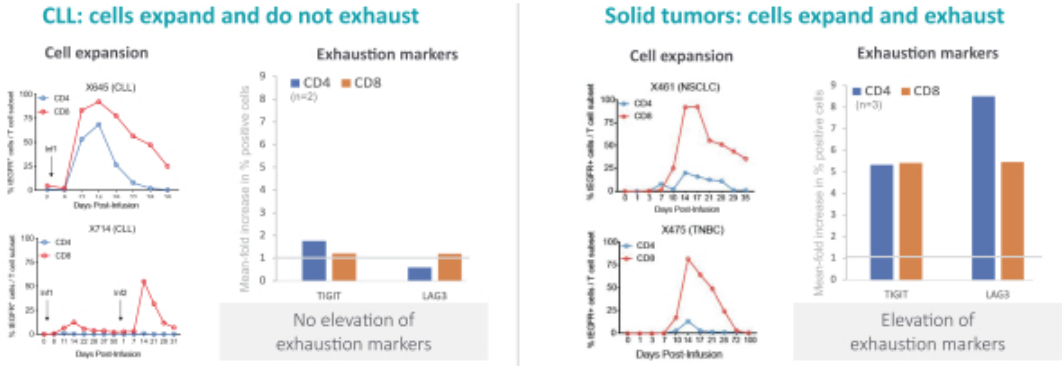
Barriers to ACT Efficacy in Solid Tumors

T Cell Exhaustion

T cell exhaustion is a state of cell differentiation characterized by impairment of effector function, elevated expression of inhibitory receptors such as PD-1 (also an activation marker), LAG3, TIM-3 and TIGIT. T cells that recognize cancer cells or that respond to chronic infections such as those caused by human immunodeficiency virus and hepatitis viruses in humans and certain strains of lymphocytic choriomeningitis virus in mice frequently enter this state of exhaustion. Because T cell exhaustion is observed in tumor-specific T cells in most solid tumors, we believe this is a primary mechanism preventing T cells from eliminating cancer cells and presents a barrier for the effectiveness of ACT in solid tumors. Solid tumors have a more organized, immunosuppressive TME than hematologic cancers, which when combined with chronic antigen stimulation, drives tumor-reactive T cells to lose function and renders them incapable of tumor destruction. Animal model and clinical data demonstrate that adoptively transferring tumor-specific T cells, including CAR T cells, to treat solid tumors can result in the development of characteristic features of exhaustion in transferred T cells, including upregulation of inhibitory receptors, loss of effector function and the inability to proliferate, persist and eliminate the tumor.

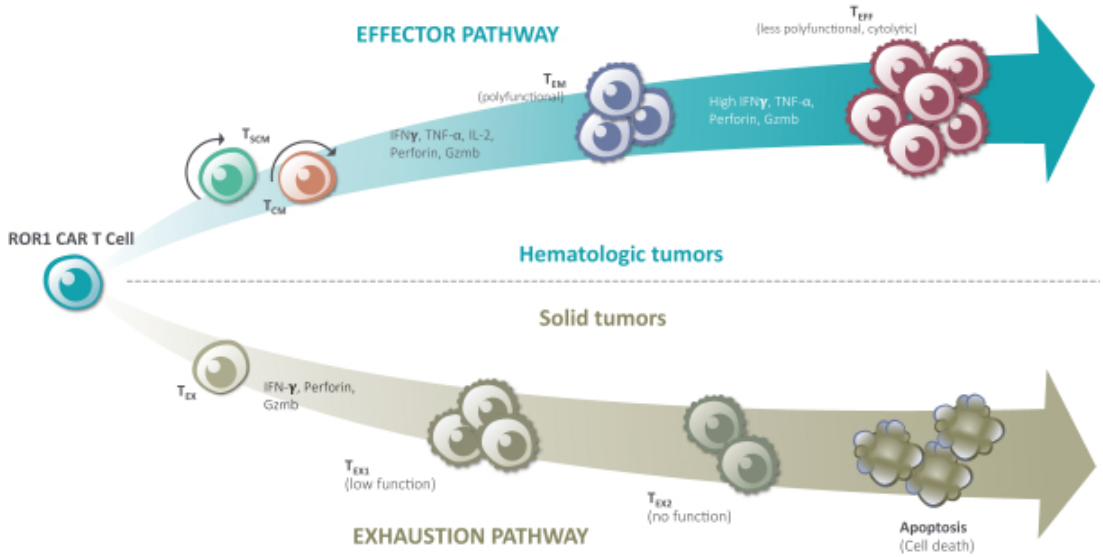
It is now well established that CAR T cells can be effective in hematologic tumors, including ALL, NHL and MM. In a revealing clinical experiment performed by Fred Hutch in collaboration with our founder, Dr. Riddell, it was demonstrated that CAR T cells specific for ROR1 expressed on both solid tumors (NSCLC, TNBC) and a hematologic tumor, chronic lymphocytic leukemia (CLL), exhaust after administration to patients with these solid tumors but remain functional after administration to patients with CLL. Data from this clinical experiment with ROR1 CAR T cells in NSCLC, TNBC and CLL were reported. This experiment found that in two refractory CLL patients, the ROR1 positive tumor cells were eliminated, including one complete response. The elimination of ROR1 positive tumor cells was associated with the expansion of CAR T cells in the blood and accumulation of CAR T cells in the bone marrow. There was limited upregulation of inhibitory receptors associated with exhaustion on the CAR T cells expanding in the patient compared to the infusion product in the CLL patients. On the other hand, in the solid tumor patients, ROR1 CAR T cells only expanded in some patients. Isolation of these expanded T cells from the blood, showed that they had upregulated multiple inhibitory receptors, including PD-1, LAG3, TIM-3 and TIGIT, and lost the ability to produce cytokines such as IFNg, TNFa and GM-CSF upon restimulation *ex vivo* compared with CAR T cells in the infusion product and that they exhibited a transcriptional profile consistent with exhausted T cells. These findings are consistent with the development of T cell exhaustion, and antitumor activity was limited (one partial remission in 14 treated patients). At the CAR T cell doses administered, no toxicity to normal tissues was observed in patients with solid tumors or CLL (despite the high levels of active circulating ROR1 CAR T cells) in this experiment.

Figure 1: The same ROR1 CAR T cells exhaust in solid tumor patients but not in CLL patients. In both CLL and NSCLC/TNBC patients the CD4+ and CD8+ CAR T cells expand. The exhaustion markers TIGIT and LAG3 are greatly increased only in the solid tumor patients, suggest demonstrated loss of function of these exhausted cells.



These findings indicated that whereas in a hematologic tumor CAR T cells differentiate along an effector pathway capable of eradicating cancer cells, in solid tumors the same CAR T cells differentiate along a distinct pathway leading to exhaustion, loss of function and lack of antitumor efficacy. By clinically testing the same CAR T cell, we conclude that the nature of the tumor (solid versus hematologic) is a major determinant of the fate of ACT T cells.

Figure 2: In hematologic tumors, CAR T cells differentiate along the upper path towards functional effector cells, whereas in solid tumors, CAR T cells differentiate down the lower path into an exhausted state.



Lack of Stemness

Patients with solid tumors can experience profound clinical responses to immunotherapy, albeit in a minority of cases. ACT and immune checkpoint blockade (ICB) both depend on the activities of T

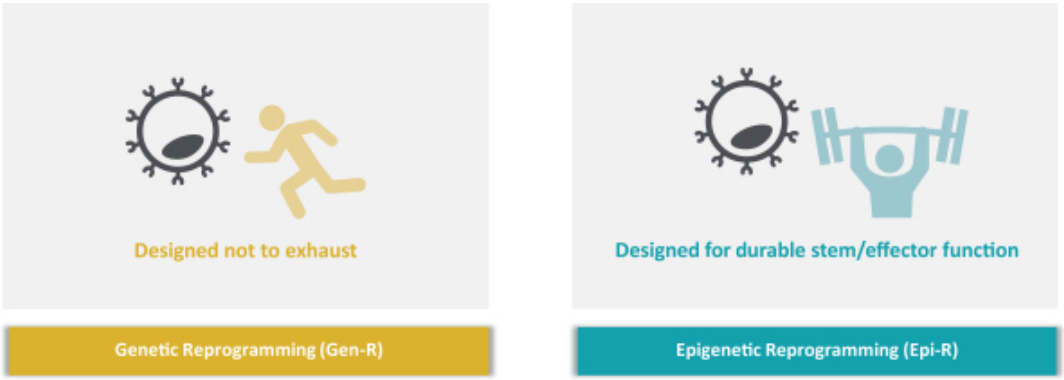
cells that react with neoantigens expressed by tumors. Until recently, the characteristics of clinically successful neoantigen-reactive T cells were unclear. However, researchers have recently identified T cell stemness – especially as driven by the hallmark transcription factor TCF7 – as a meaningful correlate of successful cancer immunotherapy in both ICB and ACT settings. Dr. Hacohen et. al. at the Broad Institute have correlated the presence of $CD8^+$ T cells expressing TCF7 predicted positive clinical outcomes to ICB. More recently, a study conducted by Drs. Steven Rosenberg and Sri Krishna at the NCI concluded that TIL-ACT responders exhibited a population of stem-like TILs positive for TCF7 in the infusion product. These data and others suggest that stem-like T cells capable of self-renewal, expansion and persistence are required for profound antitumor responses *in vivo*. Furthermore, they indicate an "active ingredient": a component of the cell preparation that is responsible for the activity but only present in some preparations.

These clinical findings are consistent with our view of T cell development. Stem-like T cells are capable of self-renewal, expansion, persistence and superior antitumor response. These stem-like T cells also are capable of differentiation into effector states that are short-lived but required to kill cancer cells. However, effective, curative ACT must deliver a population of T cells with durable stemness, capable of continual self-renewal – generating more of themselves – while also generating progeny cells that can differentiate to polyfunctional effector cells.

Therefore, we seek to go beyond the clinical correlates of highly effective T cells to intentionally create cells with durable stemness, meaning that the living T cells have a quality which allows them to "durably" self-renew in the face of continued persistent signals from the tumor driving activation, proliferation and differentiation, and continue to do so *in vivo* until the cancer is eradicated. What durable stemness enables is that even with these persistent signals, the T cells do not lose their stem-like properties. We believe that a major barrier to effective solid tumor ACT is that most cell preparations *lack* this level of stemness. It is durable stemness which we believe will be required to address the burden of cancer in patients with solid tumors, and we aim to reliably and intentionally achieve durable stemness with our Epi-R technology.

Our Technology Platforms

We have developed two technology platforms to address two major barriers to effective solid tumor ACT. Gen-R overcomes loss of T cell function attributable to an exhausted state, and Epi-R creates T cell populations with properties of durable stemness, while also maintaining polyclonality, an advantage of TIL ACT.



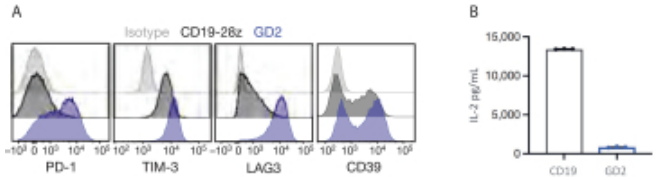
Gen-R for Overcoming T Cell Exhaustion

T cell exhaustion is an important mechanism of ACT failure, illustrated by the inability of CAR T cells to treat solid tumors, as opposed to hematologic tumors. T cell exhaustion results from transcriptional and epigenetic changes that occur as T cells differentiate into a dysfunctional state. A strategy to prevent T cells from becoming exhausted would be ideal for improving the effectiveness of ACT against solid tumors. Our scientific co-founder Dr. Mackall identified such a strategy to utilize *ex vivo* genetic reprogramming to overcome the problem of T cell exhaustion.

Dr. Mackall demonstrated that genetically modifying T cells to overexpress the c-JUN protein prevented them from losing function. c-JUN combines with another protein, FOS, to form an AP1 protein complex. This protein complex works in cooperation with NFAT to direct the transcription of genes required for T cell effector function. Overexpression of c-JUN in CAR T cells restores their antitumor activity in preclinical solid tumor models where the same CAR T cells that do not overexpress c-JUN exhaust and fail to eliminate the tumor. We have further advanced the optimization, construct design, models and data related to Dr. Mackall's work, and as applied in our product candidates, we term the optimized overexpression of c-JUN our Gen-R technology.

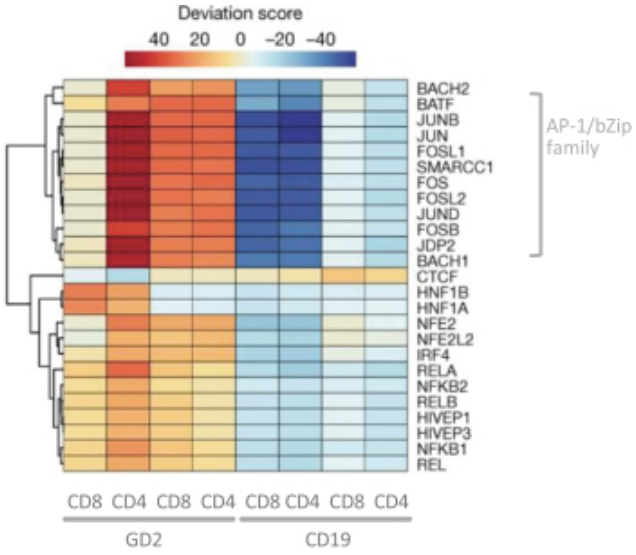
The discovery of Gen-R came from the realization that chronic stimulation of a T cell by an antigen (the T cell is always turned "on") combined with an immunosuppressive solid tumor TME likely promotes the development of T cell exhaustion. Dr. Mackall developed a GD2-targeted CAR T cell that is always turned on and quickly develops exhaustion. This model system drove the CAR T cells to have the hallmark phenotypic, functional, transcriptomic and epigenetic abnormalities described in cancer and chronic viral infections where T cells become exhausted. Compared to normal CD19-targeted CAR T cells that are not always "on," the GD2 CAR T cells demonstrated elevated expression of cell surface exhaustion-associated markers such as PD-1, TIM-3, LAG3 and CD39 (Panel A in Figure 3), and these T cells had decreased function as measured by secretion of IL-2 compared with T cells expressing the CD19 CAR (Panel B in Figure 3).

Figure 3: The GD2 CAR T cell is a model for exhaustion. These T cells exhibit elevated expression of cell surface exhaustion-associated markers, including PD-1, TIM-3, LAG3 and CD39 (left). When compared to CD19 CAR T cells, which are not exhausted, the GD2 CAR T cells fail to produce IL-2, which is a characteristic of exhausted cells (right).



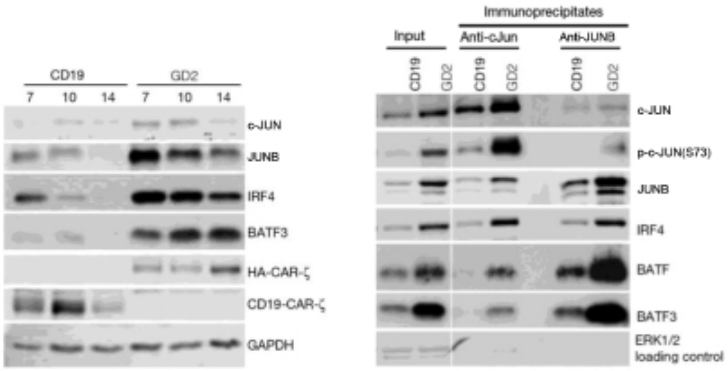
All T cell differentiation states, including exhaustion, are characterized by distinct chromatin structure (open versus closed). Generally, open chromatin structures allow for transcription factor binding while closed structures inhibit transcription factor binding. To determine if the GD2 model could enable the understanding of the biology of exhaustion, the GD2 and CD19 CAR T cells were examined for their chromatin structure to evaluate which transcription factor binding sites were accessible in the functional versus the exhausted states. The exhausted GD2 CAR T cells had a genome-wide restructuring of chromatin accessibility compared to the CD19 CAR T cells, and the greatest change was the increased availability of binding sites to the AP-1/ bZIP family and IRF4 transcription factors. These transcription factors include JUNB, JUND, BATF, BATF3, FOSL1, FOSL2 and IRF4.

Figure 4: Chromatin structure access of GD2 versus CD19 CAR T cells revealed increased access to AP-1 transcription factor binding sites, represented by red. This illustrated that the binding sites are more accessible to their transcription factors.



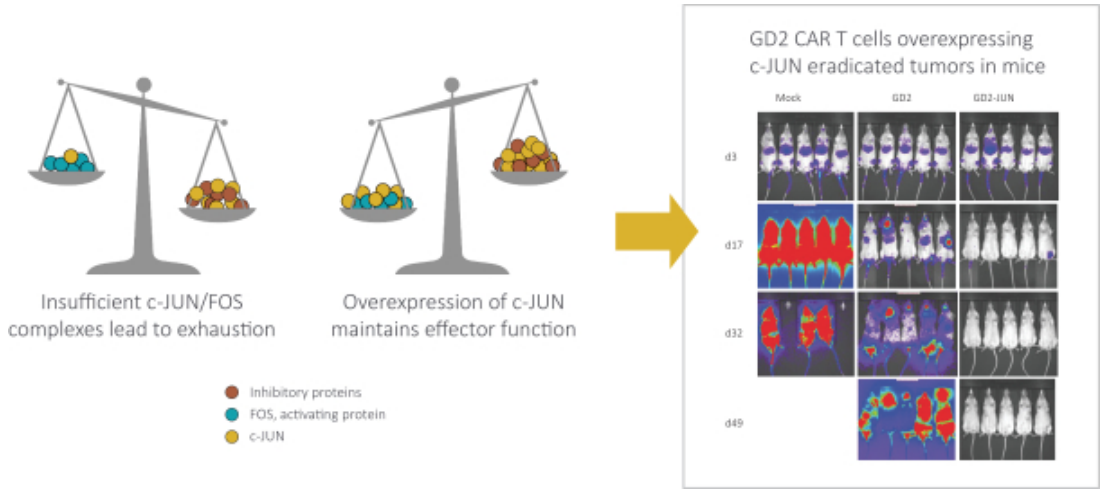
It is notable that c-JUN can bind directly to inhibitory bZIP members, potentially limiting its availability for binding to FOS, which is the necessary AP-1 complex for T cell effector function. Dr. Mackall then evaluated the levels of each these transcription factors to see whether there were differences between CD19 and GD2 CAR T cells. What was seen was an increase in the level of several of these proteins including JUNB, BATF3 and IRF4 in GD2 CAR T cells compared to CD19 CAR T cells (Figure 5; Left panel). Furthermore, in the GD2 CAR T cells c-JUN was shown to be complexed with inhibitory factors such as JUNB, IRF4, BATF and BATF3 (Figure 5: Right panel). We believe these data are suggestive of reduced availability of c-JUN to bind to FOS (its activating partner) which is required for T cell activation.

Figure 5: Left panel: inhibitory proteins that associate with c-JUN, including BATF, JUNB and IRF4 are increased in the exhausted GD2 versus CD19 CAR T cells. Right panel: in the exhausted GD2 cells, immunoprecipitation with c-JUN pulled down its inhibitory partners, demonstrating greater association of c-JUN with JUNB, IRF4, BATF and BATF3 in exhausted GD2 CAR T cells.



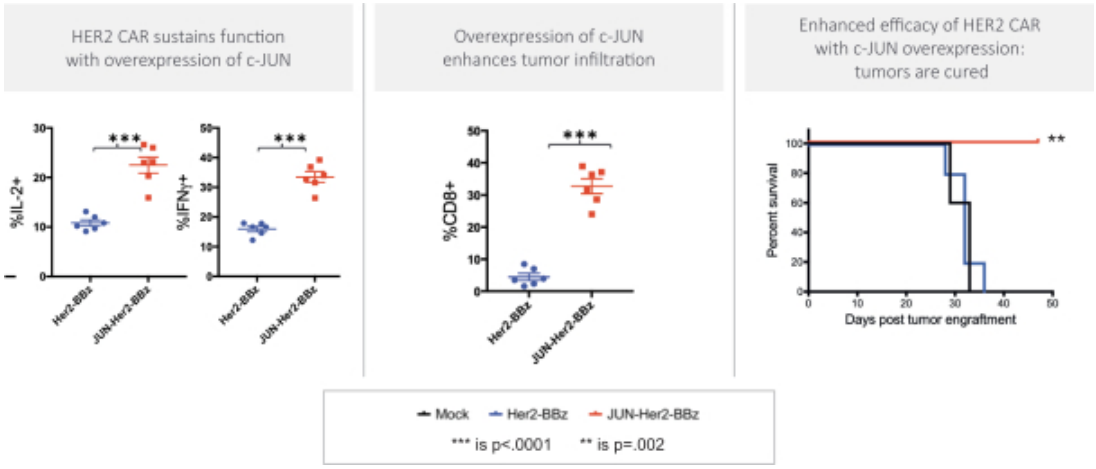
Dr. Mackall then hypothesized that overexpression of c-JUN in the GD2 CAR T cell, would enable the reconstitution of activating c-JUN/FOS heterodimers and shift the balance to activating versus suppressive protein complexes, and prevent the T cells from becoming exhausted. Indeed, overexpression of c-JUN in the GD2 CAR T cells led to tumor eradication *in vivo* in preclinical models as compared to the mice treated with GD2 CAR T cells that did not overexpress c-JUN. (Figure 6).

Figure 6: Left scale – in exhausted T cells, there is insufficient c-JUN to bind with FOS, because c-JUN is bound in overexpressed inhibitory complexes. Right scale – overexpression of c-JUN provides sufficient JUN protein to form activating c-JUN/FOS pairs, required for maintaining active T cell function. On the far right, in vivo *models demonstrated only GD2 CAR T cells overexpressing c-JUN eradicated GD2⁺ tumors, the GD2 CAR T cells lacking c-JUN failed to eliminate the tumors.*



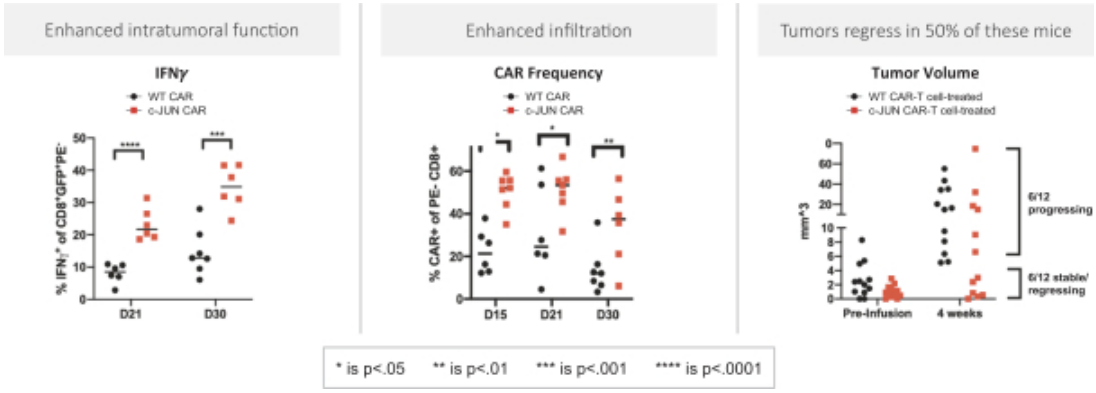
Dr. Mackall then investigated if the hypothesis would prove generalizable and be effective in solid tumor models where it was observed that the tumors caused the CAR T cells to exhaust. In a highly resistant human solid tumor model of osteogenic sarcoma in NSG mice, c-JUN overexpression augmented the antitumor activity of T cells engineered with a human epidermal growth factor receptor 2 (HER2) CAR whereas the control HER2 CAR T cells that function normally *in vitro* exhibited features of exhaustion *in vivo* and were ineffective in eradicating the tumor (Figure 7). Thus, the counter-exhaustion effect of c-JUN resulted in complete tumor eradication in contrast to the absence of efficacy in the mice treated with unmodified CAR T cells which exhausted. Importantly, this model recapitulates what is observed in human solid tumors, which demonstrates that T cells enter the tumors, exhaust and do not accumulate at the tumor site.

Figure 7: HER2 CAR T cells overexpressing c-JUN infiltrated into tumors, demonstrated higher T cell function and cured osteogenic sarcoma tumors in mice.



Dr. Riddell tested the hypothesis in another, even more rigorous solid tumor model of NSCLC. He utilized a mouse model which recapitulates the oncogenic driver mutations and immunosuppressive TME of human NSCLC. It has been difficult if not impossible to treat the tumors in these mice with chemotherapy or immunotherapy and this “model” is in all respects representative of murine NSCLC. This model was further designed so that the tumors express ROR1 and, perhaps not surprisingly proved to be resistant to therapy with ROR1 CAR T cells, just as was observed in treating human NSCLC with ROR1 CAR T cells. In contrast, tumor-bearing mice treated with ROR1 CAR T cells that overexpressed c-JUN demonstrated greater infiltration by the T cells into the tumor, enhanced function of those T cells and tumor regression in 50% of the mice, further confirming the results obtained by Dr. Mackall in HER2 and other cancer models. These results are in contrast to the 100% tumor progression observed in mice treated with ROR1 CAR without overexpression of c-JUN. (Figure 8). Once again, this model illustrated that when T cells enter solid tumors, they exhaust and become ineffective unless the T cells resist exhaustion with Gen-R.

Figure 8: ROR1 CAR T cell overexpressing c-JUN demonstrated efficacy in mice with NSCLC



In summary, Gen-R demonstrated improved CAR T cell function and antitumor efficacy in multiple models of T cell therapy for solid tumors using human and murine T cells. These data show that

preventing exhaustion with Gen-R can result in improved and sustained infiltration of functional T cells at the tumor site and supports the clinical translation of Gen-R for CAR T cell therapy of human solid tumors. We are poised to test Gen-R in our ROR1 (LYL797) and NY-ESO-1 clinical ACT programs in a number of solid tumor indications.

Epi-R: Reprogramming Cells to Create Durable Stemness

Emerging research has made clear that a key requirement of effective cellular immunotherapy is the presence of a population of T cells with specific characteristics of stemness as well as activation of effector functions to produce clinical responses. The frequency of this T cell population correlates with responses to cancer immunotherapy, including TIL ACT and ICB therapy.

Epi-R is our *ex vivo* epigenetic reprogramming technology designed to generate populations of T cells which have the properties of durable stemness. Durable stemness describes the ability of a population of T cells to maintain the sustained ability to self-renew and proliferate, even after being subjected to demands of activation and proliferation upon encountering target antigens expressed by tumor cells. In other words, we believe that a population of T cells with durable stemness are continually replenished, allowing them to generate all memory and effector T cell differentiation states that are required for meaningful long-term clinical responses.

We believe our scientists have been able to intentionally and reproducibly produce T cell populations with durable stemness using Epi-R. The resulting Epi-R T cell populations have *in vitro* and preclinical *in vivo* properties which suggest that they are significantly more potent than those generated by standard approaches to manufacturing T cells for ACT. Standard approaches likely generate ill-defined mixes of cells in various states of differentiation, most of which lack the properties to be effective against solid tumors. To be curative, we believe T cells with durable stemness properties are needed.

Our work has built upon the groundbreaking science of Dr. Restifo spanning over thirty years at the NCI, and then actuated by him and his colleagues at Lyell. We believe that we can reliably produce a population of T cells that have the requisite properties to be effective against tumor cells, that can be characterized by genomic, proteomic and transcriptomic features, and that may ultimately be responsible for clinical effectiveness in ACT. These T cells have enhanced proliferative capacities, as well as ability to engraft, persist and destroy tumor masses. Our ultimate goal is to characterize, identify, optimize and consistently produce these cells through our proprietary Epi-R technology, which comprises a protocol involving proprietary media, and well-defined cell activation and expansion protocols. We expect to develop other versions of the protocol in the future to further advance this technology.

Epi-R triggers metabolic pathways that cause T cells to have properties of durable stemness. The origins of Epi-R came from Dr. Restifo's work at the NCI, where he demonstrated that T cells grown in media with high concentrations of potassium were more stem-like and functional. These were the first clues that it might be possible to reprogram cells to be more stem-like and functional. In fact, Dr. Restifo and his team were able to demonstrate that cells grown with high potassium in the media were 40-100x more potent *in vivo* against established tumors compared with controls. They also demonstrated significantly enhanced abilities to infiltrate tumors, with tumor-infiltrating T cells exhibiting enhanced resistance to exhaustion as measured by markers such as TIM3. This work demonstrated that the high potassium resulted in changes in the epigenome of the T cells and that this epigenetic reprogramming was likely responsible for the persistence of functional changes in the T cell population, even after return to standard media or infusion *in vivo*.

At Lyell, Dr. Restifo and his team have continued the work and have further advanced and optimized these epigenetic reprogramming strategies to produce the Epi-R T cell populations with the

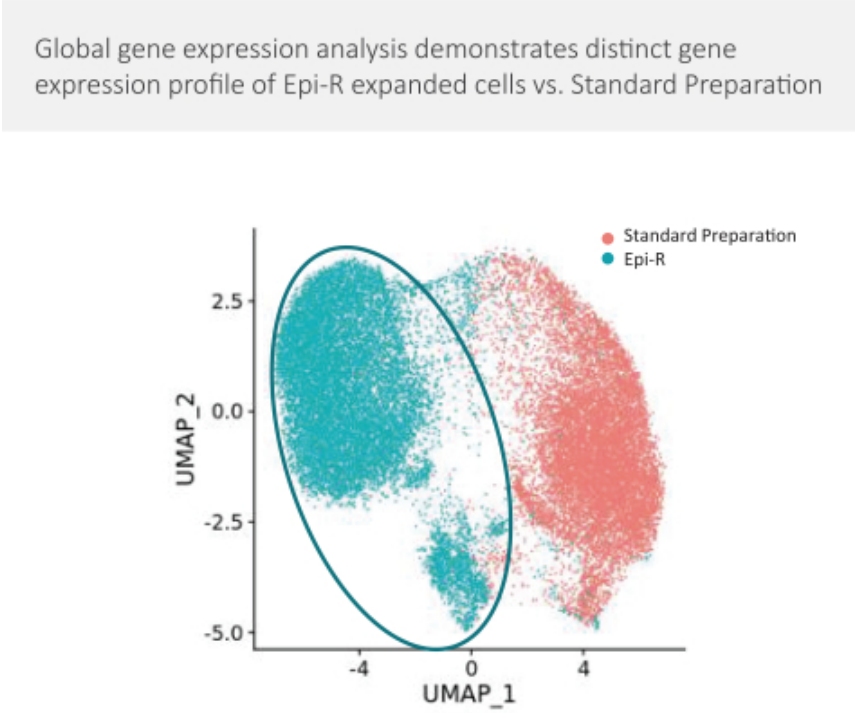
properties we seek, measured both phenotypically and functionally. We have expanded beyond Dr. Restifo's work at the NCI on hyperkalemia to execute multivariate, high dimensional experiments that improve upon what was previously published to create Epi-R protocols. Most importantly, in addition to elevated potassium, we have extensively reformulated the media, and optimized cytokines, growth factors, activation methods and other components related to cell culture, activation and expansion. These modifications were required to optimize phenotypic and *in vitro* and *in vivo* functions of the resulting T cell populations. In addition, we have advanced these research scale efforts and developed clinical scale production capabilities for Epi-R.

Creating Epi-R T cell populations

Epi-R creates populations of cells with phenotypic and *in vitro* and *in vivo* functional properties that we believe are needed for effective ACT. In single cell genome-wide RNA-Seq gene expression analysis, unsupervised clustering of single cells similar to each other reveal that Epi-R T cell populations have a distinct transcriptional profile when compared to the T cells found in a Standard Preparation (Figure 9). Standard Preparation, as used throughout this document refers to a typical cell preparation that includes TransAct beads, OpTmizer media and IL-2, IL-7 and IL-15 cytokines.

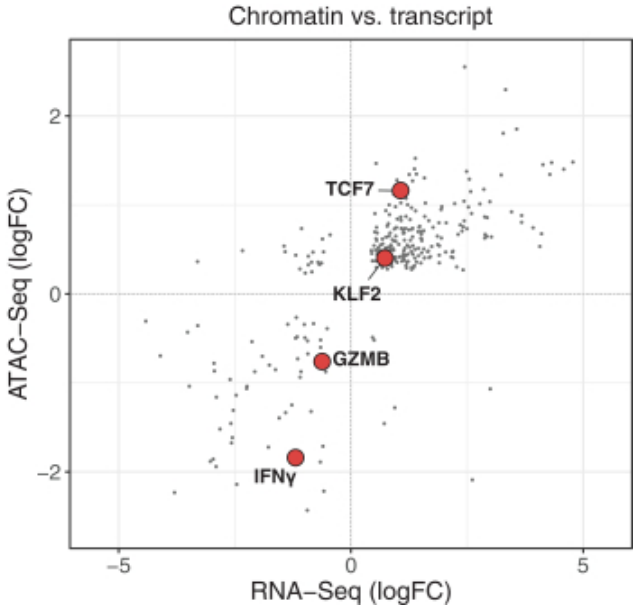
Figure 9:

Epi-R treatment generated T cells with a unique transcriptional profile. Each dot represents a single cell whose complex gene expression profile has been compressed to two dimensions; the teal population are cells treated with Epi-R and they exhibit a distinct gene expression profile from Standard Preparation, plotted in salmon color. Note that there is minimal intermingling of teal and salmon cell populations. UMAP=Uniform Manifold Approximation and Projection for Dimension Reduction.



The transcriptomic changes are associated with alterations of chromatin structures and the quantitative changes in transcription can be correlated with similar fold-change alterations in gene-specific chromatin accessibility as determined by ATAC-seq (Assay for Transposase-Accessible Chromatin using sequencing). Increased chromatin accessibility can be correlated with increased gene expression; conversely decreased chromatin accessibility can be associated with decreased gene expression. We observed that there was increased chromatin accessibility and gene transcription of stemness-associated genes including TCF7 and KLF2. Conversely, there was decreased accessibility and gene expression of hallmark effector genes such as IFNg and GZMB for effector-function priming. The increases and decreases in chromatin accessibility and gene expression are consistent with observations that Epi-R programs cells for stemness rather than immediate effector function (Figure 10).

Figure 10: Epi-R treatment promoted chromatin accessibility and expression of genes associated with T cell stemness (for example, TCF7 and KLF2) and reduced expression of genes associated with effector differentiation (for example, GZMB and IFNg). The impact of Epi-R treatment on chromatin accessibility (as profiled by ATAC-Seq) and gene expression (as measured by RNA-sequencing) as compared with Standard Preparation was measured. Individual genes with positive x-axis values have increased expression after Epi-R treatment, while genes with negative x-axis values have decreased expression. Genes with positive y-axis values have increased chromatin accessibility after Epi-R treatment compared with Standard Preparation, while genes with negative y-axis values have reduced chromatin accessibility after Epi-R. These changes are in accordance with the T cell properties that we seek.

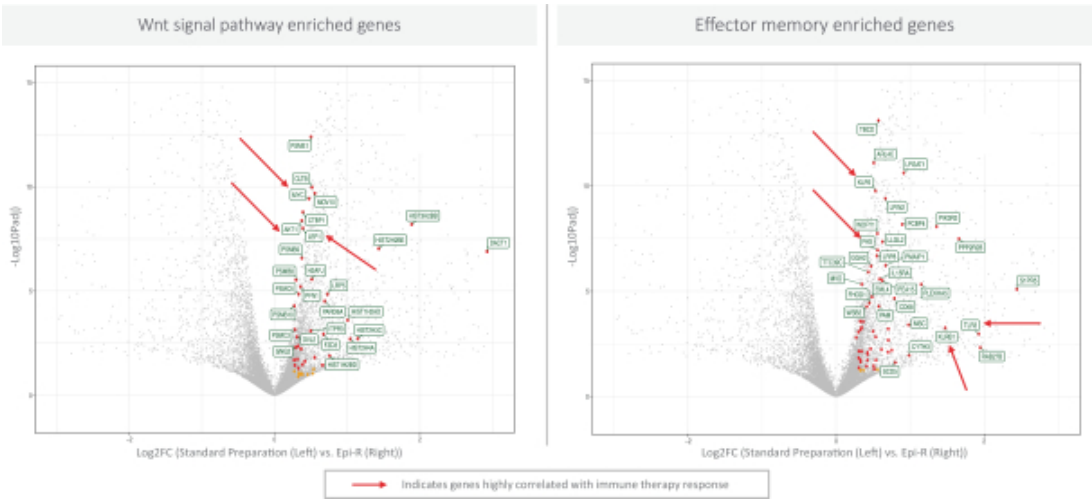


When we analyzed the gene expression of the Epi-R T cells together as a population, we showed that their epigenetic reprogramming resulted in an enrichment of the Wnt signaling pathway genes which functionalize stemness, as well as effector memory gene expression. This approach results in populations of cells that have the stemness we are looking for and cells that have a strong signature of tissue resident effector memory cells, in contrast to the populations produced by Standard Preparation. As stated above, recent literature supports the presence of such stem-like cells correlating with responsiveness to immune therapies, including ICB and ACT, which noted that patients who respond

to ICB have a unique signature of endogenous TIL. The single cell RNAseq data showed a unique CD8+ gene signature associated with memory, activation and cell survival in patients who respond to ICB. In addition, the literature supports the notion that stem-like CD8+ T cells correlate with efficacy of ACT in human melanoma. Specifically, the expression levels of the genes encoding CD27, KLF2, TCF7, LEF1, IL7R and SELL predict effectiveness of ACT in solid tumors.

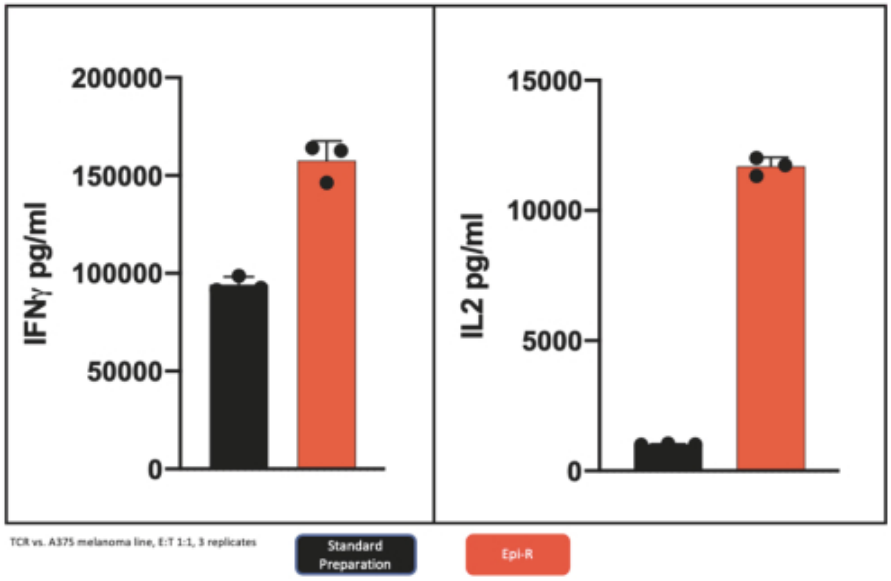
The T cell molecular signatures and genes reported in these correlative studies closely resemble the gene signatures seen in our Epi-R T cell populations and are selectively highlighted by red arrows in the volcano plots below. Each volcano plot illustrates the ratio of gene expression of Epi-R T cells versus those expanded in the Standard Preparation, plotted on a log scale which means that the difference in distance between data points are much smaller than if they were plotted on a linear scale. What is illustrated by the fact that all of the genes of interest are on one side of each respective volcano plot, the Epi-R side, showing that the genes of interest are uniformly expressed at greater levels in Epi-R T cells. These similarities suggest that with Epi-R, we are able to intentionally produce cell populations with the qualities predicted to be the “active ingredient” cells in immunotherapy that drive efficacy.

Figure 11: Enhanced expression of T cell stemness and effector memory related genes in Epi-R treated T cells. Gene transcriptional profiling demonstrated that Epi-R T cells had increased expression of genes in the Wnt signaling pathway (a key promoter of T cell stemness, left panel) and of effector memory associated genes (key drivers of antitumor function, right panel). These findings are consistent with the recent literature and our own data indicating that T cell populations of stem-like T cells are responsible for ACT response.



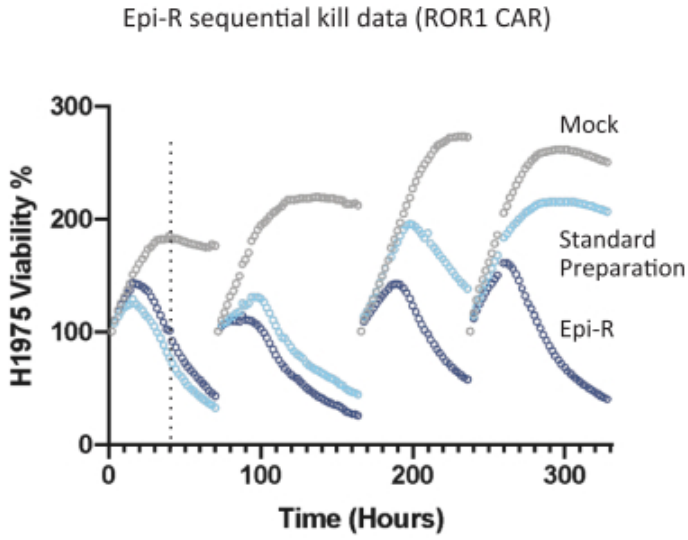
When Epi-R T cells are activated, they secrete cytokines required for tumor reactivity in significantly higher amounts versus Standard Preparation. IFNg and IL-2 cytokine secretion by Epi-R T cells indicate greater effector activity and polyfunctionality, required for antitumor activity (Figure 12).

Figure 12: Epi-R produced T cell populations exhibited greater effector activity and polyfunctionality, as measured by increased production and secretion of cytokines required for effective antitumor activity. T cells were co-cultured with target antigen-expressing tumor cell lines and T cell production of IFNg and IL-2 was measured in co-culture media.



Epi-R T cell populations resist the exhaustion of repetitive signaling which otherwise limits efficacy against solid tumors. We observed that Epi-R T cell populations maintain significantly greater ability to eliminate target tumor cells *in vitro* after multiple sequential exposures to tumor cells. They appear to “remember” their reprogramming and ability to kill tumor cells. In this experiment, cells were initially reprogrammed and expanded in Epi-R, and then transferred to Standard Preparation for the re-stimulation assay, which was repeated four times with consistent cell numbers. A low number on the y-axis indicates that the tumor cells are being killed. Epi-R T cells continued to kill tumor cells with sustained efficacy while by the third restimulation mock and Standard Preparation cells had exhausted and lost their ability to kill cells.

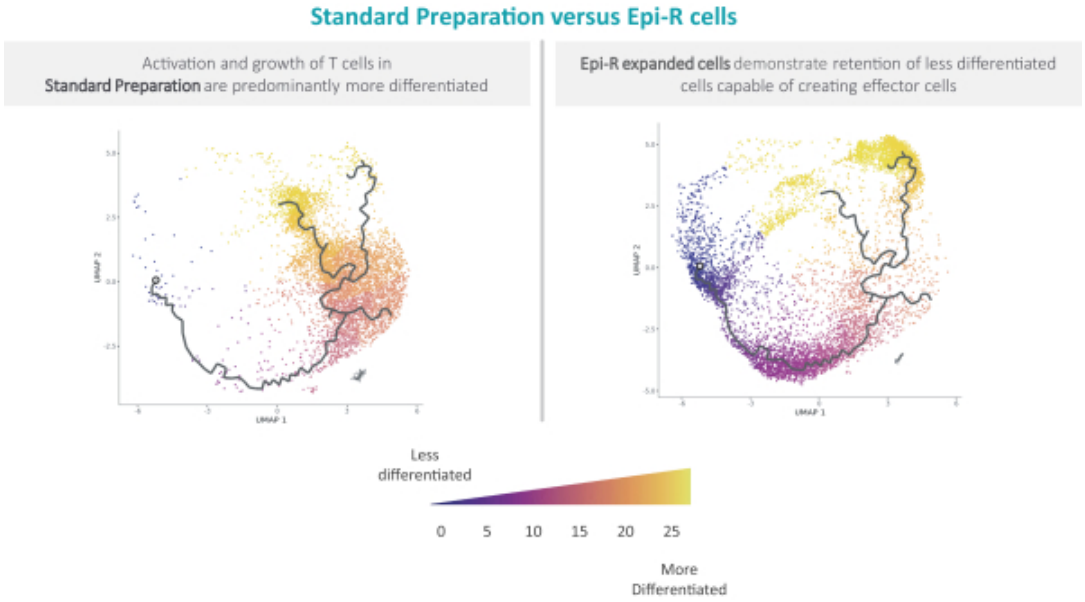
Figure 13: Epi-R produced T cells with enhanced long-term tumor killing potency. In a sequential restimulation assay, where T cells were repeatedly exposed to new tumors cells in vitro, Epi-R increased the ability of T cells to kill fresh additions of tumor cells over time (the dark blue dots show that tumor cells (the H1975 cell line) were killed even as the control and T cells grown in Standard Preparation conditions lost their ability after the second and third stimulations).



In addition to the sequential restimulation assay described above, which tested for a given population of T cells' continued ability to kill cancer cells on multiple exposures without controlling the T cell to tumor ratio, we also performed experiments where we serially restimulated T cells by adding new cancer cells while resetting the ratio of T cells to cancer cells to 1:1 at each stimulation. This latter assay tested for each individual T cells' potency against cancer cells over multiple rounds of exposure. These cells must also resist exhaustion and maintain their stemness in order to be effective. We performed a serial restimulation assay on cloned TCR T cells in Epi-R conditions, and then utilized trajectory analyses in order to illustrate the "durable stemness" of the T cell populations. In our definition of durable stemness, we posit that a T cell population can continue to both re-populate the stem cell population and differentiate to produce effector cells, even after prolonged and repetitive challenges with tumor cells. Based on the changes that we have observed between Epi-R T cells and T cells generated using Standard Preparation, we sought to understand what have become known as 'cell trajectories.' We know that T cells transition from one epigenetic state to another in response to stimuli, including recognition of tumor cells. Single cell RNA-Seq can enable the visualization of T cell transition states but to do so we must utilize machine learning algorithms to determine gene expression changes that occur in 'pseudotime,' a measure of how much progress an individual cell has made during its differentiation.

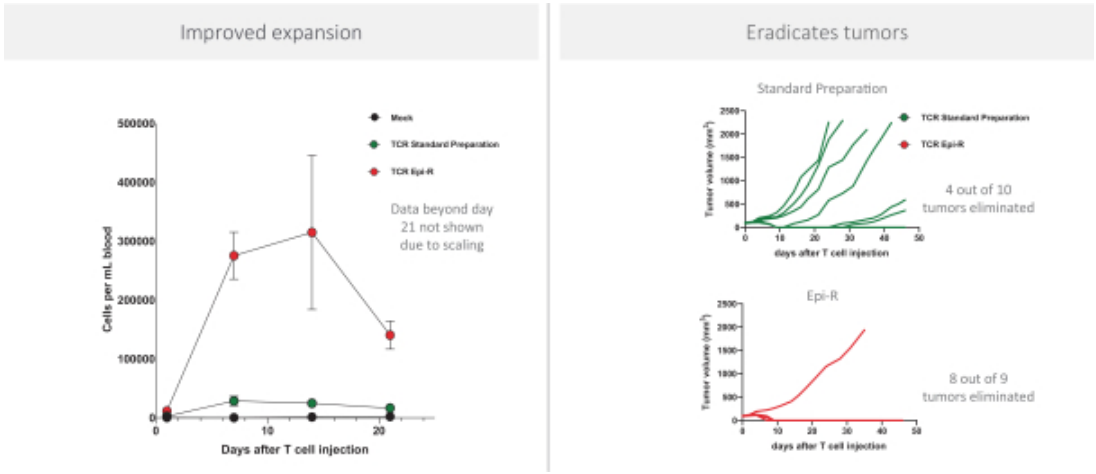
Pseudotime cell trajectories revealed an abundance of less-differentiated stem-like $CD8^+$ T cells even after repetitive stimulation with tumor cells under Standard Preparation using T cells previously expanded in Epi-R, whereas the growth of T cells previously expanded in Standard Preparation were predominantly more differentiated. The characteristics of resultant effector cells were also different, with Epi-R T cells generating effector cells resembling highly cytotoxic cells best able to engage in effector function.

Figure 14: To understand the maturational differences in the reactions of T cells to tumor after having been programmed in Epi-R or Standard Preparation. T cells were placed in Standard Preparation and serially re-exposed to tumor cells every 3-4 days (x4) for 14 days (336 hours). We then used machine learning to create unsupervised cell trajectories using cells derived from both Epi-R T cells and T cells expanded in Standard Preparation then plotted the cell trajectories. The resulting Epi-R T cells were less differentiated and more functional than T cells generated from the Standard Preparation.



The greater functional activity of Epi-R T cell populations translated to enhanced activity in *in vivo* mouse antitumor experiments. The Epi-R T cell populations had superior expansion *in vivo* mouse models. We measured the number of T cells in the mice at various time points and observed as many as 50-fold more Epi-R T cells in the mice as compared to Standard Preparation T cells. Furthermore, in this experiment, treating mice with established tumors, the Epi-R T cells eradicated tumors in 8 out of 9 mice versus eradication in only 4 out of 10 mice treated with standard T cell preparations after 40 days. It is important to note that these Epi-R T cells were taken out of Epi-R conditions and injected *in vivo*, and by expanding and killing tumors over time, they are “remembering” their new properties after the *in vitro* epigenetic reprogramming.

Figure 15: Epi-R T cells had improved expansion in vivo as shown in the left panel and had greatly improved antitumor function in mouse models of cancer, as shown on the right. Epi-R T cells eliminated tumors in 8 out of 9 treated mice (note overlapping red lines in Epi-R tumor killing along the x-axis), compared to 4 out of 10 mice treated with Standard Preparation T cells.

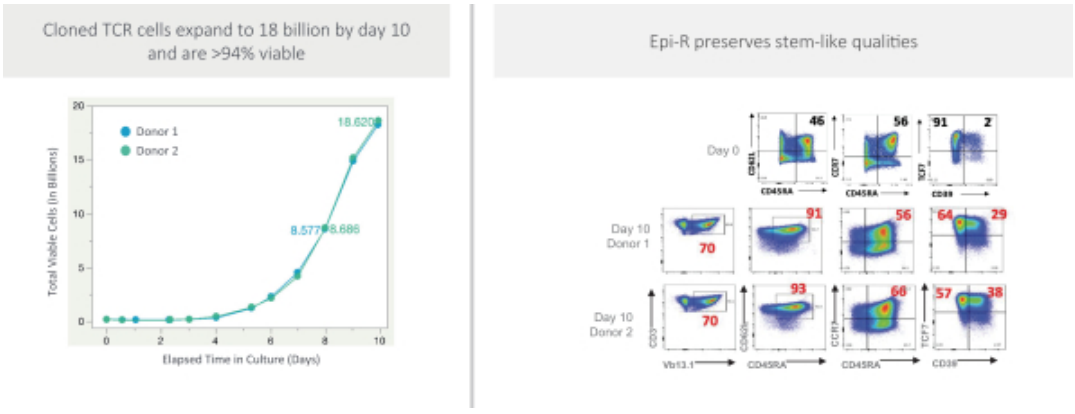


Epi-R and Addressing the Expansion/Quality Paradox

To treat patients, ACT needs to be produced at clinical scale, which means that the cells can be expanded to hundreds of millions of cells in the case of CAR, and billions of cells in the case of TCR and TIL based on current approaches. Typically, the more the cells expand during manufacturing, the worse the properties of the resulting cells, particularly their stem-like phenotype. We refer to this as the Expansion/Quality Paradox, and the ability solve this paradox could greatly improve the quality and reduce the time and expense of manufacturing ACT.

With Epi-R, we believe that we can generate engineered TCR cells to clinical scale with the desired phenotype and function. We show below that we expanded TCR cells up to 18 billion by day 10, which exceeds currently administered clinical doses; in addition, these cells are >94% viable. Furthermore, these cells maintained their stem-like qualities. (Figure 16)

Figure 16: representative data shows that engineered TCRs expanded to the billions and maintained their stemness in Epi-R.



Epi-R applied to TILs

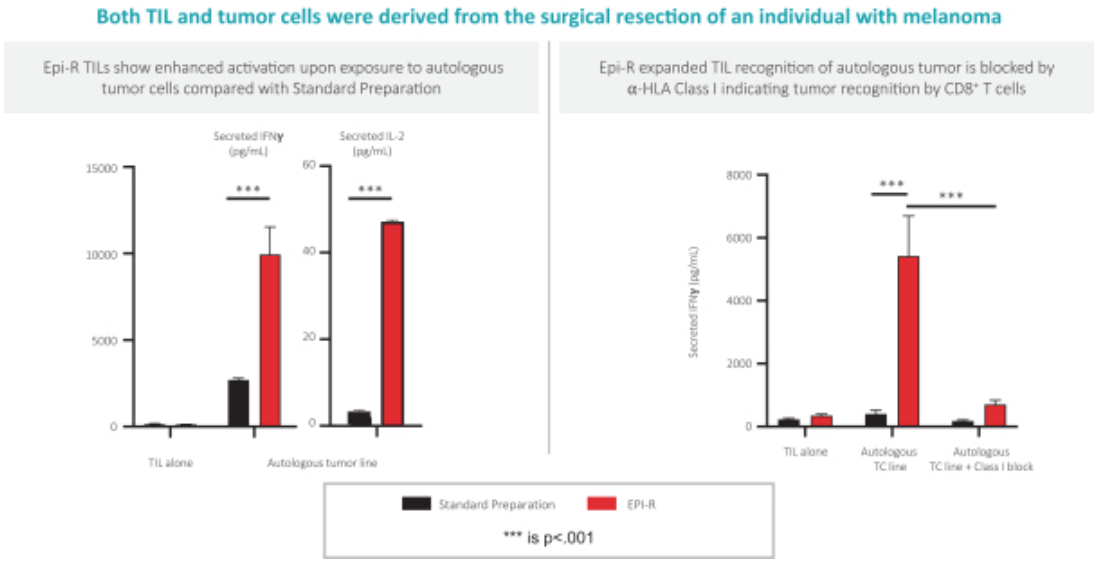
TIL ACT has been shown to be curative in a minority of cases of melanoma and occasionally in other cancers, demonstrating their potential in the treatment of solid tumors. We believe TILs have the potential to be more broadly and reliably effective against many tumor histologies, and that we can address the following requirements for TIL to achieve its potential as highly effective therapy against solid tumors.

- First, the infused TIL cells must have the property of durable stemness and be able to differentiate into effector cells for function, which we believe we achieve with Epi-R and have demonstrated with autologous *in vitro* experiments.
- Second, TIL must maintain their polyclonality during expansion, and preserve their ability to target a diversity of tumor neoantigens. Current standard TIL expansion causes a significant loss of TCR diversity, leading to skewed preparations with reduced clonotype representation. We have demonstrated that Epi-R can preserve the polyclonality of TIL preparations; for example, Epi-R T cells have ~30x more representation of the top dominant tumor TCRs in an autologous TIL experiment from a colon tumor.
- Third, stem-like and highly diverse TIL must be reliably extracted and expanded from multiple histologies. Specialized skills are required for this; while many have been able to consistently extract and expand TIL from melanoma specimens, other tissue histologies have proven more challenging. Our scientists are highly experienced in this art, and we have successfully extracted and expanded Epi-R TIL from melanoma, colorectal, NSCLC, pancreatic, renal cell, breast, prostate and liver cancers with a 95% success rate. This capability facilitates clinical trial designs that test our TIL product candidates in multiple solid tumor histologies.
- Finally, we must be able to expand TIL cell preparations to clinical scale, while maintaining their stem-like and clonally diverse properties. We have been able to expand, at clinical scale in the lab, TIL cell preparations to 13 billion cells (a clinically relevant dose) while maintaining their stem-like properties.

Epi-R TIL cell preparations reacted to autologous tumors and eradicated them

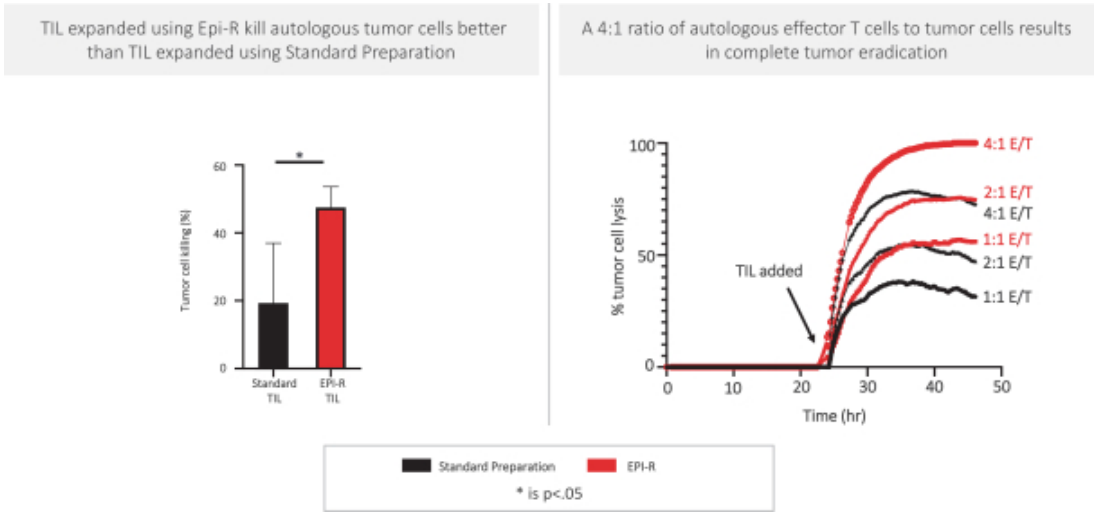
We performed experiments to evaluate Epi-R expanded TIL recognition of *autologous* melanoma cancer cells. We took a patient melanoma tumor excision, and both extracted and expanded TIL from that specimen in either Standard Preparation or Epi-R, as well as created a cancer cell line from the cancer cells from the tumor. By doing so, we could evaluate whether the expanded TIL from that tumor recognized and reacted to *that patient's own tumor*. We were able to demonstrate that Epi-R TIL exhibited enhanced activation, the response was mediated by activated killer $CD8^+$ cells, and they had significantly enhanced tumor cell killing capacity when compared to Standard Preparation. The higher secretion of IL-2, the critical T cell growth factor, is notable.

Figure 17: Epi-R TIL had enhanced recognition and activity against autologous melanoma tumor cell line. Asterisks denote significant p-values between groups. The red bars in the graph on the left show that Epi-R T cells from TIL secreted increased levels of IFNg and IL-2 cytokines as compared to Standard Preparation after co-culture with autologous melanoma tumor cells, indicating greater activation and cytotoxicity potential. As a control, when TIL alone were measured without the presence of autologous tumor cells, they did not activate and did not secrete the cytokines. In the bar chart on the right, we demonstrate that production of IFNg secretion dropped significantly when target cells were coated with an antibody to HLA Class I, indicating that the tumor cell recognition was mediated by CD8+ T cells.



These cells were also shown to be more effective at tumor cell killing. In the graph below on the left, we show that Epi-R TIL T cells killed autologous tumor cells at approximately a 50% rate, whereas those TIL grown in Standard Preparation only killed at approximately a 20% rate. When we then performed an experiment to titrate different levels of Epi-R effector T cells against tumor cells, we showed, on the right graph below, that a 4:1 effector T cell to tumor cell ratio resulted in complete tumor eradication.

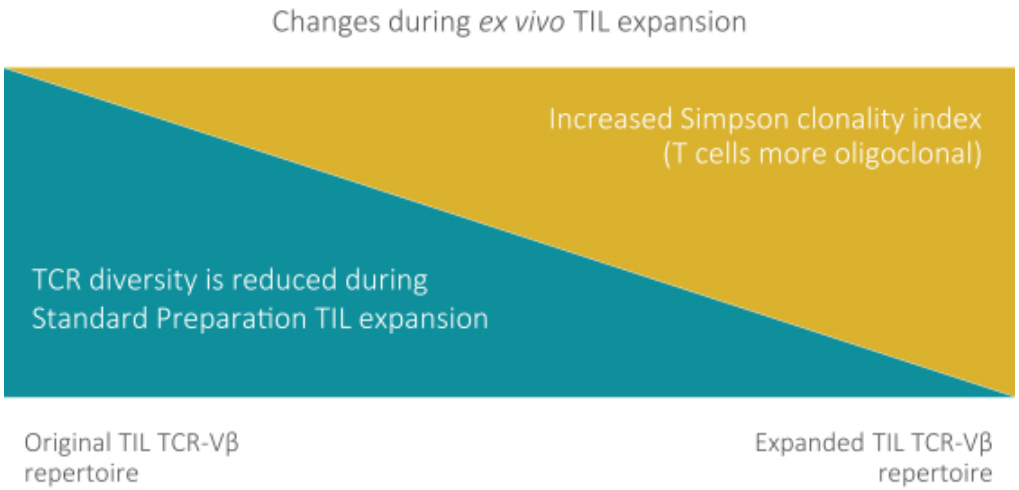
Figure 18: Epi-R TIL had improved ability to kill autologous tumor cells. Standard and Epi-R TIL were co-cultured with autologous melanoma tumor cells and their ability to kill tumor was measured after 24 hours (left panel). Altering the ratio of TIL:tumor cells (E/T ratio) can impact TIL ability to kill tumor. Epi-R TIL exhibited increased tumor killing at all E/T ratios, and at a 4:1 ratio Epi-R TIL successfully killed all tumor cells.



Epi-R and retention of polyclonality

Epi-R has also demonstrated the ability to preserve the polyclonality of TIL preparations, one of the key advantages of this ACT modality. The figure below depicts a conceptual representation of what happens during typical TIL expansion in standard preparations: the expansion protocols result in loss of tumor-specific clones and significantly reduces the polyclonality of the cell preparations. We have shown with Epi-R that we can maintain the clonal diversity in TIL preparations with respect to the original repertoire of the TIL when first extracted out of the tumor.

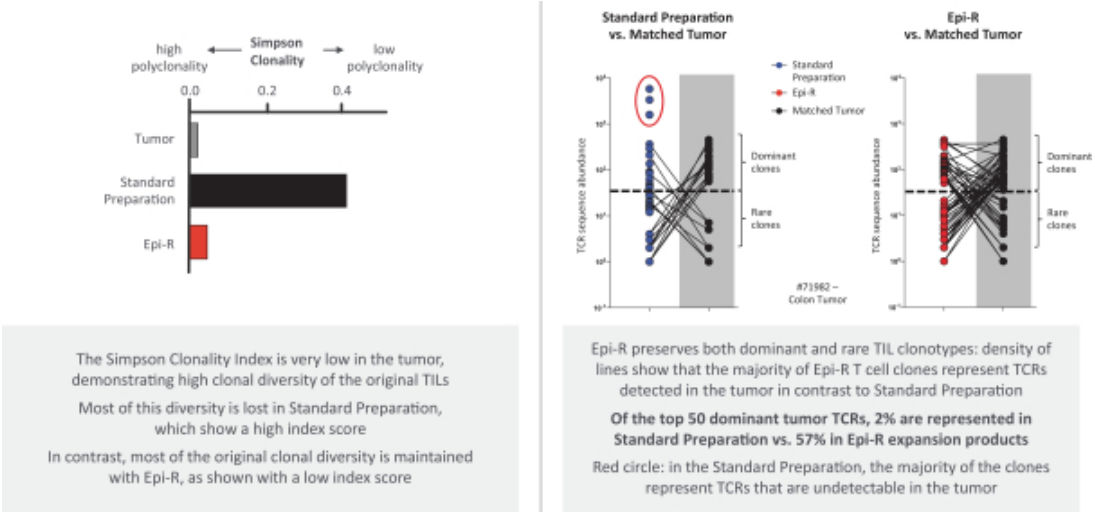
Figure 19: Standard TIL expansion preparations result in progressive loss of T cell polyclonality, resulting in reduced ability to recognize and respond to many tumor antigens. Epi-R preserves TIL polyclonality, increasing the ability of cell products to recognize and destroy tumor cells.



Quantitatively, we can measure polyclonality by the Simpson Diversity Index (or, in our use, the Simpson Clonality Index), shown below on the left (Figure 20). The Simpson Clonality Index is a quantitative tool that reflects diversity within a dataset; a low number represents high diversity, while a high number represents low diversity. An index value of 1 would represent a monoclonal population. The Simpson Clonality Index of TIL in the tumor is very low, demonstrating high clonal diversity of the original TILs. In standard TIL preparations, the majority of clones giving rise to the desired clonal diversity are lost upon stimulation and expansion as shown by the high Simpson Clonality Index. In contrast, most of the original tumor clonal diversity is maintained in TIL expanded with Epi-R, as shown with a low index score.

It is known that T cells migrating through tissues experience arrested migration upon recognition of their target tumor antigen, resulting in their activation and expansion, which is followed by their exhaustion. We quantified the TCRs from TILs and ranked them by the frequency of the clonotypes found. We compared the frequencies of individual TCRs after expansion in Standard Preparation or Epi-R conditions. On the right in the graph below, we show that Epi-R preserved both dominant and rare TIL clonotypes found amplified in the tumor; 57% of the TCR Vß sequences corresponded to the top 50 TCRs represented in the original TIL. By sharp contrast, only 2% of the TCR clonotypes expanded in the Standard Preparation were represented in the top 50 TCRs found in TIL.

Figure 20: Epi-R TIL exhibited increased T cell polyclonality and retention of original T cell clones. TCR sequencing was performed on Standard Preparation and Epi-R TIL and Simpson Clonality Index (a measure of polyclonality, with high Simpson values indicating low polyclonality) was measured. Epi-R TIL exhibited a low Simpson Clonality Index (left panel) that reflects increased diversity of T cell TCR repertoire. The relative abundance of TCRs that were observed in starting tumor T cell population was compared with standard and Epi-R expanded TILs. Epi-R TILs retained greater proportions of starting TCR repertoire after expansion.



We can further demonstrate that preserved polyclonality of the Epi-R preparations are specific to tumor neoantigens by counting the numbers of productive TCR rearrangements. In one study of TIL from a pancreatic cancer, we modeled predicted KRAS mutant-reactive T cells and evaluated the ability of Standard Preparation versus Epi-R expanded TILs to preserve KRAS mutant reactivity. KRAS is one of the most common and important mutations in human cancer, present in NSCLC, pancreatic, colorectal and other cancers. We observed that only Epi-R expanded TILs had all predicted KRAS mutant reactive clones present, indicating that those TILs preserved a broader TCR repertoire that is more reflective of the clonal diversity of T cells found in tumor; in other words, the more varied clonotypes of the TIL preparations were specific to predicted cancer neoantigens. In contrast, TILs expanded in Standard Preparation led to the loss of the tumor specific TCR clonotypes; in fact, the zeroes in the Standard Preparation column indicate that there are no T cells which can detect these predicted KRAS neoantigens (Figure 21).

Figure 21: Epi-R expanded T cells contained increased proportions of TCRs predicted to recognize hotspot KRAS tumor driver mutations. In contrast, Standard Preparation TILs did not retain these tumor target-reactive TCRs.

AMINO ACID	SUM (Productive Frequency)	PRESENT IN	Standard Preparation	EPI-R	70703-TUMOR_TCRB
CASSLGTDTQYF	0.000273449	3	2.85193E-05	0.000215095	2.98347E-05
CASSRGLGNTIYF	0.000316628	2	0	0.000286793	2.98347E-05
CASSQNYGYTF	5.37341E-05	2	0	2.38994E-05	2.98347E-05
CASSLVGTEAFF	0.000286635	2	0	0.000167296	0.000119339
CASSLRGTEAFF	0.001272605	2	0	0.00124277	2.98347E-05
CASSGDSYGYTF	5.37341E-05	2	0	2.38994E-05	2.98347E-05
CASGETQYF	5.37341E-05	2	0	2.38994E-05	2.98347E-05

Epi-R Summary

Our Epi-R technology allows us to generate T cell therapy products that retain increased characteristics of stemness that have been clinically linked with effective antitumor immunotherapies. These qualities preserve stemness while also enhancing the functional ability of our cells to recognize and destroy tumor cells, what we term durable stemness. Epi-R fine-tunes the chromatin structure of the T cells which results in a new transcriptional profiles of T cells to yield a novel cell population that is distinct from those produced by standard expansion processes, with increased expression of a distinct population of cells expressing key genes linked with T cell engraftment, expansion, *in vivo* persistence and function. Trajectory analyses of Epi-R T cell populations demonstrate that both stem-like and effector populations are maintained in the face of persistent activation, proliferation and multiple cycles of tumor killing, supporting a durable ability to self-renew. As predicted, clinical scale production of Epi-R cells show that they maintain all of these properties, thus addressing one of the challenges in ACT product production – how to maintain functionality of T cells during expansion. Our Epi-R T cell populations have increased durable functionality against tumors *in vitro* and *in vivo*, with increased ability to eradicate established tumors in realistic animal models of human cancer. Applying Epi-R to TIL expansion, we have been able to generate TIL products that exhibit increased polyclonality and retention of key TCR clonotypes in cells grown to clinically meaningful numbers. Our Epi-R TIL are able to effectively recognize and respond to autologous tumor cell lines by secreting key inflammatory cytokines and displaying increased ability to kill cancer on a per-cell basis. In utilizing Epi-R to create T cells with the qualities associated with clinical antitumor effectiveness, we believe that we have generated an opportunity to eradicate solid cancers.

The Next Frontier: Epigenetic Rejuvenation of T Cells

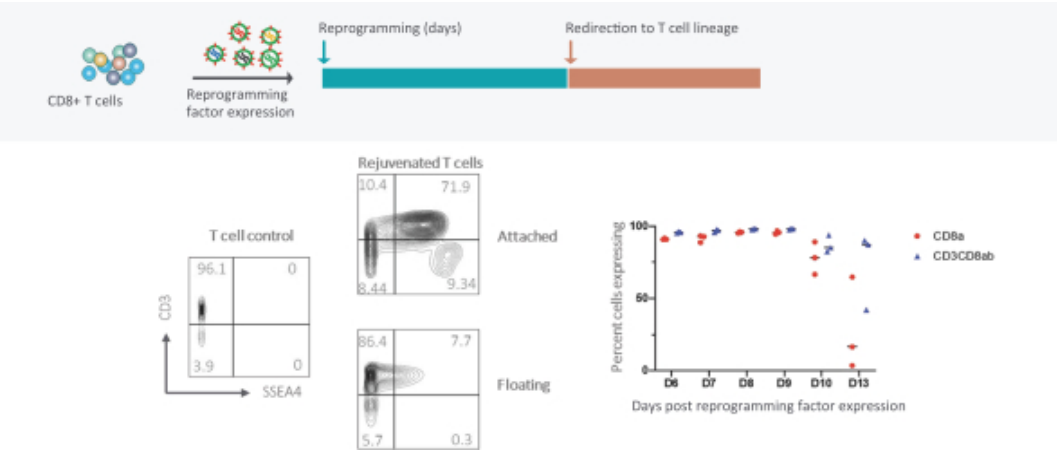
We believe that Epi-R – the epigenetic reprogramming of T cells to create Epi-R cell populations with durable stemness – holds great potential. However, new science is emerging that provides insight into additional opportunities to capture the potential of T cells enhanced with the required properties to cure cancer. We can think of two cellular parameters as cells develop and differentiate over the life of an organism: cellular identity and age. The decline in function with aging is stereotypical in many cells; it has been well characterized in T cells. Aging of adult stem cells is thought to play a central role in determining the effect of aging on organismal function. Each T cell clonotype can be renewed from a stem cell-like state, but self-renewal, proliferation, function, persistence and antitumor activity are thought to be impacted by aging. We and others have documented the impact of aging on T cell function, which begins to decline after puberty, and at an increasingly accelerated rate after age 65. Morbidity and mortality from cancer also increases with age.

We therefore sought to rejuvenate antitumor T cells. The most transformative examples of cell reprogramming have been demonstrated by Shinya Yamanaka, who proved through his Nobel Prize-winning work the ability to reprogram and dedifferentiate somatic cells into induced pluripotent stem cells utilizing four transcription factors (OCT3/4, SOX2, KLF4 and c-MYC; or OSKM), termed the Yamanaka factors. These factors regulate the developmental signaling network necessary for embryonic cell pluripotency. These iPSCs are remarkable in two ways: they are fully de-differentiated and they are rejuvenated to age zero, the age of cells immediately post-fertilization.

Recently, numerous labs have made a leap in cellular reprogramming, called partial reprogramming. By carefully controlling cell exposure to OSKM, scientists have been able to retain the functionality of cells while avoiding the impacts of aging. Rejuvenation can be measured by the reacquisition of youthful properties like enhanced stem cell proliferation and by newly discovered molecular clocks, which measure the intrinsic cellular epigenetic changes associated with aging. These intrinsic 'clocks' can be measured by DNA methylation patterns. We have early data for the first time with T cells illustrating the ability to "turn back" the epigenetic clock in a process called cell rejuvenation, without changing the cell's identity as would occur in de-differentiation. This cell rejuvenation process utilizes transient expression of OSKM, and/or other reprogramming factors.

Our data illustrates that when we express the reprogramming factors in a T cell population for a prolonged amount of time, T cells lose their identity and start to acquire markers associated with mesenchymal and embryonic stem cells. During this process, cells acquire the expression of stage-specific embryonic antigen-4 (SSEA-4) and begin to attach to the cell culture substrate. We are developing a method to revert the initial changes caused by reprogramming to regenerate T cell identity while reducing the epigenetic age of the cells.

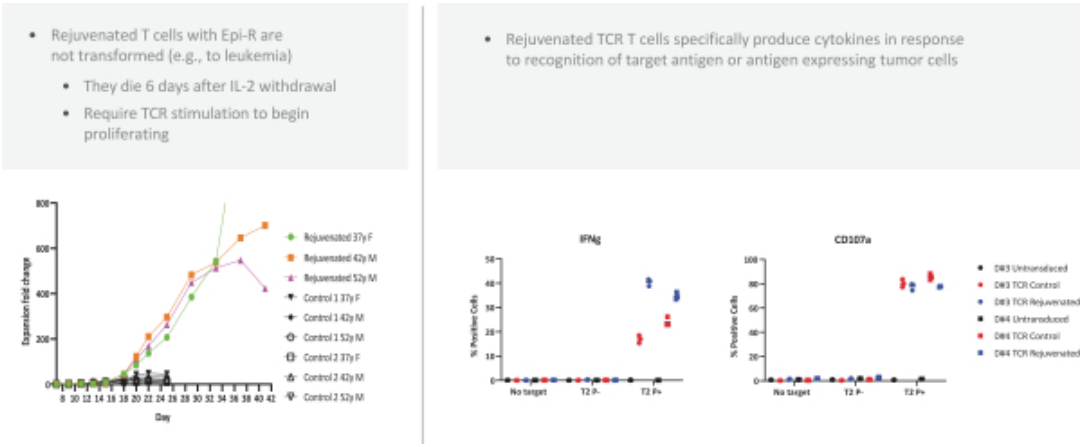
Figure 22: CD8⁺ T cells were isolated from a normal donor and transiently exposed to reprogramming factors. Transient exposure to reprogramming factors enabled a change of behavior of cells – which included attachment to the cell culture substrate and the expression of SSEA-4. Cells retained expression of T cell lineage markers if the redirection step is started before approximately 9 days; longer exposure to classical iPSC reprogramming resulted in loss of cell identity as measured by the inability to recover hallmark cell identity markers CD8 and CD3.



When the age of these cells were measured with the epigenetic clock, we observed that treating donor cells from individuals aged 21 and 43 (and the epigenetic clock measurement is consistent with

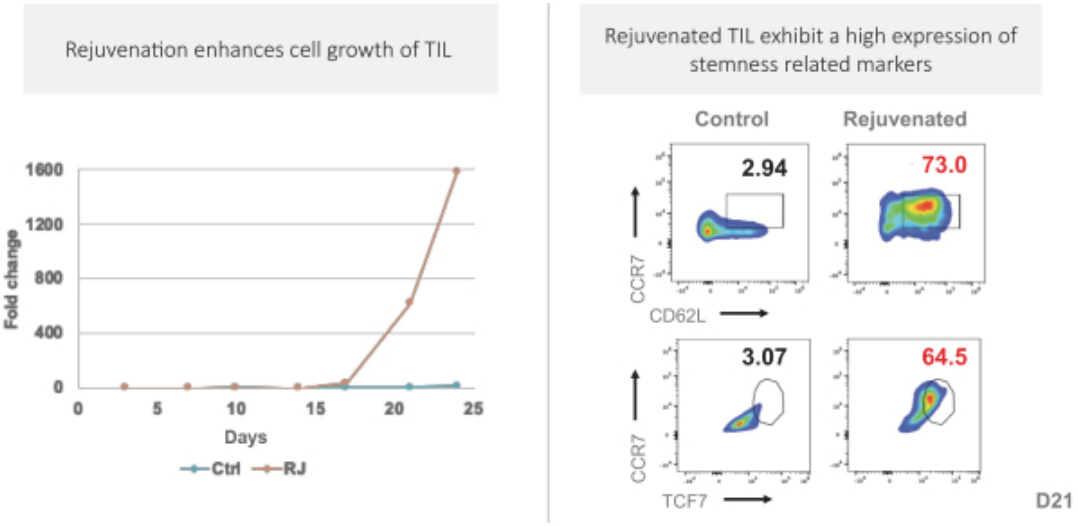
the donor information) with transient expression of reprogramming factors, resulted in rejuvenated cell populations with clock measurements of 9-16 year-olds. These treated cells exhibit markedly enhanced and sustained proliferation *in vitro* and recognize tumor antigen. They retain their T cell identity and are not transformed; specifically, they are not proliferating uncontrollably as cancer cells do, and they require typical T cell activating signals such as IL-2 and TCR stimulation. Upon such stimulation, they behave as T cells and produce the expected cytokines in response to cancer antigen or antigen-expressing tumor cells.

Figure 23: Partially reprogrammed T cells were rejuvenated, showing marked proliferation while retaining T cell identity and exhibiting enhanced function



We have also performed experiments involving the rejuvenation of TILs. Rejuvenation on TILs extracted from solid tumors shows dramatic improvements in cell growth and increases in the populations of T cells expressing stemness-associated markers such as CD62L, CCR7 and TCF7, which are closely associated with better and prolonged antitumor activity.

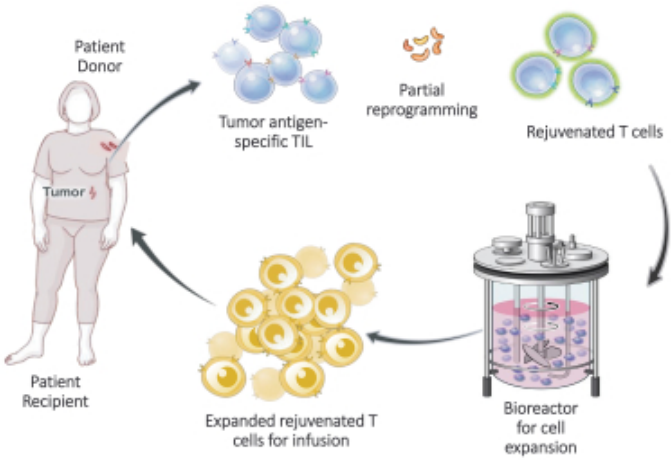
Figure 24: Rejuvenation of lung TILs of a 66-year-old patient. When compared to control conditions, cells exposed to reprogramming factors showed enhanced proliferative capacity and expression of cell phenotypes expressing CCR7, CD62L and TCF7, hallmarks of T cell populations with stem-like properties.



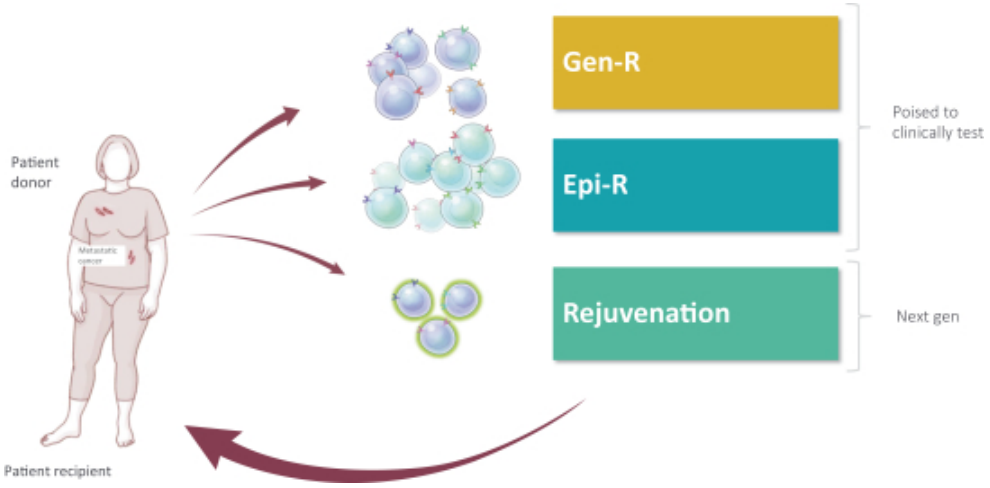
We believe T cell rejuvenation has the potential to be the next disruptive technology in cell-based therapy. Rejuvenated cells would be epigenetically younger and have higher proliferative potential and stemness properties. In the setting of tumor treatment using CAR, TCR-transduced, or naturally occurring TILs, T cells may have the ability to engraft and destroy solid tumors long term. Although T cell rejuvenation offers a revolutionary path to new treatments in the area of cancer, we believe that in the longer-term, this technology has potential application in non-oncology indications such as autoimmune and infectious diseases.

Building upon our work with Epi-R cell populations, we expect that the future production for next generation TIL could involve a partial reprogramming step, as illustrated in Figure 25.

Figure 25: potential next generation ACT including cell rejuvenation



Summary: Our Technology Platforms

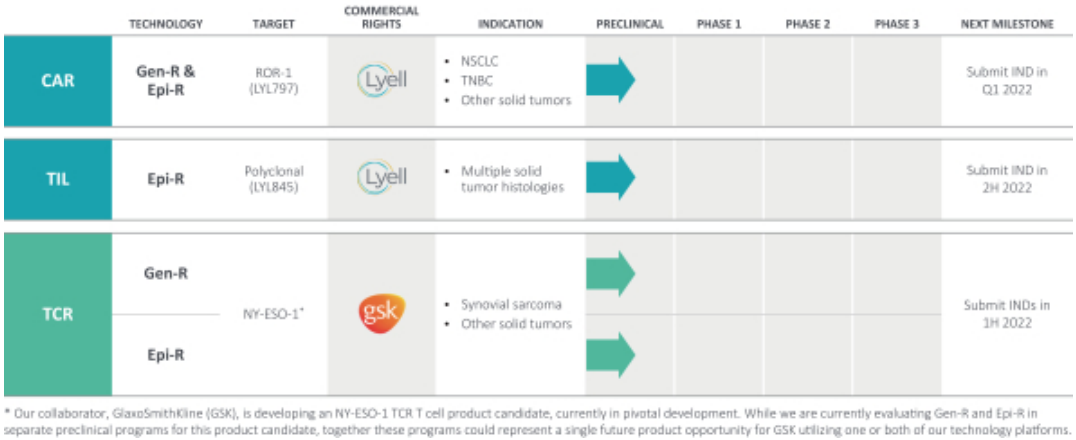


We are a T cell reprogramming company focused on the goal of curing solid tumors. We are poised to advance four programs to the clinic across multiple modalities, targets and indications with both our Gen-R and Epi-R technology platforms beginning in 2022, and have next generation efforts ongoing in cell rejuvenation.

Our Programs

The application of our platform has generated several promising living cell product candidates across multiple ACT modalities in a wide range of solid tumor settings. We are utilizing our Gen-R and Epi-R technology platforms to develop a multi-modality product pipeline with four IND submissions expected by the end of 2022. Each of our programs provide opportunities to expand into additional

indications beyond the patient populations we are initially targeting. Our product candidates are summarized in the table below:



LYL797: Our CAR T Cell Program Targeting ROR1 in Multiple Solid Tumors

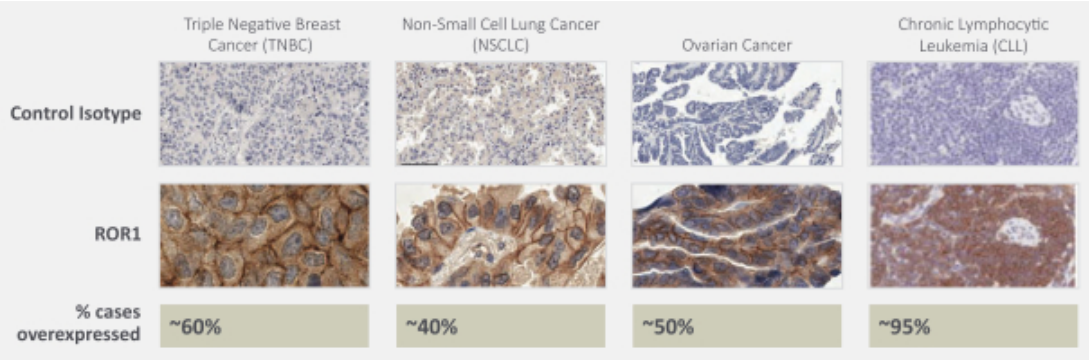
We are applying our Gen-R and Epi-R technology platforms to our lead CAR program, LYL797, which is expected to be an IV administered CAR T cell product candidate targeting ROR1 with a single-chain variable fragment derived from rabbit anti-R12 antibody that recognizes and binds to ROR1 and a proprietary optimized EGFRopt safety switch. We are initially developing LYL797 for the treatment of ROR1+ NSCLC and TNBC. ROR1 expression is associated with poor prognosis and significant subsets of patients with common cancers express ROR1, including TNBC (~60%) and NSCLC (~40%), two of the highest ROR1 expressing indications. If successful, we anticipate expanding into other ROR1+ cancers with a lower incidence of ROR1 expression, including HR+ breast cancer, ovarian cancer and other solid tumors. We expect to submit an IND for LYL797 in the first quarter of 2022.

Rationale for ROR1

We have selected ROR1 as our initial target because it is highly expressed in certain solid tumor types and clinical data has been generated using ROR1 CAR T cells that demonstrate exhaustion and thus serve as a good vehicle to test our Gen-R technology. Data from multiple third-party clinical trials of ROR1 targeted therapies in hematologic and solid tumor cancers suggest that targeting ROR1 at currently evaluated dose levels was well tolerated with no on-target, off-tumor toxicity observed despite ROR1 expression in a number of normal tissues.

Figure 26 below shows pathological immunohistochemistry (IHC) staining of ROR1 in TNBC, NSCLC, ovarian cancer and CLL against control, and the approximate epidemiological frequencies of ROR1 overexpression. This pattern of ROR1 overexpression provided an opportunity to test a ROR1 CAR in both solid and hematological cancers to observe the impact of these different tumors on the T cells.

Figure 26: IHC staining of ROR1



Background on Target Indications

Patients with solid tumors, including TNBC, NSCLC, ovarian cancer or HR+ breast cancer often face a poor prognosis and low rates of long-term survival. Although patients may benefit initially from radiation therapy, chemotherapy, surgery and more advanced alternatives such as ICB, immunotherapies or targeted therapies, most patients eventually relapse. After becoming resistant to initial lines of therapy, patients are limited to palliative care, experimental therapies in clinical trials, or chemotherapy regimens that often highly toxic and largely ineffective. Patients are further challenged by high rates of late-stage diagnosis, when tumors have metastasized. Despite recent advances in therapeutic development, for most patients diagnosed with solid tumors, a significant unmet medical need exists and long-term survival rates remain low.

Triple Negative Breast Cancer

Breast cancer is the second most common cancer in American women. Currently, the average risk for a woman in the United States to develop breast cancer is approximately 13%. The American Cancer Society estimates that about 43,600 women will die from breast cancer in the United States in 2021. Breast cancers that demonstrate the absence of estrogen receptor and progesterone receptor and no overexpression of HER2 are referred to as TNBC. Approximately 10-15% of patients with breast cancer have TNBC and TN status tends to be more common in women younger than age 40, who are African-American, or who have a BRCA1 mutation. In the United States, approximately 135,000 women suffered from TNBC in 2017 and the incidence rate was estimated to be 13.2 per 100,000 women. TNBCs present a high tendency to metastasize and patients are at a higher risk to relapse compared to other molecular types. TNBC differs from other types of invasive breast cancer in that they grow and spread faster, have limited treatment options, and a worse prognosis. Once TNBC has spread to distant parts of the body, the 5-year survival rate is only 11.5%. ROR1 is overexpressed in approximately 57% of patients with TNBC and ROR1 expression is correlated with poorer outcomes.

Non-Small Cell Lung Carcinoma

Lung cancer is the second most common cancer and is the leading cause of cancer mortality worldwide. It is estimated that 135,720 (72,500 men and 63,220 women) deaths from this disease occurred in 2020. NSCLC, defined as any type of epithelial lung cancer other than small-cell lung carcinoma (SCLC), accounts for about 84% of all lung cancers. In 2016, the incidence of NSCLC varied widely, ranging from 3 to 57 per 100,000 in Africa and North America respectively, with ~2 million cases diagnosed globally. For people with localized NSCLC, the overall 5-year survival rate is ~61%. For regional NSCLC, the 5-year survival rate is ~35%. Based on current data, when cancer metastasizes, the 5-year survival rate is 6%. ROR1 is overexpressed in approximately 42% of patients with NSCLC adenocarcinomas.

Ovarian Cancer

Ovarian cancer is one of the most common gynecologic malignancies in women worldwide. Although ovarian cancer accounts for only ~4% of cancers in women worldwide, it is the eighth most common cause of cancer death, resulting in greater than 150,000 deaths per year, or ~4% of all cancer deaths.[1] In the United States, approximately 235,000 women suffered from ovarian cancer in 2017 and the incidence rate was estimated to be 11.2 per 100,000 women. Only 30% of advanced stage ovarian cancer patients survive for five years after initial diagnosis and the majority of cases are detected in later stages. Late stage diagnosis is due in part to the largely asymptomatic nature of early stage disease and a lack of effective screening methods, coupled with the tumor's inherent aggressive biology. ROR1 is overexpressed in approximately 50% of patients with ovarian cancer.

HR+ Breast Cancer

Breast cancer is categorized into subtypes based on the presence or absence of molecular markers for estrogen or progesterone receptors and HER2. Breast cancers that test positive for estrogen receptors, progesterone receptors, or both are HR$^+$ breast cancers, with most cases testing positive for estrogen receptors. HR$^+$ breast cancers account for the most common molecular subtypes of breast cancer, including Luminal A (HR$^+$/HER2-) and Luminal B (HR$^+$/HER2$^+$), which together represent ~78% of all breast cancers. Luminal A is the most common type of breast cancer, representing ~68% of all breast cancer cases and tends to be slower-growing and less aggressive than other subtypes. In the United States, HR+ breast Cancer has an incidence rate of 100.3 per 100,000 women and it was estimated in 2017 that approximately 1,030,243 and 145,805 women had Luminal A and Luminal B breast cancer, respectively. Although prognosis for early stages is favorable, 5-year survival rates fall significantly in later stages. Once HR+ breast Cancer has spread to distant parts of the body, the 5-year survival rate is only 30.4% and 43.5% for Luminal A and Luminal B breast cancer, respectively. ROR1 is overexpressed in approximately 12% of patients with HR$^+$ breast cancer.

Additional Indications

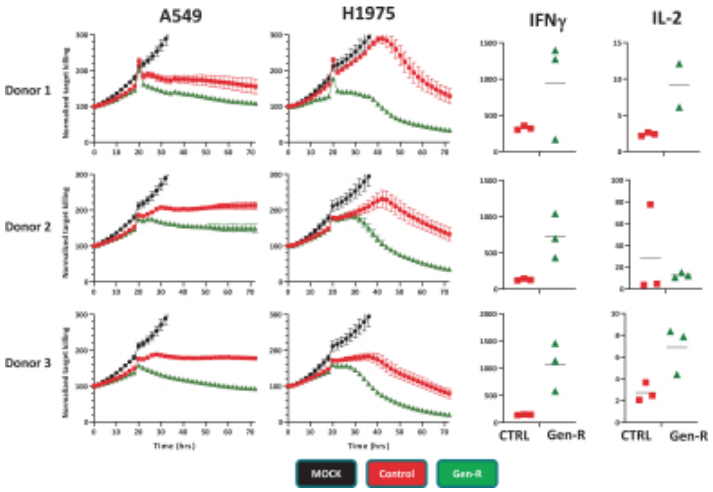
ROR1 has been reported to be expressed in many other solid tumors beyond breast, lung and ovarian, including prostate, stomach, endometrial and pancreatic, providing multiple opportunities for indication expansion. Many of these indications are unaddressed or under-addressed with currently approved therapeutics; further, patients with ROR1 expression tend to experience poorer outcomes on these treatments and poorer prognosis. These indications represent a significant unmet need and a substantial opportunity.

Preclinical Data

We have conducted a number of preclinical *in vitro* and *in vivo* experiments of LYL797 against ROR1$^+$ solid tumors. These studies have demonstrated that LYL797, which incorporates Gen-R and Epi-R, maintains stem-like phenotypes and can resist exhaustion while inhibiting tumor growth in models of tumor cells expressing ROR1.

Gen-R and Epi-R, in combination with ROR1-targeted CAR T cells, have been evaluated preclinically in *in vitro* and *in vivo* models. In the studies depicted below, we exposed ROR1 + Gen-R CAR T cells (ROR-1 + Gen-R) and other ROR1 CAR T cells without Gen-R (the Control) to chronic stimulation by repeated exposure to ROR1$^+$ NSCLC tumor cells, with fresh tumor cells introduced every two days. After seven days of chronic stimulation, we assessed cytolytic ability and cytokine release from the T cells. In all donors, the ROR1 + Gen-R T cells demonstrated improved maintenance of cytotoxicity against ROR1$^+$ tumor cells while producing increased levels of cytotoxic cytokines, such as IFNg. This suggests persistence of activity and thus lack of exhaustion in ROR1 + Gen-R versus the Control T cells (Figure 27).

Figure 27: In vitro *experiment demonstrated superior ability of ROR1 + Gen-R T cells to resist T cell exhaustion. In this experiment we repeatedly stimulated T cells from three different donors with ROR1+ lung cancer cells (cell lines A549 and H1975). After four rounds of stimulation over seven days, we tracked tumor killing kinetics by measuring reduction of tumor cells over time. Shown here are results comparing ROR1 + Gen-R T cells (Gen-R, in green), to the Control T cells (the Control, in red), and to T cells without a ROR1 CAR (Mock, in black). In both the left and middle columns (against two lung tumor cancer cell lines—A549 and H1795), the green line is below the red and black lines, indicating that more tumor killing occurred with ROR1 + Gen-R T cells. In addition, as shown in the right panel, at 24 hours after the fourth round of stimulation, the ROR1 + Gen-R T cells produced more of the killing-associated cytokines IFNg and IL-2.*



In *in vivo* experiments the ROR1 + Gen-R T cells achieved superior tumor growth inhibition relative to the Control in murine models of ROR1+ lung cancer. Importantly, as shown in the figure below, the Control T cells were administered at a sub-therapeutic dose and did not result in complete tumor eradication, while the ROR1 + Gen-R T cells, when administered intravenously at the same dose, demonstrated near complete inhibition of tumor growth.

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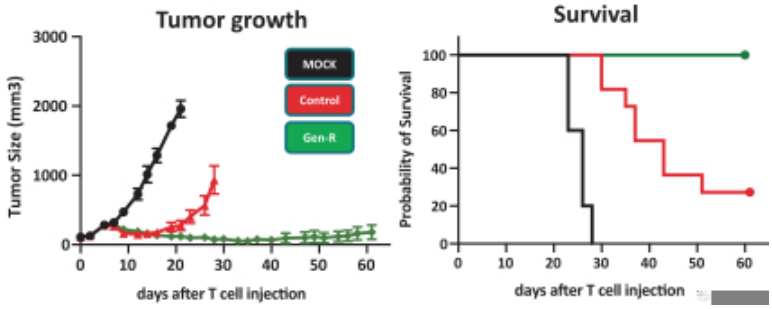
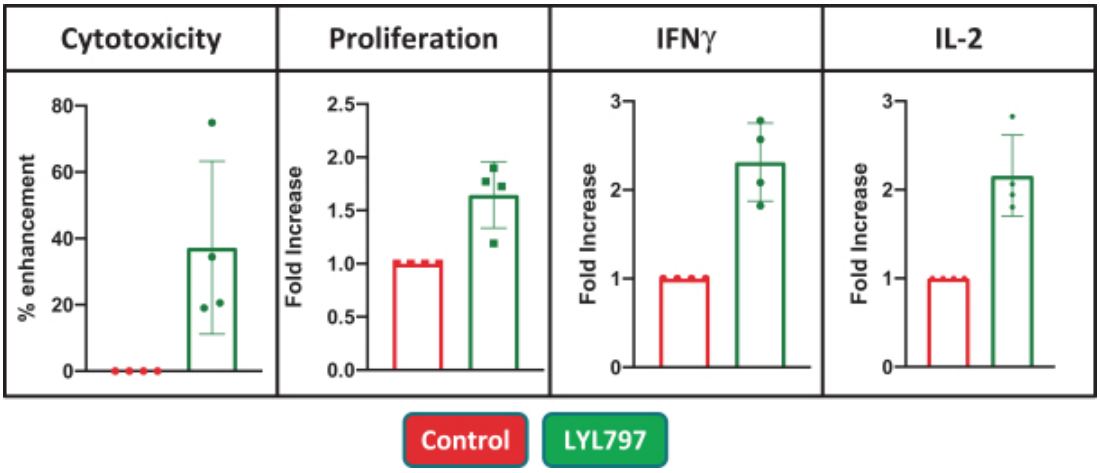
Figure 28: In vivo *study demonstrated inhibition of tumor using ROR1 + Gen-R T cells. In this study, tumor cells from a human ROR1+ lung cancer cell line were implanted into NSG mice. When tumors reached 100mm3, the mice were intravenously injected with ROR1 + Gen-R T cells (Gen-R, in green), the Control T cells (the Control, in red) or T cells without a ROR1 CAR (Mock, in black). The left panel shows results from tracking tumor growth. The black and red lines, Mock and the Control, go up over time, while the green line at the bottom, ROR1 + Gen-R, is nearly flat. At the end of the study (60 days post T cell injection) all of the mice treated with ROR1 + Gen-R T cells were alive and had no meaningful change in body weight.*



Additional *in vitro* experiments demonstrate synergistic improvement of CAR T cells by implementing Epi-R in addition to Gen-R (LYL797). When repeatedly exposed to ROR1+ NSCLC tumor cells, with fresh tumor cells introduced every three days, LYL797 showed increases in cytotoxicity, proliferation and secretion of cytokines compared to ROR1 + Gen-R, across all donors.

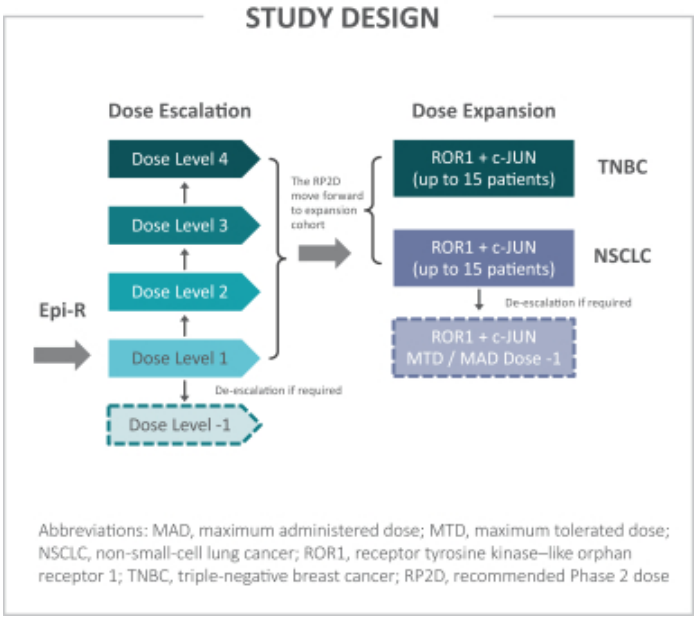
Figure 29: In vitro, application of Epi-R technology resulted in better functional activity of ROR1 + Gen-R T cells. LYL797 T cells (LYL797, in green) and ROR1 + Gen-R T cells (the Control, in red) were repeatedly stimulated every three days with tumor cells from a ROR1+ lung cancer cell line (A549). During the final stimulation, we measured the percent enhancement in tumor cell clearance (cytotoxicity) or the fold increase in proliferation and 24 hour cytokine production of LYL797 T cells compared to ROR1 + Gen-R T cells. Data from four donors is shown. LYL797 T cells showed increases in cytotoxicity, proliferation and secretion of cytokines compared to ROR1 + Gen-R T cells.



Our Planned Phase 1 Trial

We plan to submit an IND for LYL797 to the FDA in the first quarter of 2022. We are planning our Phase 1 clinical trial as a dose escalation and expansion study of LYL797 in approximately 40 patients with relapsed/refractory TNBC or NSCLC who have failed at least two lines of therapy. The primary endpoint of our Phase 1 trial is expected to be the safety and tolerability of LYL797. Additionally, we will investigate whether LYL797 T cells resist exhaustion. Patients will be monitored for cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS), as well as tissue specific toxicities in ROR1-expressing organs. As a safety measure, we have included our EGFRopt safety switch in our construct. Thus, cetuximab may be used as a safety intervention. Secondary endpoints are clinical activity based on the evaluation of antitumor activity as evaluated by Response Evaluation Criteria in Solid Tumors (RECIST) criteria and characterization of the pharmacokinetic profile of LYL797. We plan to include exploratory biomarkers of T cell stemness and function to explore the impact of Gen-R and Epi-R in this trial. Once a safe dose is identified during dose escalation in TNBC, we plan to enroll a total of 15 patients with TNBC and 15 patients with NSCLC at the recommended Phase 2 dose (RP2D) of LYL797. We expect to submit an IND for LYL797 in the first quarter of 2022.

Figure 30: LYL797 Phase 1 study design



LYL845: Our TIL Program Targeting Multiple Solid Tumor Indications

We are applying our Epi-R technology to develop our product candidate, LYL845, which is expected to be an IV administered autologous TIL therapy in multiple solid tumors. TILs have previously shown clinical benefit in patients with melanoma and other solid tumors with high mutation burdens. Published data from third-party TIL trials show that treating metastatic melanoma patients with TILs results in a 50% or greater response rate, with up to half of those responses complete and durable. TIL therapy has also been shown to result in responses in patients with advanced cervical, lung, breast and gastrointestinal cancers, although response rates in these tumor histologies are much lower than that observed in the melanoma setting. TILs target a variety of tumor antigens, but it is thought that the clinical efficacy of TILs is largely driven by specific recognition of mutated tumor

neoantigens. Further, broad TIL efficacy has been limited by poor enrichment of tumor-reactive T cells, poor quality and growth potential of expanded T cells, and failure to maintain polyclonality of TILs during production. We have designed LYL845 to incorporate our Epi-R technology that has shown promising improvements in enhancing T cell potency, antitumor activity and increased polyclonality of TILs. We expect to submit an IND to test LYL845 in multiple solid tumor indications in the second half of 2022.

Background on Target Indications

We are targeting cervical, pancreatic, non-small cell lung, breast and colorectal cancer as well as melanoma initially, which all have a high unmet need based on the current treatment landscapes. Although patients may benefit initially from radiation therapy, chemotherapy, surgery and more advanced alternatives such as checkpoint therapies, immunotherapies or targeted therapies, most patients with these types of cancers eventually relapse. After becoming resistant to initial lines of therapy, patients are limited to palliative care, experimental therapies in clinical trials, or chemotherapy regimens that often highly toxic and largely ineffective. Overall, despite recent advances in therapeutic development, for most patients diagnosed with solid tumors, a significant unmet medical need exists and long-term survival rates remain low.

Melanoma

Melanoma arises due to genetic mutations in melanocytes, the pigment producing cells, which can be found in the skin, eye, inner ear and leptomeninges, and represents the most aggressive and the deadliest form of skin cancer. Although melanoma accounts for only ~1% of all dermatologic cancers, it is responsible for ~80% of deaths from skin cancer and only ~14% of patients with metastatic melanoma survive for five years. It is estimated that there are over 105,000 new cases of melanoma diagnosed in the United States per year, and over 7,000 deaths per year.

Cervical Cancer

While increased use of Pap tests has improved the death rates from cervical cancer in recent years, it is still a common cancer diagnosed in women in the United States. It is estimated that there are approximately 15,000 new cases of cervical cancer a year, resulting in about 4,000 deaths. Patients diagnosed with metastatic disease generally have significantly poorer prognosis and fewer treatment options. For patients with localized cervical cancer, the overall 5-year survival rate is ~92%. For regional cervical cancer, the 5-year survival rate is ~58%. When the cancer has metastasized, the 5-year survival rate is 17%.

Head and Neck Cancer

Cancers that are known collectively as head and neck cancers usually begin in the squamous cells that line the moist, mucosal surfaces inside the head and neck, otherwise known as squamous cell carcinomas. Cancers of the head and neck are further categorized by the area of the head or neck in which they begin: oral cavity, pharynx, larynx, paranasal sinuses and nasal cavity and salivary glands. Head and neck cancers account for approximately 4% of all cancers in the United States and are more than twice as common among men as they are among women. In 2021, an estimated 67,000 people will develop head and neck cancer. Additionally, it is estimated that nearly 15,000 deaths from head and neck cancer will occur in 2021. Approximately one out of five head and neck cancer cases will be metastatic, with tumors spreading past the squamous cells into deeper layers of tissue, past the epithelium layer into the mucosa. Five-year survival rates for head and neck vary based on the subtype of cancer. For people with oral cavity and pharynx cancer, a common type of head and neck cancer, that is local, the overall 5-year survival rate is 85%. When cancer has metastasized, the 5-year survival rate is 40%. For another prevalent type of head and neck tumors, laryngeal cancer, localized cancers

have a 78% 5-year survival rate. For regional laryngeal cancer, the 5-year survival rate is 45%. When cancer has metastasized, the 5-year survival rate is 34%. Across other head and neck cancers, 5-year survival rates fall in a similar range.

Pancreatic Cancer

Pancreatic cancer is an aggressive form of cancer that develops largely in the exocrine cells of the pancreas. Pancreatic cancer represents roughly 3% of all cancers, but due to poor prognosis associated with pancreatic cancer, it represents 7% of all cancer deaths. It is estimated that there are approximately 60,000 new cases of pancreatic cancer in the United States per year, and 50,000 deaths from this disease a year, making it the fourth leading cause of cancer death. For patients diagnosed with localized pancreatic cancer, the overall 5-year survival rate is ~39%, but 5-year survival rates drop to as low as 3% when patients are diagnosed with metastatic disease. At the time of diagnosis, a majority, or 52%, of pancreatic cancer cases have progressed to metastatic disease.

Non-Small Cell Lung Cancer

Lung cancer is the second most common cancer and is the leading cause of cancer mortality worldwide. It is estimated that 135,720 (72,500 men and 63,220 women) deaths from this disease occurred in 2020. NSCLC accounts for about 84% of all lung cancers. In 2016, the incidence of NSCLC varied widely, ranging from 3 to 57 per 100,000 in Africa and North America respectively, with ~2 million cases diagnosed globally. For people with localized NSCLC, the overall 5-year survival rate is ~61%. For regional NSCLC, the 5-year survival rate is ~35%. Based on current data, when cancer metastasizes, the 5-year survival rate is 6%.

Breast Cancer

Breast cancer is the most common cancer in American women, except for skin cancers. Approximately, 13% of women will be diagnosed with breast cancer at some point during their lifetime, with a current estimated 3.5 million women living with breast cancer in the United States as of 2017. It is estimated that there are approximately 282,000 new cases of breast cancer diagnosed in the United States per year, representing about 15% of all new cancer cases in the United States with a 90% 5-year relative survival. When cancer has metastasized, the 5-year survival rate drops to 6%. Over 40,000 deaths in the United States are expected to occur annually from breast cancer.

Colorectal Cancer

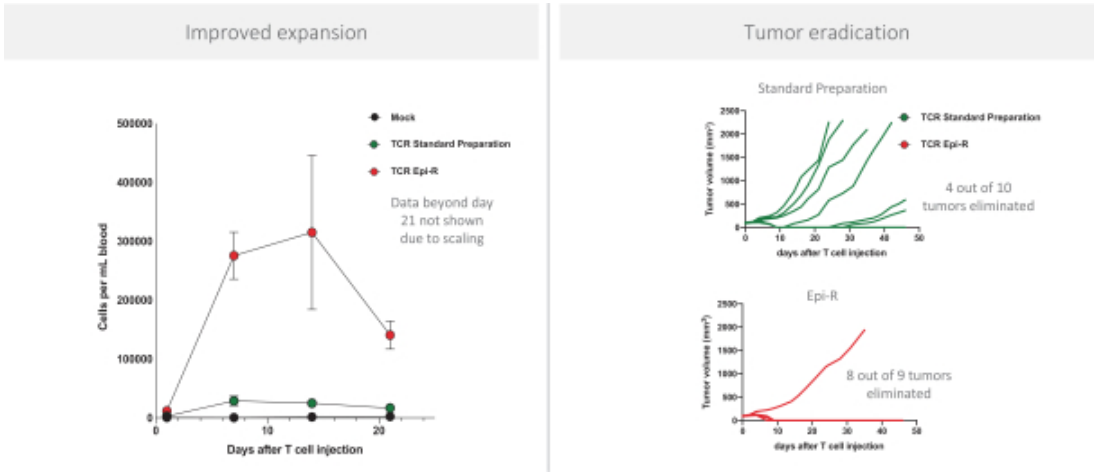
Colorectal cancer is the fourth most common cancer diagnosed in the United States. Most colorectal cancers are a type of tumor called adenocarcinoma, which is cancer of the cells that line the inside tissue of the colon and rectum, but other types of less frequently arising colorectal tumors include neuroendocrine tumor of the gastrointestinal tract, gastrointestinal stromal tumor, small cell carcinoma and lymphoma. It is estimated that there are approximately 100,000 new cases of colon cancer and 45,000 new cases of rectal cancer in the United States per year. Further, it is the second most common cause of cancer deaths in the United States, estimated to cause over 50,000 deaths a year. For patients with localized colorectal cancer, the overall 5-year survival rate is ~90%. For regional colorectal cancer, the 5-year survival rate is ~72%. For patients diagnosed with metastatic disease, the 5-year survival rate is 14%. Approximately 25% of patients have metastatic disease at diagnosis, and about 50% of patients with colorectal cancer will eventually develop metastases. Over 35% of the patients with a new diagnosis of CRC will die within five years.

Our Preclinical Data

We have conducted a number of preclinical *in vitro* and *in vivo* studies of LYL845 which suggest TILs enhanced with Epi-R maintain properties of durable stemness, including superior expansion and tumor eradication in both animal studies and autologous experiments, as well as polyclonality.

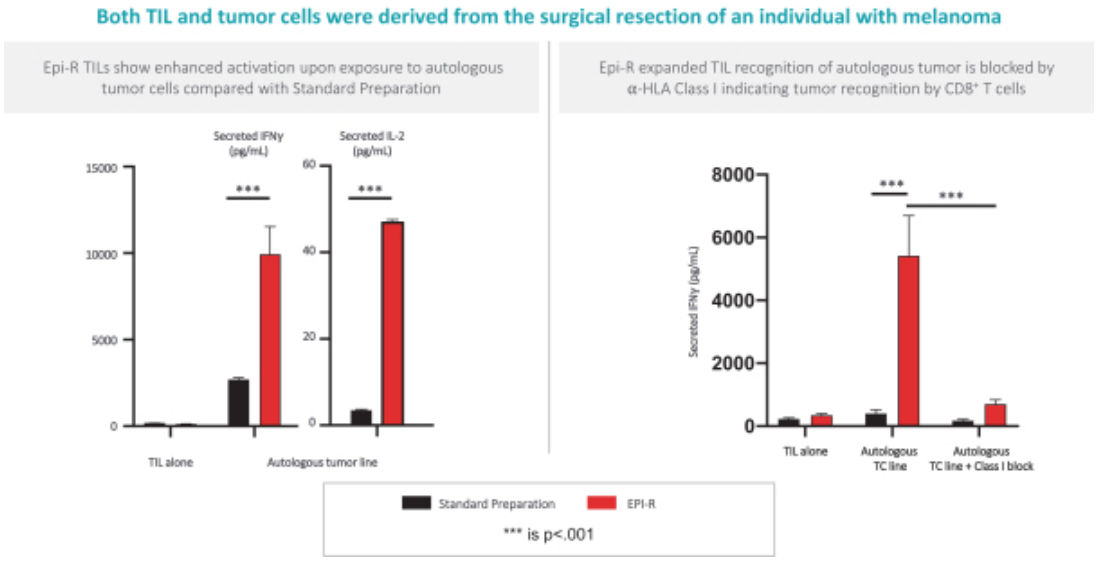
Our Epi-R T cell populations have demonstrated superior expansion in *in vivo* mouse models. We measured the number of T cells in the mice at various time points and observed as many as 50-fold more T cells in mice injected with Epi-R T cells, as compared to mice injected with T cells expanded in Standard Preparation. We also observed, after 40 days, tumor eradication in 4 out of 10 mice treated with Epi-R T cells versus eradication in only 1 out of 9 mice treated with Standard Preparation. These observations may not be repeated in clinical trials and the safety of our product candidates is a determination solely within the authority of the FDA and comparable foreign regulators.

Figure 31: Epi-R T cells had improved expansion in vivo as shown in the left panel and had greatly improved antitumor function in mouse models of cancer, as shown on the right. Epi-R T cells eliminated tumors in 8 out of 9 treated mice (note overlapping red lines in Epi-R tumor killing along the x-axis), compared to 4 out of 10 mice treated with Standard Preparation T cells.



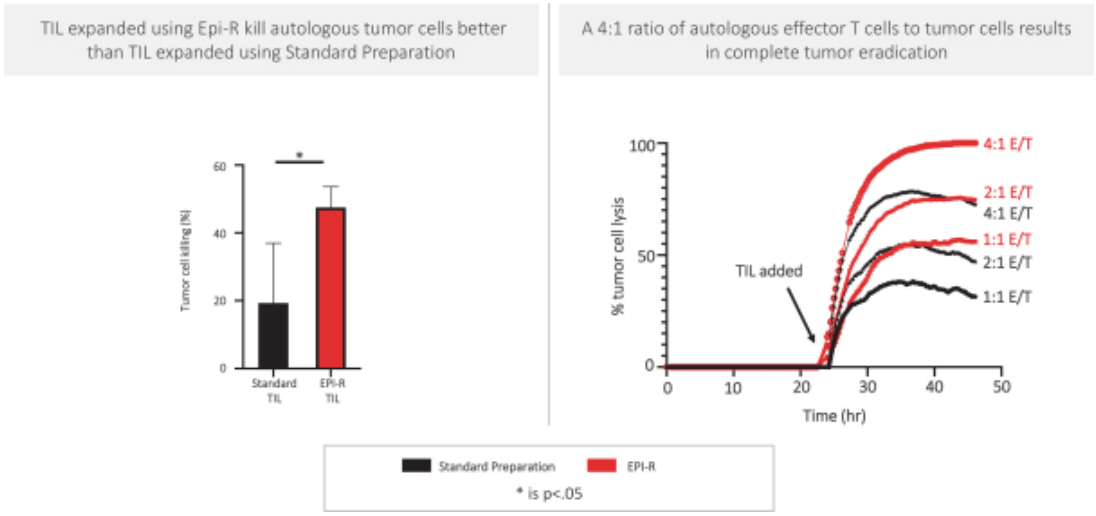
In *in vitro* studies we evaluated Epi-R expanded TIL recognition of autologous melanoma cancer cells. Utilizing a patient melanoma tumor excision, we both extracted and expanded TIL from that specimen in either Standard Preparation or Epi-R, and created a cancer cell line in order to evaluate whether the expanded TIL from that tumor recognize and react to that patient's own cancer cells. We were able to demonstrate that Epi-R TIL do exhibit enhanced activation, the response is mediated by activated killer $CD8^+$ cells, and they have significantly enhanced tumor cell killing capacity when compared to Standard Preparation. The higher secretion of IL-2, the critical T cell growth factor, is notable.

Figure 32: Epi-R TIL had enhanced recognition and activity against autologous melanoma tumor cell line. Asterisks denote significant p-values between groups. The red bars in the graph on the left show that Epi-R T cells from TIL secreted increased levels of IFNg and IL-2 cytokines as compared to Standard Preparation after co-culture with autologous melanoma tumor cells, indicating greater activation and cytotoxicity potential. As a control, when TIL alone were measured without the presence of autologous tumor cells, they did not activate and did not secrete the cytokines. In the bar chart on the right, we demonstrate that production of IFNg secretion dropped significantly when target cells were coated with an antibody to HLA Class I, indicating that the tumor cell recognition was mediated by CD8+ T cells.



These cells were also shown to be more effective at tumor cell killing. In the graph below on the left, we show that Epi-R TIL T cells killed autologous tumor cells at a rate of approximately 50% whereas those TIL grown in Standard Preparation killed at a rate of approximately 20%. We also observed, in an experiment to titrate different levels of Epi-R TIL T cells against tumor cells, that a 4:1 effector T cell to tumor cell ratio resulted in complete tumor eradication.

Figure 33: Epi-R TIL had improved ability to kill autologous tumor cells. Standard and Epi-R TIL were co-cultured with autologous melanoma tumor cells and their ability to kill tumor was measured after 24 hours (left panel). Altering the ratio of TIL:tumor cells (E/T ratio) can impact TIL ability to kill tumor. Epi-R TIL exhibited increased tumor killing at all E/T ratios, and at a 4:1 ratio Epi-R TIL successfully killed all tumor cells.

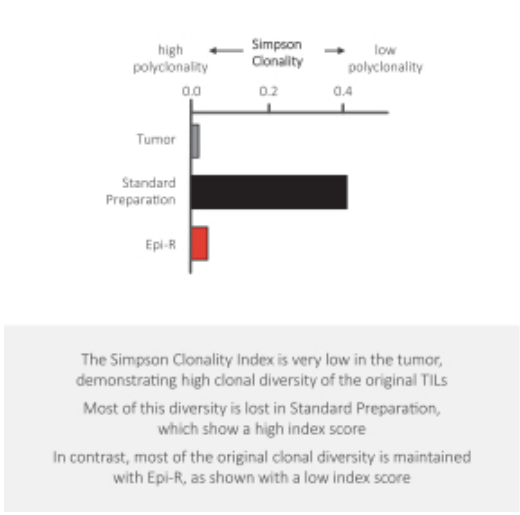


Epi-R has also demonstrated the ability to preserve the polyclonality of TIL preparations, one of the key advantages of this ACT modality.

Quantitatively, polyclonality can be measured by the Simpson Clonality index, shown below on the left (Figure 34). The Simpson Clonality Index is a quantitative tool that reflects diversity within a dataset; a low number represents high diversity, while a high number represents low diversity. An index value of 1 would represent a monoclonal population. The Simpson Clonality Index of TIL in the tumor is very low, demonstrating high clonal diversity of the original TILs. In Standard Preparation, the majority of clones giving rise to the desired clonal diversity are lost upon stimulation and expansion as shown by the high Simpson Clonality Index. In contrast, most of the original tumor clonal diversity is maintained in TIL expanded with Epi-R, as shown with a low index score.

It is known that T cells migrating through tissues experience arrested migration upon recognition of their target tumor antigen, resulting in their activation and expansion, which is followed by their exhaustion. We quantified the TCRs from TILs and ranked them by the frequency of the clonotypes found. We compared the frequencies of individual TCRs after expansion in Standard Preparation or Epi-R conditions. On the right in the graph below, we show that Epi-R preserved both dominant and rare TIL clonotypes found amplified in the tumor; 57% of the TCR Vß sequences corresponded to the top 50 TCRs represented in the original TIL. By sharp contrast, only 2% of the TCR clonotypes expanded in Standard Preparation were represented in the top 50 TCRs found in TIL.

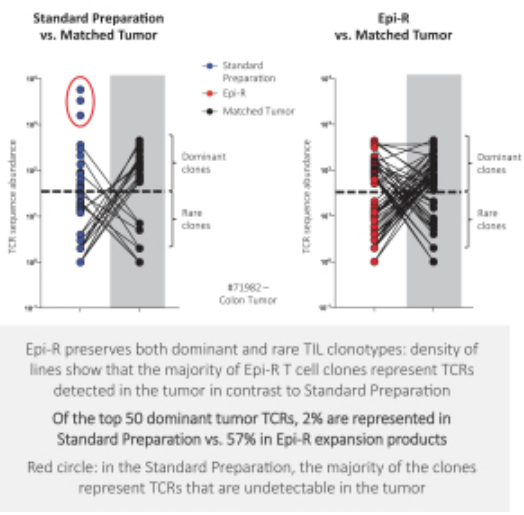
Figure 34: Epi-R TIL exhibited increased T cell polyclonality and retention of original T cell clones. TCR sequencing was performed on Standard Preparation and Epi-R TIL and Simpson Clonality Index (a measure of polyclonality, with high Simpson values indicating low polyclonality) was measured. Epi-R TIL exhibited a low Simpson Clonality Index (left panel) that reflects increased diversity of T cell TCR repertoire. The relative abundance of TCRs that were observed in starting tumor T cell population was compared with Standard Preparation and Epi-R expanded TILs. Epi-R TILs retained greater proportions of starting TCR repertoire after expansion.



The Simpson Clonality Index is very low in the tumor, demonstrating high clonal diversity of the original TILs

Most of this diversity is lost in Standard Preparation, which show a high index score

In contrast, most of the original clonal diversity is maintained with Epi-R, as shown with a low index score



Epi-R preserves both dominant and rare TIL clonotypes: density of lines show that the majority of Epi-R T cell clones represent TCRs detected in the tumor in contrast to Standard Preparation

Of the top 50 dominant tumor TCRs, 2% are represented in Standard Preparation vs. 57% in Epi-R expansion products

Red circle: in the Standard Preparation, the majority of the clones represent TCRs that are undetectable in the tumor

Our Planned Phase 1 Trial

We plan to submit an IND for LYL845 to the FDA in the second half of 2022. We are planning our Phase 1 clinical trial as a dose escalation and expansion study of LYL845 in multiple solid tumor indications. The primary endpoint of our Phase 1 trial is expected to be the safety and tolerability of LYL854 in melanoma and other solid tumor indications. Eventually we hope to expand our development program to pancreatic, head and neck SCC, breast, colorectal and other solid tumors. We plan to monitor patients for CRS and auto-immunity. We plan to monitor clinical efficacy based on antitumor activity as evaluated by RECIST criteria and characterization of the pharmacokinetic profile of LYL845. We expect to submit an IND for LYL845 in the second half of 2022.

NY-ESO-1 TCR: Our Lead Program with GSK

Our collaborator, GSK, is developing an NY-ESO-1 TCR T cell product candidate, NY-ESO-1c259, currently in pivotal development. Our collaboration explores the potential enhancement of that product candidate though the application of our Gen-R and Epi-R platform technologies, with a goal to improve the depth and durability of clinical responses. While we are currently evaluating Gen-R and Epi-R in separate preclinical programs, together these programs could represent a single future product opportunity for GSK utilizing one or both of our platform technologies.

We are responsible for preclinical activities for both programs and, for NY-ESO-1 with Epi-R, we intend to conduct manufacturing and hold the product IND. GSK is responsible for executing the clinical trials and commercialization of the future product. We anticipate that initial clinical trials will be conducted in synovial sarcoma and multiple other solid tumors. Positive results from these trials could support additional combinations and expansions into additional tumor types, including those with lower levels of target antigen, such as NSCLC. We anticipate an IND submission in the first half of 2022.

Rationale for NY-ESO-1

NY-ESO-1 is a known cancer testis antigen target that has been previously validated in clinical trials. It is expressed in a wide range of solid tumors, including at high levels in some indications; however, it has low or no expression in healthy adult tissues. It is expressed in approximately 80% of synovial sarcomas, neuroblastomas and myxoid and round cell liposarcomas, more than 40% of

melanomas and ovarian cancers, and between 20% to 40% of multiple other cancers including bladder, esophageal, hepatocellular, head and neck, ovarian, prostate, myeloma, breast and NSCLC. Patients who could benefit from treatment with NY-ESO-1-targeted therapies are further limited because the NY-ESO-1-antigen is HLA A2-restricted and the therapeutic T cells recognize only certain protein sequences.

Background on Target Indications

We are initially targeting synovial sarcoma, NSCLC and myxoid round cell liposarcoma (MRCLS), which all have a high unmet need based on the current treatment landscapes. Synovial sarcoma and MRCLS, in particular, have limited treatment alternatives, and are largely treated with a combination of surgery and chemotherapy, but with significant rates of metastases and low 5-year survival rates in metastatic cases. While NSCLC has more treatment alternatives, it still has low five-year survival rates and due to its prevalence causes upwards of 130,000 deaths in the United States per year. In addition to the unmet need in these cancers, NY-ESO-1 expression is high in all three, 80+% in MRCLRS and synovial sarcoma as well as up to 25% in NSCLC, further supporting our development plans.

Synovial Sarcoma

Synovial sarcoma is a rare, yet highly malignant tumor occurring in soft tissue and accounts for approximately 5–10% of all soft tissue sarcomas. It is estimated that there are over 13,000 new cases of soft tissue sarcomas diagnosed in the United States per year, and over 5,000 deaths per year. This would translate to approximately 650-1,300 cases of synovial sarcoma per year. Synovial sarcoma is more common in adolescents and young adults than in older individuals, and it typically affects the extremities. Patients often develop metastases, particularly to the lungs, resulting in 10-year survival rates of <50%.

Non-Small Cell Lung Cancer

Lung cancer is the second most common cancer and is the leading cause of cancer mortality worldwide. It is estimated that 135,720 (72,500 men and 63,220 women) deaths from this disease occurred in 2020. NSCLC accounts for about 84% of all lung cancers. In 2016, the incidence of NSCLC varied widely, ranging from 3 to 57 per 100,000 in Africa and North America respectively, with ~2 million cases diagnosed globally. For people with localized NSCLC, the overall 5-year survival rate is ~61%. For regional NSCLC, the 5-year survival rate is ~35%. Based on current data, when cancer metastasizes, the 5-year survival rate is 6%.

Myxoid Round Cell Liposarcoma

MRCLS is a type of rare soft, connective tissue tumor that grows in cells that store fat in the body, typically in the arms and legs. While liposarcomas are rare, MRCLS is one of the most common types of liposarcoma and makes up approximately 30% of all cases, with 2,000 diagnosed occurrences in the United States each year. Other categories of liposarcomas include well-differentiated (~50%) and pleomorphic (10%) liposarcomas. MRCLS is specifically characterized by tumors in the extremities with prevalence in a younger population than other liposarcoma subtypes, as well as high risk of recurrence in other soft tissue sites or bones. One third of MRCLS cases will become metastatic with tumors spreading to unusual bone and soft tissue locations with multifocal synchronous or metachronous spread to fat pad areas in the retroperitoneum, trunk, pericardium and axilla. For people with localized soft tissue tumors, the overall 5-year survival rate is ~93%. When cancer has metastasized, the 5-year survival rate is 41%. Additionally, outcomes for patients with significant (5% or greater) round cell component is associated with a poorer prognosis, 74% 5-year survival rate vs. 92% in low grade myxoid liposarcomas.

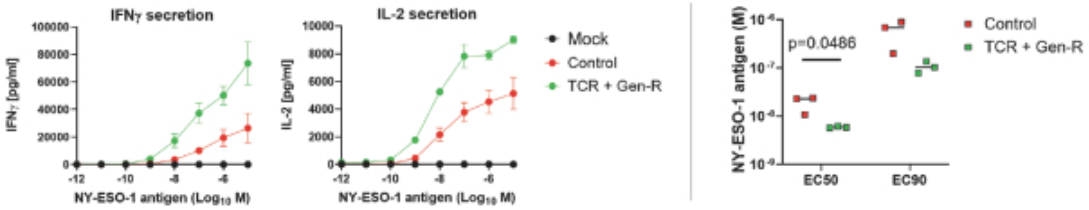
Preclinical Data

We have separately tested both platform technologies with GSK's NY-ESO-1 TCR. We are currently conducting preclinical studies for NY-ESO-1 TCR with Gen-R (NY-ESO-1 + Gen-R) and NY-ESO-1 TCR with Epi-R (NY-ESO-1 + Epi-R), compared to GSK's baseline NY-ESO-1 TCR (the Control). NY-ESO-1 + Gen-R data is discussed below; data is pending for NY-ESO-1 + Epi-R.

We have conducted a series of *in vitro* and *in vivo* experiments that show NY-ESO-1 + Gen-R T cells resisted exhaustion and had increased production of cytokines associated with tumor killing, improved sensitivity to lower levels of NY-ESO-1 surface expression and improved tumor cell killing compared to the Control, both initially and after persistent exposure to NY-ESO-1+ tumor cells. We believe these findings could translate into improved outcomes in the clinical setting.

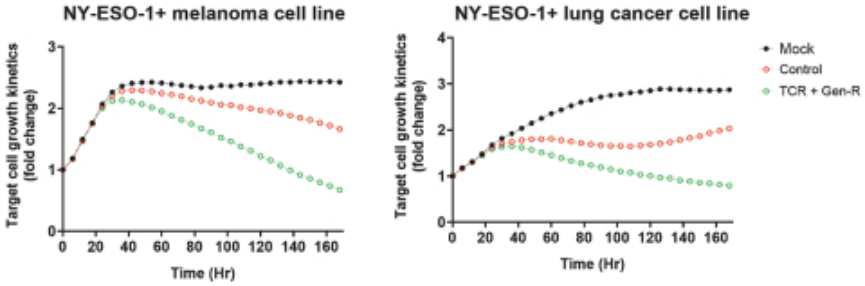
We exposed NY-ESO-1 + Gen-R T cells to NY-ESO-1+ solid tumor cell lines and measured IFNg and IL-2, cytokines associated with tumor killing. We observed a more than two-fold increase in secretion of those cytokines with NY-ESO-1 + Gen-R compared to the Control in two of three donors. We also exposed T cells to increasing concentrations of NY-ESO-1 on solid tumor cells and showed that NY-ESO-1 + Gen-R were significantly more sensitive than the Control to low levels of NY-ESO-1 (Figure 35).

Figure 35: In vitro experiments showed that NY-ESO-1 + Gen-R had increased antitumor cytokines (left panel) and increased antigen sensitivity (right panel) compared to the Control. In the experiment on the left, T cells were exposed to NY-ESO-1+ tumor cells and IFNg and IL-2 production were measured. The figure shows that NY- ESO- 1 + Gen-R (TCR + Gen-R, green curves) produced higher and increasing amounts of those cytokines compared to the Control (red curves). In the experiment on the right, T cells were exposed to increasing concentrations of NY-ESO-1 peptide presented by T2 cells, where EC50 and EC90 are measures of maximal antigen concentration needed for response. The right panel shows that NY-ESO-1 + Gen-R (green dots) were more sensitive to low levels of NY-ESO-1 compared to the Control (red dots). Mock T cells, without NY-ESO-1 TCR or Gen-R, are shown in the black curves. Results for EC50 were significant, with p values between groups shown.



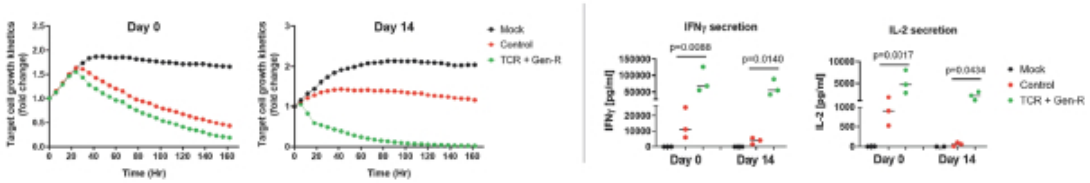
Additionally, NY-ESO-1 + Gen-R T cells demonstrated a stronger, faster and sustained durability to kill solid tumor cells versus the Control (Figure 36). This result was observed across five donors and two NY-ESO-1+ solid tumor cell lines.

Figure 36: NY-ESO-1 + Gen-R T cells (TCR + Gen-R, green curves) demonstrated superior ability to kill NY-ESO-1⁺ solid tumor cells compared to the Control. The figure shows T cell killing efficiency against two different NY-ESO-1⁺ cell lines, measured by tracking kinetics of tumor cell clearance over time. The green curves illustrate the clearance of tumor cells by the NY-ESO-1 + Gen-R; the red curves illustrate the same for the Control. Mock T cells, without NY-ESO-1 TCR or Gen-R, are shown in the black curves. In the right panel, the red curve goes upward over time as the TCR T cells without Gen-R lost their antitumor activity, while the green curve goes downward, showing that NY-ESO-1 + Gen-R T cells maintained their antitumor activity. Experiment performed with five donors; representative donor shown.



To test for T cell exhaustion, we exposed NY-ESO-1 + Gen-R to NY-ESO-1⁺ solid tumor cells repetitively. After persistent antigen exposure, NY-ESO-1 + Gen-R continued to kill NY-ESO-1⁺ tumor cells and secrete cytokines associated with tumor killing, while the Control T cells lost this ability (Figure 37). In addition, a significantly lower proportion of NY-ESO-1 + Gen-R expressed markers of exhaustion. These results suggest that NY-ESO-1 + Gen-R T cells resisted exhaustion after persistent antigen exposure compared to the Control.

Figure 37: NY-ESO-1 + Gen-R T cells (TCR + Gen-R, green line) showed enhanced long-term tumor killing activity. In a serial re-stimulation assay, where the T cells were exposed to fresh NY-ESO-1⁺ tumor cells four times, NY-ESO-1 + Gen-R T cells maintained the ability to kill NY-ESO-1⁺ tumor cells and to secrete cytokines over time, whereas the Control cells (red line) exhibited signs of exhaustion, as illustrated by loss of killing activity and cytokine secretion. The green curves in the left panel and the green dots in the right panel show that the NY-ESO-1 + Gen-R T cells were able to kill NY-ESO-1⁺ tumor cells and secrete high amounts of cytokines before (Day 0) and after (Day 14) four rounds of NY-ESO-1 antigen exposure, whereas the Control T cells showed signs of exhaustion, as illustrated by loss of ability to kill and secrete cytokines (red curves and red dots). Mock T cells, without NY-ESO-1 TCR or Gen-R, are shown in the black curves. Significant p values between groups are shown.



Planned Phase 1 Trial

The initial clinical trial for our NY-ESO-1 TCR program, conducted by GSK, is expected to test this product candidate in patients with synovial sarcoma and multiple other solid tumors for tolerability and preliminary efficacy. Positive results from such a trial could support additional combinations and

expansions, including expansion to additional patient populations with lower levels of target antigen, such as NSCLC.

Manufacturing and Digital Infrastructure

We believe it is critically important to own, control and continuously monitor all aspects of the cell therapy manufacturing process in order to mitigate risks the field has seen, including challenges in managing production, supply chain, patient specimen chain of custody and quality control. We made a strategic decision to invest in building our own manufacturing facility to control our supply chain, maximize efficiencies in cell product production time, cost and quality, and have the ability to rapidly incorporate disruptive advancements and new innovations. Controlling manufacturing also enables us to protect proprietary aspects of our Gen-R and Epi-R technology platforms. We view our manufacturing team and capabilities as a significant competitive advantage.

Our LyFE manufacturing center is approximately 73,000 square feet and comprises laboratories, offices and manufacturing suites. LyFE has a flexible and modular design allowing us to produce plasmid, viral vector and T cell product to control and de-risk the sequence and timing of production of the major components of our supply chain related to our product candidates. At full staffing and capacity, we expect to be able to manufacture approximately 500 infusions per year depending on product candidate mix. We believe this capacity is sufficient to support our pipeline programs through pivotal trials and, if approved, early commercialization. We anticipate the facility to be cGMP qualified by the end of 2021.

LyFE is a paperless facility that integrates advanced data and analytics approaches to enable a completely digital manufacturing process. Our adaptive manufacturing capabilities allow us to track every step of the process and instantly manage any deviations or alerts. We believe the ability to capture and analyze data in real time will ultimately lead to more effective and safe cell therapy products for patients. Upon receipt of a patient specimen, the subsequent application of Gen-R and Epi-R is conducted within our integrated manufacturing center to generate reprogrammed T cells to be infused back into the patient. This integrated manufacturing capability, further enhanced with our sophisticated information science and real-time monitoring capabilities, should enable us to improve yield and success rates, which could result in a more favorable cost structure, while at the same time expanding our knowledge base for each product candidate from each manufacturing run.

To support our digital manufacturing capabilities, we worked with AWS. Our LyFE manufacturing center is one of the first cell therapy manufacturing facilities to benefit from AWS's extensive experience with cloud computing, Internet of Things (IoT) and advanced analytics. Our digital strategy is spearheaded by our Information Sciences team, comprising experts in cloud computing, security, software development, automation, robotics and advanced analytics, including artificial intelligence. Our digital analytics platform is designed to allow us to rapidly and continuously acquire, manage and analyze data to accelerate and enhance our science and operations and inform our next generation cell therapies. The key benefits of our digital manufacturing strategy include:

- Real-time data acquisition: allows for monitoring, alerting, rapid decision making;
- Workflow automation: reduces variability, manual oversight, data entry and calculations;
- Cloud computing: unlimited compute and storage, accelerated innovation, security, compliance;
- Agility: rapidly adapts to changing needs while ensuring compliance; and
- Analytics and insights: enables trending, process optimization, data-driven decision making.

Our Information Sciences infrastructure is built on a "data lake and control tower" approach to managing data arising from our scientific and manufacturing operations. A data lake is a platform which

stores and allows access to integrated data from many sources, eventually to rapidly interconnect research, clinical and manufacturing data sources with patient outcomes. The control tower creates dashboards and real-time business metrics to allow us to understand, prioritize and resolve critical issues as they happen, end-to-end across our processes. Our goal is to learn and maximize the insights from each experiment, patient and manufacturing run, and apply those to continuous learning and process improvements to our product candidates.

Competition

The pharmaceutical industry is highly competitive and dynamic, owing to rapidly advancing technologies. We face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions, government agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing treatments and new treatments that may become available in the future.

We are aware of a number of companies using *ex vivo* cell therapy approaches to treat solid tumors. Some of these companies may have substantially greater financial and other resources than we have, such as larger research and development staff and well-established marketing and sales forces, or may operate in jurisdictions where lower standards of evidence are required to bring products to market. There are a number of companies developing CAR T cells, TCR T cells or TIL-based immune-oncology therapies for the treatment of solid tumors including Achilles Therapeutics plc, Allogene Inc., BioNTech SE., bluebird bio Inc., Bristol Myers Squibb Co., Gilead Sciences Inc., GlaxoSmithKline Plc., Instil Bio Inc., Iovance Biotherapeutics Inc., Nanjing Legend Biotech and Tmunity Therapeutics Inc. Among companies developing cell therapies for solid tumors, we believe we are substantially differentiated by our technology platforms, knowledge, experience, scientific personnel and robust intellectual property portfolio. We believe the key competitive factors affecting the success of any of our product candidates will include efficacy, safety, accessibility, price and cost of manufacturing.

Collaboration, License and Success Payment Agreements

Fred Hutch License Agreement and Success Payment Agreement

In December 2018, we entered into a license agreement with Fred Hutch that grants us an exclusive, worldwide, sublicensable license under certain patent rights, and a non-exclusive, worldwide, sublicensable license under certain technology, to research, develop, manufacture, improve, and commercialize products and processes covered by such patent rights or incorporating such technology for all fields of use utilizing CARs and/or TCRs. This agreement was amended in June 2019, September 2019, January 2020, and August 2020. We paid to Fred Hutch an upfront payment of $150,000. In connection with the license agreement, we entered into a letter agreement with Fred Hutch pursuant to which we issued to Fred Hutch 1,075,000 shares of our common stock.

We also entered into a letter agreement with Fred Hutch in December 2018 under which we agreed to make success payments to Fred Hutch, payable in cash or publicly traded equity at our discretion. These success payments are based on increases in the per share fair market value of our Series A convertible preferred stock or any security into which such stock has been converted or for which it has been exchanged during the success payment period, which is a period of time that begins on the date of our letter agreement with Fred Hutch and ends on the earlier of: (a) the ninth anniversary of that date and (b) the earlier of (i) the date on which we sell, lease, transfer, or exclusively license all or substantially all of our assets to another company and (ii) the date on which we merge or consolidate with or into another entity (other than a merger in which our pre-merger

stockholders own a majority of the shares of the surviving entity). Success payments will be owed (if applicable) after measurement of the value of our common stock in connection with the following valuation dates during the success payment period: (1) the first anniversary of the date on which we complete an initial public offering of our common stock, or our shares otherwise become publicly traded; (2) the second anniversary of such; (3) each two year anniversary thereafter (i.e., the four year anniversary, six year anniversary, etc. of such date); (4) the date on which we sell, lease, transfer or exclusively license all or substantially all of our assets to another company; (5) the date on which we merge or consolidate with or into another entity (other than a merger in which our pre-merger stockholders own a majority of the shares of the surviving entity); (6) the last day of the nine year period. Any success payment will generally be made within 45 days after the applicable valuation date, except that in the case of a merger or sale of all of our company's assets, the success payment will be made on the earlier of the 90th day following the transaction or the first date that transaction proceeds are paid to any of our stockholders. In the case of (1), (2) and (3), the value of our common stock will be determined by the average trading price of a share of our common stock over the consecutive 90-day period preceding the date the success payment is made; the value will otherwise be determined either, in the case of a merger or stock sale, by the consideration paid in the transaction for each share of our stock or the stock of the acquiring entity (or their parent or affiliate). The amount of a success payment is determined based on whether the value of our common stock meets or exceeds certain specified threshold values ascending from $18.29 per share to $91.44 per share, in each case subject to adjustment for any stock dividend, stock split, combination of shares, or other similar events. Each threshold is associated with a success payment, ascending from $10.0 million at $18.29 per share to $200.0 million at $91.44 per share, payable if such threshold is reached. Any previous success payments made to Fred Hutch are credited against the success payment owed as of any valuation date, so that Fred Hutch does not receive multiple success payments in connection with the same threshold. The success payments paid to Fred Hutch will not exceed, in aggregate, $200.0 million, which would be owed only when the value of the common stock reaches $91.44 per share.

Stanford License Agreement and Success Payment Agreement

In January 2019, we entered into a license agreement with Stanford that grants us an exclusive, worldwide, sublicensable license under certain patent rights, and a non-exclusive, worldwide, sublicensable license under certain other patent rights and technology, to make, have made, use, offer to sell, sell, import, or otherwise offer to dispose of products and processes covered by such patent rights or incorporating such technology for all fields of use utilizing CARs and/or TCRs. The patents and patent applications covered by this agreement are directed to compositions and methods of treating related to preventing, reversing, inhibiting, reducing or modulating T cell exhaustion and compositions and methods related to engineered cell surface receptors including CARs. We also have the right to add certain Stanford patent applications covering certain inventions which are improvements to the existing patents and patent applications, as well as a right of first negotiation for other patent applications covering inventions made in the principal investigator's lab which relate to and are necessary or useful for utilizing CARs and/or TCRs.

We are obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and to develop markets for licensed products.

We paid to Stanford an upfront payment of $400,000. We are required to pay to Stanford an annual maintenance fee in the mid tens of thousands on the second anniversary of entering into this agreement, and each anniversary thereafter until the date of the first commercial sale of a licensed product. We are obligated to pay Stanford up to a maximum of $3.7 million per target upon achievement of certain specified clinical and regulatory milestones. We are also obligated to pay to Stanford $2.5 million collectively for all licensed products upon our achievement of a certain commercial milestone. In addition,

the license agreement provides that we are required to pay to Stanford low single-digit tiered royalties based on annual net sales of the licensed products by us and by our sublicensees. If we seek to challenge the validity of any of the licensed patents, during the pendency of such action our royalty rate will increase, and if the outcome of such challenge finds that patent is both valid and infringed our royalty rate will increase further. We are also required to pay Stanford (a) royalties in the mid-teens percentage of the payments that we receive from sublicensees of the rights solely licensed to us by Stanford, or (b) if sublicensed with other intellectual property, on a tiered basis in the low six figures up to $300,000.

The license agreement will expire, on a licensed product-by-licensed product and country-by-country basis, on the expiration of the last to expire valid claim of the licensed patents rights covering such licensed product in such country. We may terminate the agreement at will in its entirety or with respect to any licensed patent. Stanford has the right to terminate the agreement in the event of our uncured breach.

In connection with the license agreement, we entered into a letter agreement in January 2019 with Stanford pursuant to which we issued to Stanford 910,000 shares of our common stock.

We also entered into a letter agreement with Stanford in October 2020, under which we agreed to make success payments to Stanford, payable in cash or publicly traded equity at our discretion. These success payments are based on increases in the per share fair market value of our Series A convertible preferred stock or any security into which such stock has been converted or for which it has been exchanged during the success payment period, which is a period of time that begins on the date of our letter agreement with Stanford and ends on the earlier of: (a) the ninth anniversary of that date and (b) the earlier of (i) the date on which we sell, lease, transfer, or exclusively license all or substantially all of our assets to another company and (ii) the date on which we merge or consolidate with or into another entity (other than a merger in which our pre-merger stockholders own a majority of the shares of the surviving entity). Success payments will be owed (if applicable) after measurement of the value of our common stock in connection with the following valuation dates during the success payment period: (1) the first anniversary of the date on which we complete an initial public offering of our common stock, or our shares otherwise become publicly traded; (2) the second anniversary of such; (3) each two year anniversary thereafter (i.e., the four year anniversary, six year anniversary, etc. of such date); (4) the date on which we sell, lease, transfer or exclusively license all or substantially all of our assets to another company; (5) the date on which we merge or consolidate with or into another entity (other than a merger in which our pre-merger stockholders own a majority of the shares of the surviving entity); (6) the last day of the nine year period. Any success payment will generally be made within 45 days after the applicable valuation date, except that in the case of a merger or sale of all of our company's assets, the success payment will be made on the earlier of the 90th day following the transaction or the first date that transaction proceeds are paid to any of our stockholders. In the case of (1), (2) and (3), the value of our common stock will be determined by the average trading price of a share of our common stock over the consecutive 90-day period preceding the date the success payment is made; the value will otherwise be determined either, in the case of a merger or stock sale, by the consideration paid in the transaction for each share of our stock or the stock of the acquiring entity (or their parent or affiliate). The amount of a success payment is determined based on whether the value of our common stock meets or exceeds certain specified threshold values ascending from $18.29 per share to $91.44 per share, in each case subject to adjustment for any stock dividend, stock split, combination of shares, or other similar events. Each threshold is associated with a success payment, ascending from $10.0 million at $18.29 per share to $200.0 million at $91.44 per share, payable if such threshold is reached. Any previous success payments made to Stanford are credited against the success payment owed as of any valuation date, so that Stanford does not receive multiple success payments in connection with the same threshold. The success payments paid to Stanford will not exceed, in aggregate, $200.0 million, which would be owed only when the value of the common stock reaches $91.44 per share.

GSK Collaboration and License Agreement

In May 2019, we entered into a collaboration and license agreement with GSK which became effective on July 7, 2019 and was amended in June 2020. Under the GSK Agreement, we agreed to work collaboratively with GSK to research and develop certain T cell therapies incorporating our technology platforms or other cell therapy innovations as applied to CARs or TCRs under distinct collaboration programs. The GSK Agreement could include T cell therapies for up to a total of nine CAR or TCR targets, and GSK may select these CAR or TCR targets for collaboration during a specified period, subject to certain restrictions.

Under the GSK Agreement, we granted GSK an option, for each Lyell cell therapy innovation that was the subject of a collaboration program under the GSK Agreement, to obtain an exclusive, worldwide license to develop and commercialize that Lyell cell therapy innovations as part of a TCR or CAR cell therapy for the specific target, for human diagnostic and therapeutic uses, except that we retain rights for the China territory for T cell therapies directed to targets that were within GSK's pipeline and met certain criteria prior to inclusion in the GSK Agreement. We also retain rights to the Lyell cell therapy innovations for other products and targets.

For potential T cell therapies that are the subject of collaboration programs under the GSK Agreement, we are responsible for certain research and development activities, at our cost, up to GSK's option point. The GSK option point is prior to IND filing for therapies to targets that were within GSK's pipeline and met certain criteria prior to inclusion in the GSK Agreement and, for other targets, the GSK option point is after results of a specific clinical trial. At the GSK option point, together with GSK we must engage in an option process for a specified period of time, at the end of which GSK may exercise its option. Generally, each party is responsible for its own cost and expense to conduct each collaboration program. Upon any such option exercise, GSK will be responsible for further development, at GSK's cost.

In April 2021, GSK exercised its option to the NY-ESO-1 TCR with Gen-R program. As a result of such option exercise, we will transition to GSK responsibility for future research and development of this program at its cost and expense.

For applications of our Epi-R technology to the NY-ESO-1 TCR, we have agreed with GSK to share responsibilities of development activities for the period between IND-enabling work and the GSK option point at the conclusion of initial clinical trials. During that period, we are responsible for ongoing research, process development and vector and cell manufacturing, while GSK is responsible for clinical trials. We share regulatory responsibilities with GSK; we are responsible for the product IND and GSK for the clinical protocol and associated regulatory filings.

For a specified time period, we are prohibited from working with third parties to develop or commercialize CAR or TCR T cell therapies, except (a) in China for non-GSK programs, (b) with entities such as research institutions, contractors and clinical sites that are not granted commercial rights, (c) for companies with supporting tools and (d) in programs for which the therapy targets one of the targets excluded from the GSK Agreement. Currently five targets are excluded, and we may exclude three additional targets during a specified period. In addition, there is a target-based exclusivity for so long as GSK is paying royalties on a product to that target.

We received an upfront payment of $45.0 million from GSK under the GSK Agreement. In addition to the upfront payment, we are eligible to receive up to two one-time payments, totalling up to approximately $200.0 million in aggregate for technology validation of Lyell's cell therapy innovations. For each cell therapy target for which there has been a joint collaboration program, Lyell also could receive up to approximately $400.0 million in aggregate in development and sales milestones if the target is already within GSK's pipeline and meets certain criteria, up to approximately $900.0 million in

aggregate in development and sales milestones for all other targets, and tiered royalties on a per-product basis ranging from low to high single digits for targets that are already within GSK's pipeline and meet certain criteria, or from high single digit to low teens for all other targets. Royalties and milestones are paid once per target, even if there is more than one Lyell innovation applied to a T cell therapy directed to that target.

The GSK Agreement will expire on a product-by-product and country-by-country basis upon the latest of (a) the expiration of the last valid claim of the last to expire licensed patent covering such product in such country, (b) the expiration of all regulatory exclusivity for such product in such country, or (c) a specified period after the first commercial sale of such product in such country. GSK may terminate the GSK Agreement in its entirety or on a collaboration program-by-collaboration program basis for convenience or in its entirety upon a change of control of Lyell by a GSK competitor. Each party may terminate the GSK Agreement in its entirety or with respect to a collaboration program in the event of an uncured material breach by the other party or in its entirety for the other party's insolvency. We may terminate the GSK Agreement in the event of a patent challenge by GSK or specified third parties.

National Cancer Institute (NCI) License Agreement

In December 2020, we entered into a license agreement with NCI that grants us a worldwide license to certain patent rights, and intellectual property rights related to certain know-how, to develop, make and commercialize licensed products and practice licensed processes for the treatment of human cancers, which license is (A) exclusive with respect to certain licensed patents for use in the field of (1) companion diagnostics for our T cell therapy products, (2) adoptive T cell therapy products generated from autologously derived, induced pluripotent stem cells, or (3) adoptive T cell therapy products isolated from autologously-derived and allogeneic-derived peripheral blood; (B) non-exclusive with respect to all licensed patents for use in the field of (4) autologous and allogeneic, adoptive T cell therapy products; and (C) non-exclusive with respect to the licensed know-how for use in the fields of (1) through (4). The licensed patents and licensed know-how covered are directed, in part, to thymic emigrant cells, hematopoietic progenitor cells, thymic organoid from human pluripotent stem cells, T cells, T memory stem cells, and their use for the treatment of cancer in humans. We may grant sublicenses under our license with NCI's written approval and, if the rights we are sublicensing are non-exclusive, they must be sublicensed in combination with certain other intellectual property. On or before the seventh anniversary of the agreement, it is the intention of NCI and us to enter into an amendment to the agreement, which amendment is intended to narrow our exclusive license for certain licensed patents to a defined list of cancer indications that meet certain criteria. Such amendment would also extend the term of our exclusive license to such licensed patents so that it would continue beyond such seventh anniversary until the expiration of the last to expire of such licensed patents.

We are obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and to adhere to an agreed-upon clinical development plan and performance milestones.

We paid to NCI an upfront payment of $100,000. We have paid a prorated annual maintenance payment to NCI in the mid four figures and we also agreed to pay NCI future annual maintenance payments in the high five figures, which payments may be credited against earned royalties. We may be obligated to pay to NCI up to a maximum of $3.1 million upon achievement of certain specified clinical and regulatory milestones. We may also be obligated to pay to NCI a maximum of $12.0 million collectively for all licensed products upon our achievement of certain commercial milestones. In addition, the license agreement provides that we are required to pay to NCI low single-digit royalties on annual net sales of the licensed products.

The license agreement will expire on the expiration of the last to expire valid claim of the licensed patents. We may terminate the agreement at will, in its entirety, or on a patent-by-patent and country-by-country basis. NCI has the right to terminate the agreement in the event of our uncured breach or to terminate or modify the agreement, at NCI's option, for our failure to meet certain diligence obligations, in the event of certain false statements or omissions by us, for our violation of certain laws, for our material breach of a covenant in this agreement, if we fail to maintain reasonable availability of licensed products or licensed processes, if we cannot meet certain health and safety needs, or if we cannot reasonably justify a failure to comply with certain production requirements.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions and improvements that are commercially important to our business, including seeking, maintaining and defending patent rights, whether developed internally or licensed from our collaborators or other third parties. Our policy is to seek to protect our proprietary position by, among other methods, filing patent applications in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements and product candidates that are important to the development and implementation of our business. We also rely on trade secrets and know-how relating to our proprietary technology and product candidates, continuing innovation, and in-licensing opportunities to develop, strengthen and maintain our proprietary position in the field of cell and gene therapy. We additionally plan to rely on data exclusivity, market exclusivity and patent term extensions when available, and if appropriate, may seek and rely on regulatory protection afforded through orphan drug designations. Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions and improvements; to preserve the confidentiality of our trade secrets; to maintain our licenses to use intellectual property owned by third parties; to defend and enforce our proprietary rights, including our patents; and to operate without infringing on the valid and enforceable patents and other proprietary rights of third parties.

We have in-licensed and procured, and filed for numerous patent applications, which include claims directed to compositions, methods of use, processes, dosing and formulations, and possess substantial know-how and trade secrets relating to the development and commercialization of our cell engineering technology platforms and related product candidates, including related manufacturing processes and protocols.

As of April 30, 2021, our in-licensed and owned patent portfolio consists of approximately nine licensed U.S. issued patents, approximately 25 licensed U.S. pending patent applications, and approximately 27 owned U.S. pending patent applications (including two co-owned with collaboration partners), as well as approximately 19 licensed patents issued in jurisdictions outside of the United States, approximately 110 licensed patent applications pending in jurisdictions outside of the United States (including approximately five licensed pending Patent Cooperation Treaty (PCT) applications), and approximately two owned pending PCT application, that, in many cases, are counterparts to the foregoing U.S. patents and patent applications. The patents and patent applications outside of the United States in our portfolio are held primarily in Europe, Canada, Japan and Australia. For information related to our in-licensed intellectual property, see the subsection titled under "—Collaboration, License and Success Payment Agreements."

As for the product candidates and related manufacturing processes we develop and commercialize, in the normal course of business, we intend to pursue, when possible, composition, method of use, process, dosing and formulation patent protection. We may also pursue patent protection with respect to manufacturing and drug development processes and technology and with respect to our technology platform. When available to expand market exclusivity, our strategy is to obtain or license additional intellectual property related to current or contemplated development technology platforms, core elements of technology and/or product candidates.

Individual patents extend for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, patents issued for applications filed in the United States are effective for 20 years from the earliest nonprovisional filing date. In the United States, a patent's term may be lengthened by patent term adjustment (PTA), which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent . In addition, in certain instances, the patent term of a U.S. patent that covers an FDA-approved drug may also be eligible for extension to recapture a portion of the term effectively lost as a result of clinical trials and the FDA regulatory review period, such extension is referred to as patent term extension (PTE). The restoration period cannot be longer than five years and the total patent term, including the restoration period, must not exceed 14 years following FDA approval, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions. Similar provisions are available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug. The duration of patents outside of the United States varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest nonprovisional filing date. The actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent.

In some instances, we submit patent applications directly to the USPTO as provisional patent applications. Provisional applications for patents were designed to provide a lower-cost first patent filing in the United States. Corresponding nonprovisional patent applications must be filed not later than 12 months after the provisional application filing date. The corresponding nonprovisional application may be entitled to the benefit of the earlier provisional application filing date(s), and the patent term of the finally issued patent is calculated from the later non-provisional application filing date. This system allows us to obtain an early priority date, add material to the patent application(s) during the priority year, obtain a later start to the patent term and to delay prosecution costs. Such delay may be useful in the event that we decide not to pursue prosecution of the application. While we intend to timely file nonprovisional patent applications relating to our provisional patent applications, we cannot predict whether any such nonprovisional patent applications will result in the issuance of patents that provide us with any competitive advantage.

We file U.S. nonprovisional applications and PCT applications that claim the benefit of the priority date of earlier filed provisional applications, when applicable. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and to designate all of the PCT member states in which national or regional patent applications can later be pursued based on the international patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national or regional applications prior to having to incur the filing fees and prosecution costs. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national/regional-phase applications. At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Organisation. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine claiming strategy on a case-by-case basis. Advice of counsel, country-specific patent laws and our business model and needs are always considered. We may file patents containing claims for protection of all useful applications of our proprietary technology platforms and any products, as well as all new applications and/or uses we discover for existing technology platforms and products, assuming these are strategically valuable. We continuously reassess the number and type of patent applications, as well as the pending and issued patent claims, to help ensure that maximum coverage and value are obtained for our processes, and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including, for example, the extent of the prior art, the novelty and non-obviousness of the invention and the ability to satisfy the patent eligibility, written description and enablement or support requirement of the patent laws. In addition, the coverage claimed in a patent application can be significantly reduced before a patent is issued, and the scope of a patent can be reinterpreted or further altered even after issuance. Consequently, we may not ultimately obtain or maintain adequate patent protection for any of our product candidates or for our technology platform. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection against competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of cell and gene therapy has emerged in the United States. The patent situation outside of the United States is even more uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights, and more generally could affect the value of our intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our products, their use and the methods used to manufacture those products. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our products. The area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our patented product candidates and practicing our proprietary technology. It is uncertain whether the issuance of any third-party patent would require us to alter our development or commercial strategies, or our products or processes, obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention. Our issued patents and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our product candidates. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies. For these reasons, we may have competition for our product candidates.

Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. Patent disputes are sometimes interwoven into other business disputes.

As of March 31, 2021, our registered trademark portfolio currently contains approximately 27 registered trademarks and pending trademark applications, consisting of approximately four pending trademark applications in the United States, approximately two foreign pending trademark applications in Canada and India, and trademark registrations in the following countries through national filings: Australia, Brazil, China, European Union, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Republic of Korea, Switzerland and the United Kingdom.

We may also rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our technology and product candidates, in part, by entering into confidentiality agreements with those who have access to our confidential information, including our employees, contractors, consultants, collaborators and advisors. We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. Although we have confidence in these individuals, organizations and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or may be independently discovered by competitors. To the extent that our employees, contractors, consultants, collaborators and advisors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. For this and more comprehensive risks related to our proprietary technology, inventions, improvements and product candidates, see the subsection titled “Risk Factors —Risks Relating to Our Intellectual Property.”

Sales and Marketing

Given our stage of development, we have not yet established a commercial organization or distribution capabilities. We intend to either build a commercial infrastructure to support sales of any approved products, or outsource this function to third parties. We intend to continue evaluating opportunities to work with partners that enhance our capabilities with respect to the development and commercialization of LYL797 or LYL845. In addition, we intend to commercialize our product candidates, if approved, in key markets either alone or with partners in order to maximize the worldwide commercial potential of our programs.

Government Regulation

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct trials or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Biologics Regulation

In the United States, biological products are subject to regulation under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal, state, local and foreign statutes and regulations. The process required by the FDA before biologics may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's Good Laboratory Practice requirements (GLP);
- submission to the FDA of an IND, which must become effective before clinical trials may begin;
- approval by an IRB or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as GCP, regulations and any additional requirements for the protection of human research subjects and their health information to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a Biologics License Application (BLA), after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency and, if applicable, to assess compliance with the FDA's cGTPs requirements for the use of human cellular and tissue products, and of selected clinical investigation sites to assess compliance with GCPs;
- potential FDA audit of the nonclinical and clinical trial sites that generated the data in support of the BLA; and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Before testing any biological product candidate in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical trials. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product; chemistry, manufacturing and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the submission of an IND to the FDA before initiation of a clinical trial in the United States, certain human clinical trials involving recombinant or synthetic nucleic acid molecules are subject to oversight of IBCs as set forth in the NIH Guidelines for Research Involving Recombinant DNA Molecules (the NIH Guidelines). Specifically, under the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical trials and clinical trial results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These trials are designed to test the safety, dosage tolerance, absorption, metabolism and excretion of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product in the intended therapeutic indication, particularly for long-term safety follow-up. These so-called Phase 4 trials may also be made a condition to approval of the BLA.

Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from preclinical and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including trials initiated by independent investigators. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the FDA accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after the filing date, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may also be extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may also convene an advisory committee to provide clinical insight on application review questions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. For a product candidate that is also a human cellular or tissue product, the FDA also will not approve the application if the manufacturer is not in compliance with cGTPs. These are FDA regulations that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues and cellular and tissue-based products, or HCT/Ps, which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their

HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter (CRL). An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A CRL will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the CRL, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a REMS, to ensure the benefits of the product outweigh its risks, or otherwise limit the scope of any approval. A REMS is a safety strategy implemented to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-marketing trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. For example, the fast track program is intended to expedite or facilitate the process for reviewing new products that are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Specifically, new biological products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a new biologic may request that the FDA designate the biologic as a fast track product at any time during the clinical development of the product. The sponsor of a fast track product has opportunities for more frequent interactions with the applicable FDA review team during product development and, once a BLA is submitted, the product candidate may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete

application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product candidate can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product candidate, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any marketing application for a drug or biologic submitted to the FDA for approval, including a product candidate with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product candidate is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new biological product designated for priority review in an effort to facilitate the review. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, product candidates studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical trials to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing studies or if such studies fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

In 2017, the FDA established a new regenerative medicine advanced therapy (RMAT) designation, which is intended to facilitate an efficient development program for, and expedite review of, any drug or biologic that meets the following criteria: (i) the drug or biologic qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (ii) the drug or biologic is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (iii) preliminary clinical evidence indicates that the drug or biologic has the potential to address unmet medical needs for such a disease or condition. RMAT designation provides all the benefits of breakthrough therapy designation, including more frequent meetings with the FDA to discuss the development plan for the product candidate and eligibility for rolling review and priority review. Product candidates granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical

benefit, or reliance upon data obtained from a meaningful number of clinical trial sites, including through expansion of trials to additional sites. RMAT-designated products that receive accelerated approval may, as appropriate, fulfill their post-approval requirements through submission of clinical evidence, clinical trials, patient registries, or other sources of real-world evidence (such as electronic health records); through the collection of larger confirmatory data sets; or via post-approval monitoring of all patients treated with such therapy prior to approval of such therapy. Fast track designation, breakthrough therapy designation, priority review, accelerated approval, and RMAT designation do not change the standards for approval but may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan Drug Designation and Exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 individuals in the United States and when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for a particular drug or biologic for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same biological product as defined by the FDA or if our product candidate is determined to be contained within the competitor’s product for the same indication or disease.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if a second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Biologics are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting,

product sampling and distribution and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Biologic manufacturers and other entities involved in the manufacture and distribution of approved biological products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP requirements and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain GMP compliance. Changes to the manufacturing process or facility are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or untitled letters;
- clinical holds on clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with doctors, debarment, restitution, disgorgement of profits, or civil or criminal penalties. Physicians may

prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe, in their independent medical judgment, that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The Affordable Care Act, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act (BPCIA), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies, and a clinical trial or trials. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study. The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation and impact of the BPCIA is subject to significant uncertainty.

Government Regulation Outside of the United States

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and

distribution of our products. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries. Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials.

In the European Union, for example, a clinical trial application (CTA) must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved in accordance with the applicable requirements, clinical trial development may proceed. The requirements and process governing the conduct of clinical trials, are to a significant extent harmonized at the European Union-level but could vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. The way clinical trials are conducted in the European Union will undergo a major change when the Clinical Trial Regulation (Regulation (EU) 536/2014) comes into application, probably in 2022. The Regulation harmonizes the assessment and supervision processes for clinical trials throughout the European Union via a Clinical Trials Information System, which will contain a centralized European Union portal and database.

To obtain regulatory approval of an investigational biological product under European Union regulatory systems, we must submit a marketing authorization application. The application used to file the BLA in the United States is similar to that required in the European Union, with the exception of, among other things, country-specific document requirements. Innovative products that target an unmet medical need may be eligible for a number of expedited development and review programs in the European Union, such as the PRIME scheme, which provides incentives similar to the breakthrough therapy designation in the United States. Such products are generally eligible for accelerated assessment and may also benefit from different types of fast track approvals, such as a conditional marketing authorization or a marketing authorization under exceptional circumstances granted on the basis of less comprehensive clinical data than normally required (respectively in the likelihood that the sponsor will provide such data within an agreed timeframe or when comprehensive data cannot be obtained even after authorization).

The European Union also provides opportunities for market exclusivity. For example, in the European Union, upon receiving marketing authorization, new chemical entities generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic or biosimilar application. During the additional two-year period of market exclusivity, a generic or biosimilar marketing authorization can be submitted, and the innovator's data may be referenced, but no generic or biosimilar product can be marketed until the expiration of the market exclusivity. However, there is no guarantee that a product will be considered by the European Union's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity. Products receiving orphan designation in the European Union can receive ten years of market exclusivity, during which time no similar medicinal product for the same indication may be placed on the market. An orphan product can also obtain an additional two years of market exclusivity in the European Union for pediatric trials. No extension to any supplementary protection certificate can be granted on the basis of pediatric trials for orphan indications.

The criteria for designating an "orphan medicinal product" in the European Union are similar in principle to those in the United States. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than

five in 10,000 persons in the European Union when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the European Union to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the European Union, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication. The application for orphan drug designation must be submitted before the application for marketing authorization. The applicant will receive a fee reduction for the marketing authorization application if the orphan drug designation has been granted, but not if the designation is still pending at the time the marketing authorization is submitted. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if:

- The second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- The applicant consents to a second orphan medicinal product application; or
- The applicant cannot supply enough orphan medicinal product.

The medicinal products we are developing, which are based on genes, cells or tissues, may be considered advanced therapy medicinal products (ATMPs) in the European Union if they meet the scientific criteria for defining an ATMP. The principles of the aforementioned medicines legislation apply to ATMPs. All ATMPs must obtain a marketing authorization from the EMA and are regulated through the centralized authorization procedure. Regulation (EC) No 1394/2007 (the ATMP Regulation) provides specific incentives to accelerate the development of such products, including fee reductions for scientific advice, an ATMP classification procedure (for all developers) and a certification procedure for quality and preclinical data (for SMEs only).

If tissues and cells are being used as starting materials in a medicinal product we may also need to comply with the requirements of Directive 2004/23/EC (the European Tissues and Cells Directive) covering standards for donation, procurement and testing, processing, preservation, storage and distribution of human tissues and cells, as well as its technical implementing directives; and Directive 2015/566, as regards the procedures for verifying the equivalent standards of quality and safety of imported tissues and cells.

In the European Union, early access mechanisms for innovative medicines (such as compassionate use programs and named patient supplies), pricing and reimbursement, and promotion and advertising are subject to national regulations and oversight by national competent authorities and therefore significantly vary from country to country.

Sanctions for non-compliance with the aforementioned requirements, which may include administrative and criminal penalties, are generally determined and enforced at national level. However, under the European Union financial penalties regime, the EMA can investigate and report on alleged breaches of the European Union pharmaceutical rules by holders of a marketing authorization for centrally authorized medicinal products and the European Commission could adopt decisions imposing significant financial penalties on infringing marketing authorization holders.

The United Kingdom left the European Union on January 31, 2020. Following the Transition Period which ended on December 31, 2020, Brexit could materially impact the regulatory regime with

respect to the development, manufacture, importation, approval and commercialization of our product candidates in the United Kingdom in the coming years.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business and may constrain the financial arrangements and relationships through which we research, sell, market and distribute any products for which we obtain marketing approval. Such laws include, without limitation, federal and state anti-kickback, fraud and abuse, false claims, data privacy and security, price reporting and physician and other health care provider transparency laws and regulations. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply, we may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and imprisonment.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor but the exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances.

Additionally, the intent standard under the Anti-Kickback Statute and the criminal healthcare fraud statutes under the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA) was amended by the ACA to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (FCA) (discussed below).

The FCA prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the U.S. government. Pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product and for causing false claims to be submitted because of the companies' marketing of the product for unapproved, and thus non-covered, uses.

HIPAA also created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Additionally, the federal Physician Payments Sunshine Act within the ACA, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) annually report information related to certain payments or other transfers of value made or distributed to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals and certain ownership and investment interests held by these healthcare providers and their immediate family members. Beginning in 2022, applicable manufacturers also will be required to report information regarding its payments and other transfers of value to physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives during the previous year.

We may also be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH) and its implementing regulations, impose requirements on covered entities, including certain healthcare providers, health plans, healthcare clearinghouses and their respective business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity as well as their covered subcontractors relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to business associates, independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of pharmaceutical products in a state,

including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, track and report gifts, compensation and other remuneration made to physicians and other healthcare providers, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private “qui tam” actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations

Coverage and Reimbursement

Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor’s determination that a product is safe, effective and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and neither cosmetic, experimental, nor investigational. A third-party payor could also require that certain lines of therapy be completed or failed prior to reimbursing our therapy. The principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services (CMS), an agency within the U.S. Department of Health and Human Services (HHS). CMS decides whether and to what extent products will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. Third-party payors determine which products and procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular product or procedure, the resulting reimbursement payment rates may not be adequate. These third-party payors are increasingly reducing coverage and reimbursement for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Healthcare Reform

In the United States, in March 2010, the ACA was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA contained a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and changes to fraud and abuse laws. For example, the ACA:

- increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the average manufacturer price;
- required collection of rebates for drugs paid by Medicaid managed care organizations;
- required manufacturers to participate in a coverage gap discount program, under which they must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" to specified federal government programs.
- expanded the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and
- created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research.

There have been executive, judicial and Congressional challenges to certain aspects of the ACA. For example, the Tax Act was enacted, which includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit ruled that that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. The U.S. Supreme Court is currently reviewing this case, but it is unknown when a decision will be reached. Although the U.S. Supreme Court has not yet ruled on the constitutionality of the ACA, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructs certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the Supreme Court ruling, other such litigation and the healthcare reform measures of the Biden administration will impact the ACA and our business.

Other legislative changes have also been proposed and adopted in the United States since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, included aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013. However, COVID-19 relief legislation suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2021. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers,

including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There has been heightened governmental scrutiny recently over the manner in which pharmaceutical companies set prices for their marketed products, which has resulted in several Congressional inquiries and proposed federal legislation, as well as state efforts, designed to, among other things, bring more transparency to product pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. The likelihood of success of these and other measures initiated by the former Trump administration is uncertain, particularly in light of the new Biden administration. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We anticipate that these new laws will result in additional downward pressure on coverage and the price that we receive for any approved product, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products (if approved). In addition, it is possible that there will be further legislation or regulation that could harm our business, financial condition and results of operations. For example, it is possible that additional governmental action is taken in response to address the COVID-19 pandemic.

Other Privacy and Security Laws

We may become subject to privacy laws in the jurisdictions in which we are established or in which we sell or market our products or run clinical trials. For example, in Europe we may be subject to Regulation (EU) 2016/679, the General Data Protection Regulation (GDPR) in relation to our collection, control, processing and other use of personal data (i.e. data relating to an identifiable living individual). The GDPR is directly applicable in each European Union Member State, however, it provides that European Union Member States may introduce further conditions, including limitations which could limit our ability to collect, use and share personal data (including health and medical information), or could cause our compliance costs to increase, ultimately having an adverse impact on our business.

The GDPR imposes onerous accountability obligations requiring data controllers and processors to maintain a record of their data processing and implement policies as part of its mandated privacy governance framework. It also requires data controllers to be transparent and disclose to data subjects (in a concise, intelligible and easily accessible form) how their personal information is to be used, imposes limitations on retention of personal data; defines pseudonymized (i.e., key-coded) data; introduces mandatory data breach notification requirements; and sets higher standards for data controllers to demonstrate that they have obtained valid consent for certain data processing activities. We are subject to the supervision of local data protection authorities in those European Union jurisdictions where we are established or otherwise subject to the GDPR. Fines for certain breaches of the GDPR are significant: up to the greater of €20 million or 4% of total global annual turnover. Further, following the withdrawal of the United Kingdom from the European Union on January 31, 2020, pursuant to the transitional arrangements agreed between the United Kingdom and the European Union, we will have to comply with the GDPR and separately the GDPR as implemented in the United Kingdom, each regime having the ability to fine up to the greater of €20 million/ £17 million or 4% of global turnover. The relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains unclear, including how data transfers between European Union member states and the United Kingdom will be treated. These changes may lead to additional compliance costs and could increase our overall risk. In addition to the foregoing, a breach of the GDPR or other applicable privacy and data protection laws and regulations could result in regulatory investigations, reputational damage, orders to cease/change our use of data, enforcement notices, or potential civil claims including class action type litigation.

In addition, the GDPR includes restrictions on cross-border data transfers. Certain aspects of cross-border data transfers under the GDPR are uncertain as the result of legal proceedings in the European Union, including a recent decision by the Court of Justice for the European Union that invalidated the EU-U.S. Privacy Shield and, to some extent, called into question the efficacy and legality of using standard contract clauses. This may increase the complexity of transferring personal data across borders. The GDPR will increase our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. We are also subject to European Union rules with respect to cross-border transfers of personal data out of the European Union and EEA. Recent legal developments in the European Union have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States. On July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (Privacy Shield) under which personal data could be transferred from the EEA to US entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy, subject to certain conditions, of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism), future regulatory guidance could result in changes to the use of standard contractual clauses. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Further, the vote in the United Kingdom in favor of exiting the European Union, referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. Specifically, while the Data Protection Act of 2018, which “implements” and complements the GDPR achieved Royal Assent on May 23, 2018 and is now effective in the United Kingdom, aspects of data protection in the United Kingdom, such as the transfer of data from the EEA to the United Kingdom, remain uncertain. During the period of “transition” (i.e., until December 31, 2020), European Union law

will continue to apply in the United Kingdom, including the GDPR, after which the GDPR will be converted into United Kingdom law. Beginning in 2021, the United Kingdom will be a “third country” under the GDPR.

In addition, California recently enacted the California Consumer Privacy Act (CCPA) which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies’ data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action may increase the likelihood of, and risks associated with, data breach litigation. The CCPA became effective on January 1, 2020, and (i) allows enforcement by the California Attorney General, with fines set at $2,500 per violation (i.e., per person) or $7,500 per intentional violation and (ii) authorizes private lawsuits to recover statutory damages for certain data breaches. In addition, laws in all 50 U.S. states require businesses to provide notice to consumers whose personal information has been disclosed as a result of a data breach. State laws are changing rapidly and there is discussion in the U.S. Congress of a new comprehensive federal data privacy law to which we would become subject if it is enacted. The CCPA may impact our business activities and exemplifies the vulnerability of our business to the evolving regulatory environment related to personal data and protected health information. Further, the California Privacy Rights Act (the CPRA) recently passed in California. The CPRA will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required.

The U.S. Foreign Corrupt Practices Act

The U.S. Foreign Corrupt Practices Act of 1977 (FCPA), prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Employees and Human Capital Resources

As of March 31, 2021, we had 188 full-time employees and two part-time employees, consisting of clinical, research, operations, regulatory, finance and business development personnel. 53 of our employees hold Ph.D. or M.D. degrees. None of our employees is subject to a collective bargaining agreement. We consider our relationship with our employees to be good.

We recognize that our continued ability to attract, retain and motivate exceptional employees is vital to ensuring our long-term competitive advantage. Our employees are critical to our long-term

success and are essential to helping us meet our goals. Among other things, we support and incentivize our employees in the following ways:

- ***Talent development, compensation and retention*** – We strive to provide our employees with a rewarding work environment, including the opportunity for growth, success and professional development. We provide a competitive compensation and benefits package, including broad-based bonus and equity plans, a 401(k) plan and a multi-layered recognition program – all designed to attract and retain a skilled and diverse workforce.
- ***Health and safety*** – We support the health and safety of our employees by providing comprehensive insurance benefits, an employee assistance program, wellness days and other additional benefits which are intended to assist employees to manage their well-being.
- ***Inclusion and diversity*** – We are committed to efforts to increase diversity and foster an inclusive work environment that supports our workforce.

One of our top priorities during the ongoing COVID-19 pandemic remains protecting the health and well-being of our employees, customers, partners and communities. We have closely monitored the COVID-19 pandemic and have strived to follow recommended containment and mitigation measures, including the guidance from the CDC, the states of California and Washington and applicable counties. For most of the pandemic, essential laboratory, manufacturing and support employees worked in our facilities to continue and progress experiments and manufacturing related activities. We implemented preventative measures at our facilities in order to minimize the risk of employees' exposure to the virus, including the following requirements: that each employee who entered a facility agreed to comply with social distancing, frequent hand washing and the requirement to wear masks. We also increased cleaning of high touch areas, provided hand sanitizing stations and implemented an employee questionnaire to ensure employee health status and to provide for limited on-site tracing if needed. Finally, commencing in early March 2020, we suspended all non-essential business travel and directed all employees who are not essential laboratory or manufacturing personnel to work from home. We expect to continue such measures for the near foreseeable future. We will continue to actively monitor the situation related to the COVID-19 pandemic and may take further actions that alter our operations, including those that may be required by federal, state, or local authorities, or that we determine are in the best interests of our employees and other third parties with whom we do business.

Facilities

California

Our current corporate headquarters are located in South San Francisco, California, where we lease approximately 40,000 square feet of office and laboratory space pursuant to a lease agreement which commenced on January 14, 2019 and expires on December 17, 2021. Additionally, we lease approximately 108,000 square feet of office and laboratory space in South San Francisco, California, which will be the site of our future corporate headquarters, pursuant to a lease agreement which commenced on February 1, 2020 and expires on March 31, 2031.

Washington

We lease approximately 34,000 square feet of office and laboratory space in Seattle, Washington, pursuant to a lease agreement which commenced on January 1, 2019 and expires on December 31, 2028. We lease approximately 73,000 square feet of manufacturing, office and laboratory space in Bothell, Washington, pursuant to a lease agreement which commenced on February 1, 2020 and expires on May 31, 2030.

We believe that these existing facilities will be adequate for our near-term needs. If required, we believe that suitable additional or alternative space would be available in the future on commercially reasonable terms.

COVID-19 Impact on Facilities

We are partially operating virtually to align with local COVID-19 guidelines, which we believe meets our operational needs for the time being as a preclinical-stage organization. To date, we have not experienced any material impact on our ability to operate our business. We plan to periodically reassess our facility needs.

Legal Proceedings

From time to time, we have been or may become involved in material legal proceedings or be subject to claims arising in the ordinary course of our business. For example, although not material to our operations, in February 2021 we filed a demand for arbitration to, among other things, seek rescission of the agreements we entered into with PACT in June 2020 and recover the consideration paid to PACT thereunder. Litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business.

We are currently not party to any legal proceedings material to our operations or of which any of our property is the subject, nor are we aware of any such proceedings that are contemplated by a government authority.

Regardless of outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

MANAGEMENT

Executive Officers, Management and Directors

The following table sets forth information regarding our executive officers, management and directors as of June 9, 2021.

Name	Age	Position
Executive Officers:		
Richard D. Klausner, M.D.	69	Executive Chairman and Director
Elizabeth Homans	55	Chief Executive Officer and Director
Charles Newton	51	Chief Financial Officer
Stephen Hill	50	Chief Technical Operations Officer
Heather Turner	48	Chief General Counsel
Management:		
Nicholas Restifo, M.D.	60	Executive Vice President, Research
Tina Albertson, M.D., Ph.D.	48	Chief Medical Officer and Head of Development
Richard Goold, Ph.D.	61	Chief Information Officer
Lisa Ryan	54	Chief People Officer
Non-Employee Directors:		
Hans Bishop(2)	57	Director
Otis Brawley, M.D.(2)(4)	61	Director
Catherine Friedman(1)(3)	60	Director
Elizabeth Nabel, M.D.(3)(4)	69	Director
Robert Nelsen(1)	58	Director
William Rieflin(1)(3)	61	Director
Lynn Seely, M.D.(5)	62	Director

(1) Member of the compensation committee.
(2) Member of the nominating and corporate governance committee.
(3) Member of the audit committee.
(4) Appointed April 2021.
(5) Appointed May 2021.

Executive Officers

Richard D. Klausner, M.D. is our founder and current Executive Chairman and was previously our Chief Executive Officer from September 2018 to July 2020. He previously served on the board of directors of Juno Therapeutics, a Bristol-Myers Squibb company that he founded. Since January 2016, Dr. Klausner has served as a member of the board of directors of GRAIL, a private life sciences company that he founded. He is also the co-founder and Executive Chairman of Mindstrong, co-founder of Lifemine Therapeutics, Executive Chairman of Wisdo, Chairman of Sonoma Biotherapeutics and a member of the board of directors of X-Tremity Prosthetics. From September 2013 to February 2016, Dr. Klausner served in multiple senior leadership positions at Illumina Corporation, including as Senior Vice President, Chief Medical Officer and Chief Opportunity Officer. He currently chairs the Grand Challenges in Cancer program of Cancer Research UK. Previously he served as managing partner of the venture capital firm, The Column Group, was the Executive Director for Global Health of the Bill and Melinda Gates Foundation from 2002 to 2005 and was the eleventh director of the National Cancer Institute between 1995 and 2001. Dr. Klausner received an M.D. from Duke Medical School and a B.S. from Yale University. We believe that Dr. Klausner's scientific and medical expertise, particularly in cell biology, molecular biology and cancer, as well as his industry, academic and public service leadership roles, make him an appropriate member of our board of directors.

Elizabeth Homans has served as our Chief Executive Officer and member of our board of directors since August 2020. From September 2018 to August 2020, she served as our President and

the operational lead as we grew in size, scope and ambition. From July 2009 to May 2018, Ms. Homans served in multiple senior leadership positions at Genentech, including Vice President, U.S. Sales and Marketing Leader for Breast Cancer, Vice President, U.S. Sales and Marketing Leader for Xolair, Vice President, Global Regulatory Operations Leader and Vice President, Global Product Strategy, HER2 Franchise. From May 2004 through November 2007, Ms. Homans served as Executive Director, Project Leadership and Portfolio Management at Jazz Pharmaceuticals, Inc. Ms. Homans received an M.B.A. from Columbia University in the City of New York and a B.A. in German and Economics from Bates University. We believe that Ms. Homans' extensive work in high-growth biotechnology companies makes her an appropriate member of our board of directors.

Charles Newton has served as our Chief Financial Officer since February 2021. From November 2015 to February 2021, he served as Managing Director & Co-Head of Healthcare Investment Banking in the Americas at Bank of America. From September 2010 to November 2015, Mr. Newton served as Managing Director at Credit Suisse where his last position was Co-Head of Healthcare Investment Banking in the Americas. From June 1996 to September 2010, he served in the investment banking division at Morgan Stanley where his last position was Managing Director and Head of Western Region Healthcare Investment Banking. Mr. Newton received an M.B.A. from The Tuck School at Dartmouth College and a B.S. in Finance from Miami University.

Stephen Hill has served as our Chief Technical Operations Officer since June 2019. From June 2018 to June 2019, he was Senior Vice President, Head of Global Biologics Operations and from March 2016 to June 2018 as Vice President, Site Head at AstraZeneca, a publicly-traded company. From December 2012 through February 2016, Mr. Hill served in multiple positions at Amgen, including as Vice President, Bulk Manufacturing, Executive Director, Plant Manager and Executive Director, Manufacturing Technologies. Mr. Hill received an M.B.A. and a B.S. in Microbiology and B.A. in Political Science from the University of Washington.

Heather Turner has served as our Chief General Counsel since December 2019 when she was promoted from our General Counsel, a position she served from April 2019 to December 2019. From February 2018 to March 2019, she served as Executive Vice President, General Counsel and Secretary of Sangamo Therapeutics, Inc., a publicly-traded biotechnology company. From July 2015 to February 2018, Ms. Turner served as Executive Vice President, General Counsel and Head of Portfolio Strategy at Atara Biotherapeutics, Inc., a publicly-traded cell therapy company. From June 2007 to June 2015, she served as General Counsel and Secretary of Orexigen Therapeutics, Inc., a publicly-traded small molecule company. Ms. Turner received a J.D. from UCLA School of Law and a B.A. in Environmental Studies from University of California, Santa Barbara.

Management

Nicholas Restifo, M.D. has served as our Executive Vice President, Research since July 2019. From July 1989 to July 2019, Dr. Restifo served in multiple positions at the National Cancer Institute, including as Head of the Center of Excellence in Immunology and Director of the 'Cancer Moonshot' in Adoptive Cellular Therapy. Dr. Restifo received an M.D. from New York University and his B.S. in Natural Sciences from Johns Hopkins University.

Tina Albertson, M.D., Ph.D. has served as our Chief Medical Officer and Head of Development since July 2020. From January 2015 to April 2020, Dr. Albertson was Vice President of Global Drug Development at Juno Therapeutics, a Bristol-Myers Squibb company. From October 2010 to January 2015, Dr. Albertson served as Medical Director at Seagen, a publicly-traded biotechnology company. Dr. Albertson also completed a pediatric oncology fellowship at University of Washington. Dr. Albertson received a Ph.D. in Cancer Biology from University of Washington, an M.D. from Stanford University and a B.S. in Biology from University of Oregon.

Richard Goold, Ph.D. has served as our Chief Information Officer since April 2019. From January 2019 to April 2019, he served as our Senior Vice President of Information Sciences. From January 2010 to December 2018, Dr. Goold served as Chief Executive Officer of Station X, a human genome data analytics company that he founded and that was acquired by Roche. From November 2002 to April 2004, Dr. Goold was the Chief Genomics Officer at Incyte Corporation. From February 2000 to October 2002, Dr. Goold was Chief Executive Officer of Prospect Genomics, a computational genomics company that he founded and that was acquired by Structural GenomiX. Dr. Goold was also a founding scientist and Project Lead at the UCSF/Stanford Human Genome Center. Dr. Goold received a Ph.D. in Medical Biochemistry from the University of Cape Town and a M.Pharm. in Pharmacology and a B.Pharm. from Rhodes University.

Lisa Ryan has served as our Chief People Officer since December 2020. From December 2018 to December 2020, she served as our Vice President of People. From November 2008 through December 2018, Ms. Ryan served in multiple positions at Genentech, including Global Human Resources Director, Product Development, Clinical Operations; Director, Human Resources for Biologics; Associate Director, Human Resources, SSF Production and DS/DP Quality; Group Product Manager, Business Operations – Virology and Specialty Care and Senior Human Resources Business Partner, US Commercial. From July 2004 to January 2008, Ms. Ryan served as Vice President/Group Director of Talent Operations at Digitas, a digital and direct advertising agency that is part of the Publicis group. Lisa received an M.B.A. from Suffolk University and a B.A. in Psychology from Boston College.

Non-Employee Directors

Hans Bishop has served as a member of our board of directors since August 2018. Since 2019, Mr. Bishop has served as the Chief Executive Officer of GRAIL, Inc., a private life sciences company. From July 2013 to March 2018, Mr. Bishop served as President and Chief Executive Officer at Juno Therapeutics, a company that he founded and that was acquired by Celgene. From February 2012 through July 2013, Mr. Bishop served as Executive in Residence at Warburg Pincus, a multinational private equity firm. From January 2010 to September 2011, Mr. Bishop served as Executive Vice President and Chief Operating Officer at Dendreon, Inc., a publicly-traded cancer immunotherapy company. From December 2006 to January 2010, Mr. Bishop served as President of Specialty Medicine at Bayer Healthcare, a publicly-traded company. From January 2004 to August 2006, he served in multiple leadership positions at Chiron Corporation, a multinational biotechnology company, including as Senior Vice President of Global Commercial Operations and Vice President and General Manager of European Biopharmaceuticals. He currently serves as the Chairman of Sana Biotechnology since October 2018 and as a director of Agilent Technologies since July 2017 and JW Therapeutics, all of which are publicly-traded companies, and previously served as a director of Celgene from June 2018 to November 2019. Mr. Bishop received a B.A. in Chemistry from Brunel University in London. We believe that Mr. Bishop's more than 30 years of experience in the biotechnology industry and chemistry studies make him an appropriate member of our board of directors.

Otis Brawley, M.D. has served as a member of our board of directors since April 2021. Dr. Brawley has served as a Bloomberg Distinguished Professor of Oncology and Epidemiology at Johns Hopkins University since January 2019 and as a member of the board of directors of PDS Biotechnology Corporation, a publicly-traded biotechnology company, since November 2020. From April 2007 to December 2018, he served as the Chief Medical and Scientific Officer of American Cancer Society. From January 2002 to August 2007, he was director of the Georgia Cancer Center at Grady Memorial Hospital. From April 2001 to December 2018, he served as professor of hematology, oncology, medicine and epidemiology at Emory University. Dr. Brawley received an M.D. from the University of Chicago, Pritzker School of Medicine and a B.S. in Chemistry from the University of

Chicago. He completed an internal medicine residency at Case-Western Reserve University and a fellowship in medical oncology at the National Cancer Institute. He is board certified in internal medicine and medical oncology. We believe that Dr. Brawley's education and work in oncology makes him an appropriate member of our board of directors.

Catherine Friedman has served as a member of our board of directors since August 2018. Ms. Friedman is an independent financial consultant who has been serving public and private companies in the life sciences industry since 2006. Previously, Ms. Friedman held numerous executive positions during a 23-year investment banking career with Morgan Stanley & Co., an investment bank, including managing director, head of West Coast Healthcare and co-head of the Biotechnology Practice. Ms. Friedman is the chair of the board of directors for GRAIL, Inc. since August 2017, and also serves as a member of the boards of Altaba Inc. (formerly Yahoo! Inc.) since March 2016, Radius Health, Inc. since August 2015, Seer, Inc. since September 2020, Vividion Therapeutics, Inc. since March 2021 and Revolution Healthcare Acquisition Corp since February 2021, and previously served on the board of directors of Innoviva, Inc., a publicly-traded company. Ms. Friedman is a trustee of The Darden School Foundation at the University of Virginia. Ms. Friedman holds a B.A. in economics from Harvard University and an MBA from The University of Virginia's Darden School of Business. We believe that Ms. Friedman's extensive financial experience and work for biotechnology companies make her an appropriate member of our board of directors.

Elizabeth Nabel, M.D. has served as a member of our board of directors since April 2021. Dr. Nabel served as a member of the board of directors of Moderna, Inc., a publicly-traded pharmaceutical company, from December 2015 to July 2020, and was reappointed to Moderna's board in March 2021. Since March 1, 2021, Dr. Nabel is Executive Vice President for Strategy at ModeX Therapeutics, a new biotechnology company focused on immunotherapies for cancer and viral diseases. Through February 2021, Dr. Nabel served as the President of Harvard University-affiliated Brigham Health, which includes Brigham and Women's Hospital, Brigham and Women's Faulkner Hospital, and the Brigham and Women's Physician Organization, a position she held from January 2010. Dr. Nabel was also a Professor of Medicine January 2010 to February 2021 and currently is a Professor of Medicine emeritius at Harvard Medical School. Prior to joining Brigham Health, Dr. Nabel held a variety of roles, including Director, at the National Heart, Lung and Blood Institute at the National Institutes of Health, a federal agency funding research, training and education programs to promote the prevention and treatment of heart, lung and blood diseases, from September 1999 to November 2009. She is an elected member of the National Academy of Medicine of the National Academy of Sciences. Dr. Nabel received an M.D. from Weill Cornell Medical College and a B.A. in psychology from St. Olaf College. We believe that Dr. Nabel's education and work in medicine makes her an appropriate member of our board of directors.

Robert Nelsen has served as a member of our board of directors since September 2018. Since 1986, Mr. Nelsen has served as Co-founder and Managing Director of ARCH Venture Partners, a venture capital firm focused on early-stage technology companies. Mr. Nelsen is a member of the board of directors of Beam Therapeutics, Denali Therapeutics, Hua Medicine, Karuna Pharmaceuticals, Sana Biotechnology, Revolution Healthcare Acquisition Corp. and Vir Biotechnology, all of which are publicly-traded companies, and serves as the Chairman of Hua Medicine. Previously, Mr. Nelsen served on the boards of Juno Therapeutics from August 2013 to March 2018, Syros Pharmaceuticals from August 2012 to June 2018, Sienna Biopharmaceuticals from August 2015 to October 2018, Agios Pharmaceuticals from December 2007 to June 2017, KYTHERA Biopharmaceuticals from January 2006 to December 2014, Adolor Corporation from November 1994 to May 2008, Illumina Corporation from June 1998 to August 2006, Fate Therapeutics from September 2007 to June 2014, deCODE genetics from August 1996 to November 2001, NeurogesX from July 2000 to May 2013, Bellerophon Therapeutics from February 2014 to February 2015, Sage Therapeutics from September 2013 to March 2016 and Caliper Life Sciences from April 1996 to

December 1999. From 2004 to 2014, Mr. Nelsen served as trustee of the Fred Hutchinson Cancer Research Center. Mr. Nelsen received an M.B.A. from the University of Chicago and a B.S. degree with majors in Economics and Biology from the University of Puget Sound. We believe that Mr. Nelsen's experience as a venture capitalist building and serving on the boards of many public and private emerging companies, including multiple life sciences, biotechnology and pharmaceutical companies, makes him an appropriate member of our board of directors.

William Rieflin has served as a member of our board of directors since May 2020. From September 2010 to September 2018, he served as the Chief Executive Officer of NGM Biopharmaceuticals, Inc. Since April 2015, Mr. Rieflin has served on the Board, and has been Chairman of the Board since June 2019, at RAPT Therapeutics, Inc., a publicly-traded biopharmaceutical company and since September 2018 he has served as Executive Chairman of the Board at NGM Biopharmaceuticals, Inc., a publicly-traded biotechnology company where he also previously served as a member of the board since 2010. Mr. Rieflin previously served on the board of directors of Anacor Pharmaceuticals, Inc., a pharmaceutical company, from April 2011 to June 2016 and of XenoPort, Inc. from September 2010 to July 2016. Mr. Rieflin also served as a board member of Flexus Biosciences until its acquisition in 2015. From August 2004 until September 2010, he served as President of XenoPort, Inc., a publicly-traded company. He currently serves on the board of directors of Kallyope, Inc. and Lycia Therapeutics, Inc., both privately-held companies. Mr. Rieflin received an M.B.A. from the University of Chicago Booth Graduate School of Business, a J.D. from Stanford Law School and a B.S. in Industrial and Labor Relations from Cornell University. We believe that Mr. Rieflin's extensive experience in the biopharmaceutical industry, his industry expertise and financial knowledge and his experience as a member of the board of directors of other public companies makes him an appropriate member of our board of directors.

Lynn Seely, M.D. has served as a member of our board of directors since May 2021. Dr. Seely currently serves as a member of the board of directors of Blueprint Medicines Corp., a publicly-traded pharmaceutical company. From June 2016 to January 2021, Dr. Seely served as President, Chief Executive Officer and a member of the board of directors of Myovant Sciences, a biotechnology company. From March 2005 to October 2015, Dr. Seely served as Senior Vice President and Chief Medical Officer of Medivation, a biotechnology company. Dr. Seely received an M.D. from the University of Oklahoma College of Medicine and a B.A. in Journalism from the University of Oklahoma. Dr. Seely completed her residency and served as chief resident in internal medicine at Yale-New Haven Hospital, and she completed her fellowship in endocrinology and metabolism at the University of California, San Diego. We believe that Dr. Seely's education and work in healthcare and life sciences makes her an appropriate member of our board of directors.

Composition of Our Board of Directors

Our business and affairs are organized under the direction of our board of directors, which currently consists of nine members with two vacancies. The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling and direction to our management. Our board of directors meets on a regular basis and additionally as required.

Certain members of our board of directors were elected under the provisions of our Amended and Restated Voting Agreement entered into in April 2021 (the Voting Agreement), which will terminate upon the closing of this offering. Under the terms of our Voting Agreement, the stockholders who are party to the Voting Agreement have agreed to vote their respective shares to elect: (i) two directors designated by ARCH Venture Fund IX, L.P. and ARCH Venture Fund IX Overage, L.P., currently Hans Bishop and Robert Nelsen; (ii) one director who shall be our then-current Chief Executive Officer, currently Elizabeth Homans; (iii) one director who shall be our then-current Executive Chairman, currently Richard D. Klausner, M.D.; and (iv) five directors who are not our employees or affiliates, with such individuals to be designated by mutual agreement of our board of directors, currently Otis

Brawley, Catherine Friedman, William Rieflin, Elizabeth Nabel and one vacancy. The Voting Agreement will terminate upon the closing of this offering, and upon the closing of the offering no stockholder will have any special rights regarding the election or designation of the members of our board of directors. Our current directors elected to our board of directors pursuant to the Voting Agreement will continue to serve as directors until their successors are duly elected and qualified by holders of our common stock.

Our board of directors may establish the authorized number of directors from time to time by resolution. In accordance with our amended and restated certificate of incorporation to be filed in connection with this offering, immediately after this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be Hans Bishop, Catherine Friedman and Robert Nelsen, and their terms will expire at the annual meeting of stockholders to be held in 2022;
- the Class II directors will be Richard Klausner, Otis Brawley and William Rieflin, and their terms will expire at the annual meeting of stockholders to be held in 2023; and
- the Class III directors will be Elizabeth Homans, Lynn Seely and Elizabeth Nabel, and their terms will expire at the annual meeting of stockholders to be held in 2024.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Director Independence

Under the Nasdaq Listing Rules independent directors must comprise a majority of our board of directors as a listed company within one year of the listing date.

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning her or his background, employment and affiliations, including family relationships, our board of directors has determined that none of our directors, other than Dr. Klausner and Ms. Homans, has any relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is “independent” as that term is defined under the Nasdaq Listing Rules. Our board of directors has determined that Dr. Klausner and Ms. Homans, by virtue of their positions as our Executive Chairman and Chief Executive Officer, respectively, are not independent under applicable rules and regulations of the U.S. Securities and Exchange Commission (the SEC) and the Nasdaq Listing Rules. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director and the transactions described in the section titled “Certain Relationships and Related Person Transactions.”

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. The composition and responsibilities of each of the committees of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Each committee intends to adopt a

written charter that satisfies the application rules and regulation of the SEC and the Nasdaq Listing Rules, which we will post to our website at www.lyell.com upon the closing of this offering. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

Our audit committee currently consists of William Rieflin, Catherine Friedman and Elizabeth Nabel, each of whom our board of directors has determined satisfies the independence requirements under Nasdaq Listing Rules and Rule 10A-3(b)(1) of the Securities Exchange Act of 1934, as amended (Exchange Act). The chair of our audit committee is William Rieflin, who our board of directors has determined is an "audit committee financial expert" within the meaning of SEC regulations. Each member of our audit committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, the board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of our board of directors with respect to our corporate accounting and financial reporting processes, systems of internal control and financial-statement audits, and to oversee our independent registered accounting firm. Specific responsibilities of our audit committee include:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes our internal quality control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving, or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

Compensation Committee

Our compensation committee currently consists of Catherine Friedman, Robert Nelsen and William Rieflin. The chair of our compensation committee is Catherine Friedman. Our board of directors has determined that each member of our compensation committee is independent under the Nasdaq Listing Rules and as a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The primary purpose of our compensation committee is to discharge the responsibilities of our board of directors in overseeing our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- reviewing and approving the compensation of our chief executive officer, other executive officers and senior management;

- reviewing and recommending to our board of directors the compensation paid to our directors;
- reviewing and approving the compensation arrangements with our executive officers and other senior management;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating, incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management;
- reviewing, evaluating and recommending to our board of directors succession plans for our executive officers; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation strategy, including base salary, incentive compensation and equity-based grants, to assure that it promotes stockholder interests and supports our strategic and tactical objectives, and that it provides for appropriate rewards and incentives for our management and employees.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Otis Brawley and Hans Bishop. The chair of our nominating and corporate governance committee is Otis Brawley. Our board of directors has determined that each member of the nominating and corporate governance committee is independent under the Nasdaq Listing Rules, a non-employee director, and free from any relationship that would interfere with the exercise of his or her independent judgment.

Specific responsibilities of our nominating and corporate governance committee include:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our board of directors;
- considering and making recommendations to our board of directors regarding the composition and chairmanship of the committees of our board of directors;
- instituting plans or programs for the continuing education of our board of directors and orientation of new directors;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the board of directors' performance, including committees of the board of directors and management.

Code of Business Conduct and Ethics

In connection with this offering, we intend to adopt a written Code of Business Conduct and Ethics that applies to all our employees, officers and directors. This includes our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The full text of our Code of Business Conduct and Ethics will be posted on our website at www.lyell.com. We intend to disclose on our website any future amendments of our Code of Business Conduct and Ethics or waivers that exempt any principal executive officer, principal financial officer, principal accounting officer or controller, persons performing similar functions or our directors from provisions in the Code of Business Conduct and Ethics. Information contained on, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only an inactive textual reference.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently, or has been at any time, one of our executive officers or employees. None of our executive officers currently serves, or has served during the last calendar year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

During the year ended December 31, 2020, each of the following individuals served on our board of directors as non-employee directors: Hans Bishop, Catherine Friedman, Robert Nelsen and William Rieflin.

The following table presents all of the compensation awarded to or earned by or paid to our named non-employee directors during the fiscal year ended December 31, 2020.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)	Total ($)
Hans Bishop	—	—	—
Catherine Friedman	125,842	$2,363,999(2)	$2,489,841
Robert Nelsen	—	—	—
William Rieflin(3)	30,935	$1,479,796(4)	$1,510,731

(1) All of the option awards were granted under the 2018 Plan, the terms of which plan are described below under "Executive Compensation—Equity Benefit Plans—2018 Equity Incentive Plan." The amounts shown represent the grant date fair values of option awards granted in 2020 as computed in accordance with Financial Accounting Standards Board (FASB) Accounting Standard Codification (ASC) Topic 718. See Note 12, *Stock-Based Compensation*, to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the assumption used in the calculation. As of December 31, 2020, Mr. Bishop, Ms. Friedman and Mr. Rieflin held options to purchase 1,163,038, 650,000 and 400,000 shares of common stock, respectively. As of December 31, 2020, Mr. Bishop and Ms. Friedman held 1,250,000 and 41,667 shares of common stock, respectively, that were subject to a right of repurchase in favor of the company at $0.0001 per share that becomes exercisable in the event the non-employee director terminates service with the company for any reason. No other non-employee director held any option or stock awards as of December 31, 2020.

(2) In accordance with our non-employee director compensation policy, Ms. Friedman was granted the option to purchase 400,000 shares of common stock on May 19, 2020. Ms. Friedman was also granted the option to purchase 250,000 shares of common stock on December 17, 2020 in connection with her services as a director and the chair of the compensation committee. Each grant vests monthly over three years.

(3) Mr. Rieflin was appointed to our board of directors effective as of May 19, 2020.

(4) In accordance with our non-employee director compensation policy, Mr. Rieflin was granted the option to purchase 400,000 shares of common stock on May 19, 2020 which vests monthly over three years.

Mr. Bishop and Mr. Nelsen were not compensated for their service on our board of directors during the year ended December 31, 2020. Ms. Homans and Dr. Klausner each also served on our board of directors during the year ended December 31, 2020, but neither received any additional compensation for their service as a director. See the section titled "Executive Compensation" for more information regarding the compensation earned by Ms. Homans and Dr. Klausner.

We have reimbursed and will continue to reimburse all of our non-employee directors for their reasonable out-of-pocket expenses incurred in attending board of directors and committee meetings.

In November 2019, our board of directors adopted our Director Compensation Policy for our nonemployee directors (the Policy). We intend to adopt an amended and restated form of the Policy, to be effective in connection with the consummation of this offering (the Amended Policy). The Policy

provides, and the Amended Policy will provide, that our non-employee directors will receive the following compensation for service on our board of directors:

- an annual cash retainer of $50,000 (which is the same in the case of the Amended Policy) for all non-employee directors other than the lead director/chair of our board of directors;
- an annual cash retainer of $10,000 (or $30,000 in the case of the Amended Policy) for the chair of our board of directors (in addition to the annual cash retainer above);
- an additional annual cash retainer of $7,500, $5,000 and $2,500 (or $15,000, $12,000 and $10,000 in the case of the Amended Policy) or service as chair of the audit committee, compensation committee and the nominating and corporate governance committee, respectively (other than for the chair of any such committee);
- an additional annual cash retainer of $3,500, $2,500 and $1,500 (or $7,500, $6,000 and $5,000 in the case of the Amended Policy) for service as a member of the audit committee, compensation committee and the nominating and corporate governance committee, respectively; and
- an appointment option grant, for new non-employee directors, to purchase 400,000 shares of our common stock (or 100,000 shares of our common stock in the case of our Amended Policy with an annual option grant of 50,000 shares of our common stock), vesting in 36 equal monthly installments measured from the date the non-employee director is first elected to our board of directors (or generally on the earlier of the next annual meeting or the first anniversary of the date of grant, in the case of annual grants), subject to the non-employee director's continued service on each applicable vesting date.

Each appointment option grant and annual option grant was or will be granted under our 2018 Equity Incentive Plan (2018 Plan), or following the completion of this offering, under our 2021 Plan, and our then current standard form of option agreement under such plan. These options have or will have a maximum term of 10 years from their grant date and a per share exercise price equal to at least 100% of the fair market value of a share of our common stock on the option's grant date. In the event of our acquisition (as defined in our 2018 Plan) or change in control (as defined in our 2021 Plan), each non-employee director's then-outstanding equity awards granted under the Policy (in the case of an acquisition) or the Amended Policy (in the case of a change in control) will become fully vested immediately prior to the closing of the acquisition or change in control, as applicable, provided that he or she remains in continuous service until immediately prior to the closing of the acquisition or change in control, as applicable.

EXECUTIVE COMPENSATION

Our named executive officers for the year ended December 31, 2020 were:

- Richard Klausner, M.D., our Executive Chairman and former Chief Executive Officer;
- Elizabeth Homans, our Chief Executive Officer;
- Stephen Hill, our Chief Technical Operations Officer; and
- Heather Turner, our Chief General Counsel.

Summary Compensation Table

The following table presents all of the compensation awarded to or earned by or paid to our named executive officers during the fiscal year ended December 31, 2020.

Name and Principal Position	Fiscal Year	Salary ($)	Bonus ($)(1)	Stock Awards ($)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation ($)(3)	All Other Compensation ($)(4)	Total ($)
Richard Klausner, M.D. *Executive Chairman and former Chief Executive Officer(5)*	2020	427,147	738,712	20,799,288(6)	16,618,943(6)	261,288	6,858	38,852,236
Elizabeth Homans *Chief Executive Officer*	2020	493,981	327,250	—	17,730,122(7)	309,000	8,922	18,869,275
Stephen Hill *Chief Technical Operations Officer*	2020	441,343	54,984	—	2,139,150	219,938	6,317	2,861,732
Heather Turner *Chief General Counsel*	2020	441,343	254,984	—	2,526,150	219,938	810	3,443,225

(1) The amounts shown represent discretionary bonuses earned by Dr. Klausner, Ms. Homans, Mr. Hill and Ms. Turner as recognition of accomplishing certain achievements as further described in detail below under the subsection titled "—Narrative to Summary Compensation Table—Bonus Compensation.".

(2) Except as otherwise noted, the amounts shown represent the grant date fair values of option awards granted in 2020 as computed in accordance with FASB ASC Topic 718. See Note 12, *Stock-Based Compensation*, to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the assumption used in the calculation. All of the option awards were granted under the 2018 Plan, the terms of which plan are described below under "—Equity Benefit Plans—2018 Equity Incentive Plan."

(3) The amounts shown represent the annual performance-based cash bonus earned by our named executive officers based on the achievement of certain corporate performance objectives during 2020 as described further under the subsection titled "—Narrative to Summary Compensation Table—Bonus Compensation." These amounts were paid in early 2021.

(4) The amounts shown represent: (i) for Dr. Klausner, $6,858 of life insurance premiums paid by us on his behalf; including $2,143 for associated taxes (ii) for Ms. Homans, $2,322 of life insurance premiums paid by us on her behalf, including $315 for associated taxes and $6,600 paid as reimbursement for certain legal fees, including $1,600 for associated taxes; (iii) for Mr. Hill, $1,242 of life insurance premiums paid by us on his behalf, including $91 for associated taxes and $5,075 paid as reimbursement for certain relocation expenses, including $1,236 for associated taxes; and (iv) for Ms. Turner, $810 of life insurance premiums paid by us on her behalf, including $19 for associated taxes.

(5) Dr. Klausner ceased serving as our Chief Executive Officer when Ms. Homans was appointed our Chief Executive Officer in August 2020. Dr. Klausner continues to be employed as our Executive Chairman.

(6) The amounts shown also include the incremental fair value of stock award and option award modifications deemed to have occurred based on the continued vesting of Dr. Klausner's restricted stock and option awards following his transition from Chief Executive Officer to Executive Chairman in 2020, calculated in accordance with FASB ASC Topic 718. See Note 12, *Stock-Based Compensation*, to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the assumption used in the calculation.

(7) The amount shown also includes the incremental fair value of option awards modified to provide for service-based vesting as described further under the section titled "—Offer Letters", calculated in accordance with FASB ASC Topic 718. See Note 12, *Stock-Based Compensation*, to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the assumption used in the calculation.

Narrative to the Summary Compensation Table

Our board of directors or our compensation committee reviews compensation annually for all employees, including our named executive officers. In making compensation determinations, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders and a long-term commitment to our company.

Our board of directors or our compensation committee has historically determined our executive officers' compensation and has typically reviewed and discussed management's proposed compensation with our chief executive officer for all executives other than our chief executive officer. Based on those discussions and its discretion, our board of directors or our compensation committee then approved the compensation of each executive officer. Upon the closing of this offering, the compensation committee will determine our executive officers' compensation and follow this process, but generally the compensation committee itself, rather than our board of directors, will approve the compensation of each executive officer.

Annual Base Salary

Base salaries for our executive officers are initially established through arm's-length negotiations at the time of the executive officer's hiring, taking into account such executive officer's qualifications, experience, the scope of his or her responsibilities and competitive market compensation paid by other companies for similar positions within the industry and geography. Base salaries are reviewed periodically, typically in connection with our annual review process, and adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance and experience. In making decisions regarding salary increases, we may also draw upon the experience of members of our board of directors with executives at other companies. The 2020 base salaries for our named executive officers are reflected in the table above, as adjusted throughout the year, except for Dr. Klausner, whose annual base salary was reduced to $275,000 when he ceased serving as our Chief Executive Officer and Ms. Homans, whose annual base salary was increased to $515,000 when she began serving as our Chief Executive Officer.

Bonus Compensation

Our executive officers are eligible earn an annual incentive bonus of up to a percentage of his or her annual base salary, with such percentage set forth in his or her respective offer letter, based on the achievement of performance objectives to be determined by our board of directors. Additionally, from time to time, our board of directors or compensation committee, in its discretion, may approve bonuses for our executive officers based on individual performance, company performance or as otherwise determined to be appropriate.

For 2020, each of our named executive officers was eligible to receive an annual incentive bonus based on the achievement of certain 2020 corporate goals of the company. The target bonus amounts for Dr. Klausner, Ms. Homans, Mr. Hill and Ms. Turner were $261,288, $309,000, $219,938 and $219,938, respectively. In February 2021, our board of directors assessed company performance against our 2020 corporate goals and based on such performance, awarded a cash annual incentive bonus to each of our named executive officers equal to 100% of his or her target bonus amount for 2020. In addition, in February 2021, our board of directors also assessed additional company achievements in 2020 and based on such assessment awarded each of our named executive officers an additional cash bonus in the amount of $738,712 for Dr. Klausner, $77,250 for Ms. Homans, and $54,984 for each of Mr. Hill and Ms. Turner. All of the bonus amounts described above were paid in early 2021. Ms. Turner and Ms. Homans also received additional cash bonuses in the amounts of

$200,000 and $250,000, respectively, based on performance achievements of certain corporate goals which was approved by the board of directors in March 2020.

Outstanding Equity Awards as of December 31, 2020

The following table presents the outstanding equity awards held by each named executive officer as of December 31, 2020.

	Option Awards (1)						Stock Awards	
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price Per Share ($)	Vesting Commencement Date	Option Expiration Date	Number of Shares or Units of Stock not yet Vested (#)(2)	Market Value of Shares or Units not yet Vested ($)(3)
Richard Klausner, M.D.	8/6/2018	—	—	—	8/1/2018(6)	—	2,916,667	18,200,002
	11/6/2018	1,526,487(4)	1,187,269(5)	0.10	9/20/2018(6)	11/5/2028	—	—
	8/31/2019	1,655,868(4)	3,019,524(5)	3.65	7/9/2019(7)	8/30/2029	—	—
	1/16/2020	135,416	514,584	3.65	2/1/2020(7)	1/15/2030	—	—
Elizabeth Homans	11/6/2018	1,951,423(4)	1,517,775(5)	0.10	9/17/2018(6)	11/5/2028	—	—
	11/6/2018	361,375(4)	332,465(5)	0.10	11/6/2018(8)	11/5/2028	—	—
	1/16/2020	47,916	182,084	3.65	2/1/2020(7)	1/15/2030	—	—
	7/15/2020	279,358	3,072,942	5.81	8/1/2020(7)	7/14/2030	—	—
Heather Turner	4/23/2019	208,333	291,667	3.65	4/1/2019(6)	4/22/2029	—	—
	1/16/2020	34,375	130,625	3.65	2/1/2020(7)	1/15/2030	—	—
	11/17/2020	—	550,000	5.96	12/1/2020(7)	11/16/2030	—	—
Stephen Hill	7/10/2019	187,500	312,500	3.65	6/19/2019(6)	7/9/2029	—	—
	1/16/2020	34,375	130,625	3.65	2/1/2020(7)	1/15/2030	—	—
	11/17/2020	—	450,000	5.96	12/1/2020(7)	11/16/2030	—	—

(1) All of the option awards were granted under the 2018 Plan, the terms of which plan are described below under "—Equity Benefit Plans—2018 Equity Incentive Plan."
(2) Constitutes restricted shares of common stock that are subject to repurchase at their original purchase price upon a termination of service. The repurchase right lapses over the vesting schedule, subject to continued service to us through the applicable vesting date.
(3) Amount is calculated by multiplying the number of shares shown in the table by $6.24, the estimated fair market value per share of our common stock as of December 31, 2020.
(4) The option is early-exercisable, meaning that it can be exercised before it vests for restricted shares of our common stock subject to the same vesting provisions as the underlying options. Accordingly, the number of shares shown for the option in this column represent the number of shares that were exercisable and vested as of December 31, 2020.
(5) The option is early-exercisable, meaning that it can be exercised before it vests for restricted shares of our common stock subject to the same vesting provisions as the underlying options. Accordingly, the number of shares shown for the option in this column represent the number of shares that were exercisable and unvested as of December 31, 2020.
(6) The restricted stock award and options vest as to 25% of the shares or shares initially underlying the option on the first anniversary of the vesting commencement date and as to 1/48th of the shares initially underlying the option each month until fully vested on the fourth anniversary of the vesting commencement date, subject to continued service to us through the applicable vesting date.
(7) Each option vests as to 1/48th of the shares initially underlying the option each month until fully vested on the fourth anniversary of the vesting commencement date, subject to continued service to us through the applicable vesting date.
(8) The option initially vested based on the occurrence of certain milestones. The vesting was subsequently modified in 2020 to vest as to 25% of the shares initially underlying the option on the first anniversary of the vesting commencement date and as to 1/48th of the shares initially underlying the option each month until fully vested on the fourth anniversary of the vesting commencement date, subject to continued service to us through the applicable vesting date.

Options held by certain of our named executive officers are eligible for accelerated vesting under specified circumstances. Please see the subsection titled "—Offer Letters" below for a description of such potential acceleration.

We may in the future, on an annual basis or otherwise, grant additional equity awards to our executive officers pursuant to our 2021 Plan, the terms of which are described below under the section titled "—Equity Benefit Plans—2021 Equity Incentive Plan."

Emerging Growth Company Status

We are an "emerging growth company," as defined in the JOBS Act. As an emerging growth company we will be exempt from certain requirements related to executive compensation, including the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our chief executive officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Pension Benefits

Our named executive officers did not participate in, or otherwise receive any benefits under, any pension or retirement plan sponsored by us during the fiscal year ended December 31, 2020.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a non-qualified deferred compensation plan sponsored by us during the fiscal year ended December 31, 2020.

Offer Letters

Below are descriptions of our offer letters with our named executive officers. The offer letters with our executive officers generally provide for at-will employment and set forth the executive officer's initial base salary, annual target bonus, and eligibility to participate in our employee benefit plans.

Richard Klausner, M.D.

In July 2020, we and Dr. Klausner entered into an amended offer of employment that governs the current terms of his employment in connection with his transition from Chief Executive Officer to Executive Chairman. The amended offer of employment provides that Dr. Klausner's initial annual base salary was $275,000. Effective March 1, 2021, Dr. Klausner's annual base salary is $284,625.

Dr. Klausner is eligible to earn an annual incentive bonus of up to 60% of his base salary, based on the achievement of performance objectives to be determined by our board of directors. The amended offer of employment provides that Dr. Klausner's annual incentive bonus for 2020 was to be pro-rated based upon his salary and target bonus level provided for immediately before his transition from Chief Executive Officer to Executive Chairman (which salary was $550,000 and annual target bonus was 60%) and the length of his employment from August 1, 2020 through the end of the 2020 fiscal year, which amount is disclosed in the "Bonus Compensation" and "Non-Equity Incentive Plan Compensation" columns in the "Summary Compensation Table" above.

Dr. Klausner's amended offer of employment provides for severance payments upon certain qualifying terminations of his employment. In the event of a termination of his employment by us without Cause (as defined below) or resignation for Good Reason (as defined below), Dr. Klausner will receive severance in the form of 18 months of his then-current base salary, with such amount to be paid through our normally scheduled payroll date following the date on which his employment is terminated. Dr. Klausner will also be entitled to a pro-rated target annual incentive bonus for the year in which termination occurs and up to 18 months of COBRA premiums for Dr. Klausner and his dependents paid for by the company. In addition, the company's repurchase option will lapse with respect to 100% of the shares of common stock previously purchased by Dr. Klausner. Dr. Klausner

will also receive accelerated vesting of his then-outstanding and unvested options which would otherwise become vested solely on the passage of time and his continuous service. These severance benefits are conditioned upon Dr. Klausner executing a general release and waiver of all claims against the company.

"Cause" means (i) executive is indicted for, convicted of, or pleads guilty or nolo contendere to, a felony or crime involving moral turpitude; (ii) executive engages in conduct that constitutes willful gross negligence, willful misconduct, or unsatisfactory performance in carrying out the executive's duties under the amended offer of employment, and, if curable, such breach remains uncured following fifteen (15) days prior written notice given by the company to the executive specifying such conduct; (iii) executive has breached any covenant or any material provision of any agreement with the company, including among other things, a willful and material breach of written company policy, and, if curable, such breach remains uncured following fifteen (15) days' prior written notice specifying such breach given by the company to the executive; (iv) executive's material violation of federal law or state law that the board reasonably determines has had or is reasonably likely to have a material detrimental effect on the company's reputation or business; or (v) executive's act of fraud or dishonesty in the performance of the executive's job duties.

"Good Reason" means (i) that executive, without executive's express, written consent, has incurred a material reduction in authority, title, duties or responsibilities at the company or a successor employer (with respect to a termination in connection with a change in control, relative to executive's authority, title, duties or responsibilities immediately prior to the change in control); (ii) that executive, without executive's express, written consent, has suffered a material breach of the amended offer of employment by the company or a successor employer; (iii) that executive, without executive's express, written consent, has been required to relocate or travel more than fifty (50) miles from executive's then current place of employment in order to continue to perform the duties and responsibilities of executive's position (not including customary travel as may be required by the nature of executive's position); or (iv) that executive, without executive's express, written consent, has been directed by the board to violate knowingly and intentionally any material state, federal or foreign law, rule or regulation applicable to the company.

In the event of a Change in Control (as defined below), the repurchase option will lapse with respect to 100% of the shares that Dr. Klausner purchased on August 6, 2018 and all such unvested shares will immediately become fully vested, provided that Dr. Klausner is an employee of the company as of the time of the effective date of such Change in Control. Further, in the event of a Change of Control, all options held by Dr. Klausner shall immediately vest and become exercisable, provided that he is an employee of the company as of the time of the effective date of the Change in Control.

"Change in Control" means any transaction or series of related transactions pursuant to which any individual or entity acquires (i) more than fifty percent (50%) of the issued and outstanding equity securities of the company or (ii) all or substantially all of the assets of the company (in either case, whether by merger, consolidation, sale, exchange, issuance, transfer or redemption of the company's equity securities by sale, exchange or transfer of the Company's consolidated assets or otherwise), provided that, where applied to compensation subject to Section 409A, any acceleration of or change in payment shall only apply (if required by Section 409A) if the corporate transaction is also a change in control event described in Treasury Regulation 1.409A-3(i)(5).

Elizabeth Homans

In July 2020, we and Ms. Homans entered into an amended offer of employment that governs the current terms of her employment in connection with her transition to the role of Chief Executive Officer.

The offer letter provides that Ms. Homans' initial annual base salary was $515,000. Effective as of March 1, 2021, Ms. Homans' annual base salary is $556,200. Ms. Homans is eligible to earn an annual incentive bonus of up to 60% of her base salary, based on the achievement of performance objectives to be determined by our board of directors. The offer letter provides that Ms. Homans' annual incentive bonus for 2020 was to be pro-rated based upon her salary and target bonus level provided for in her original employment agreement (which salary was $450,000 and annual target bonus was equal to 50% of her base salary) and the length of her employment from August 1, 2020 through the end of the 2020 fiscal year, which amount is disclosed in the "Bonus" and "Non-Equity Incentive Plan Compensation" columns in the "Summary Compensation Table" above.

Our board of directors previously granted Ms. Homans an option to purchase up to 3,699,198 shares of the company's common stock under our 2018 Plan and an option to purchase up to 693,840 shares of common stock that vested based on the occurrence of certain milestones, which was later amended in July 2020 by the board so that 25% of the shares subject to the option shall vest on the one-year anniversary of the vesting commencement date, and 1/48th of the total number of shares initially subject to the option shall vest each month thereafter on the same day of the month as the vesting commencement date. Pursuant to the amended offer of employment, Ms. Homans was granted an option to purchase up to 3,352,300 shares of our common stock. All such awards are reflected in the "Outstanding Equity Awards as of December 31, 2020" table above. If, after twelve months of Ms. Homans' employment in the role of Chief Executive Officer, our board of directors approves a corporate score of at least 90% based upon its review of performance against 2020 corporate goals, and determines that we have made reasonable progress towards achieving our 2021 corporate goals as approved by the board, Ms. Homans will be granted an additional option to bring her total equity ownership in us up to 3.4% of our fully-diluted outstanding shares of equity capital as of the date of the grant. In February 2021, Ms. Homans was granted an option to purchase 583,532 shares of common stock. In August 2020, our board of directors approved the extension of Ms. Homans' post-termination exercise period for all the options granted to Ms. Homans on November 6, 2018 and January 16, 2020.

Ms. Homans' amended offer of employment provides for severance payments upon certain qualifying terminations of her employment. In the event of a termination of her employment by us without Cause (as defined above) or resignation for Good Reason (as defined above), Ms. Homans will receive severance in the form of 18 months of her then-current base salary, with such amount to be paid through our normally scheduled payroll following the date on which her employment is terminated. Ms. Homans will also be entitled to a pro-rated target annual incentive bonus for the year in which termination occurs and up to 18 months of COBRA premiums for Ms. Homans and her dependents paid for by the company. These severance benefits are conditioned upon Ms. Homans executing a general release and waiver of all claims against the company. Additionally, Ms. Homans' amended offer letter provides that in the event of certain qualifying terminations, the post-termination exercise period applicable to certain of Ms. Homans' options will be extended.

In the event of a Change in Control (as defined above), Ms. Homans will also receive accelerated vesting of 100% of her then-outstanding and unvested options which would otherwise become vested solely on the passage of time and her continuous service, provided that Ms. Homans is an employee of the company as of the effective date of such Change in Control.

Stephen Hill

In May 2019, we and Mr. Hill entered into an offer letter governing the terms of his employment. The offer letter provides that Mr. Hill's initial annual base salary was $425,000. Effective March 1, 2021, Mr. Hill's annual base salary is $455,271. Mr. Hill is eligible to earn an annual incentive bonus of up to 50% of his base salary, based on the achievement of performance objectives to be determined

by our board of directors. In 2019, Mr. Hill also received an advance signing bonus of $300,000, which will be considered earned in May 2022 following the completion of three years continuous service with the company. Mr. Hill received relocation reimbursement of $100,000, 50% of which is subject to clawback by the company under certain circumstances. The company granted Mr. Hill a stock option to purchase up to 500,000 shares of the company's common stock under our 2018 Plan, which award is reflected in the "Outstanding Equity Awards as of December 31, 2020" table above.

Mr. Hill's offer letter provides for severance payments upon certain qualifying terminations of his employment. In the event of a termination of his employment by us without Cause (as defined above) or resignation for Good Reason (as defined immediately below), Mr. Hill will receive severance in the form of 12 months of his then-current base salary, such amount to be paid through our normally scheduled payroll date following the date on which his employment is terminated, and up to 12 months of COBRA premiums paid for by the company. These severance benefits are conditioned upon Mr. Hill executing a general release and waiver of all claims against the company.

For the purposes of Mr. Hill's offer letter, the following definition of "Good Reason," as set forth in his offer letter, applies:

"Good Reason" means (i) that executive, without executive's express, written consent, has incurred a material reduction in authority, title, duties or responsibilities at the company or a successor employer (with respect to a termination in connection with a change in control, relative to executive's authority, title, duties or responsibilities immediately prior to the change in control); (ii) that executive, without executive's express, written consent, has suffered a material breach of the offer of employment by the company or a successor employer; (iii) that executive, without executive's express, written consent, has been required to relocate or travel more than fifty (50) miles from executive's then current place of employment in order to continue to perform the duties and responsibilities of executive's position (not including customary travel as may be required by the nature of executive's position); (iv) that executive, without executive's express, written consent, has incurred a material reduction of work space designed to cause executive to resign, other than a reduction in work space generally applicable to all senior executives of the Company; or (v) that executive, without executive's express, written consent, has been directed by the board to violate knowingly and intentionally any material state, federal or foreign law, rule or regulation applicable to the company.

If Mr. Hill's employment is terminated by us without Cause, or Mr. Hill resigns for Good Reason, in each case within twelve (12) months after a Change in Control (as defined below), 100% of the then unvested shares subject to the option to purchase 500,000 shares granted to him on July 10, 2019 shall immediately vest. "Change in control" means any transaction or series of related transactions pursuant to which any individual or entity acquires (i) more than fifty percent (50%) of the issued and outstanding equity securities of the company or (ii) all or substantially all of the assets of the company (in either case, whether by merger, consolidation, sale, exchange, issuance, transfer or redemption of the company's equity securities by sale, exchange or transfer of the company's consolidated assets or otherwise).

Heather Turner

In February 2019, we and Ms. Turner entered into an offer letter governing the terms of her employment. The offer letter provides that Ms. Turner's initial annual base salary was $420,000. Effective as of March 1, 2021, Ms. Turner's annual base salary is $455,271. Ms. Turner is eligible to earn an annual incentive bonus of up to 50% of her base salary, based on the achievement of performance objectives to be determined by our board of directors. The company granted Ms. Turner a stock option to purchase up to 500,000 shares of the company's common stock under our 2018 Plan, which award is reflected in the "Outstanding Equity Awards as of December 31, 2020" table above.

Ms. Turner's offer letter provides for severance payments upon certain qualifying terminations of her employment. In the event of a termination of her employment by us without Cause (as defined above) or resignation for Good Reason (as defined above), Ms. Turner will receive severance in the form of 12 months of her then-current base salary, such amount to be paid through our normally scheduled payroll date following the date on which her employment is terminated, and up to 12 months of COBRA premiums paid for by the company. These severance benefits are conditioned upon Ms. Turner executing a general release and waiver of all claims against the company.

Potential Payments and Benefits upon Termination or Change in Control

The offer letters we have entered into with our named executive officers provide for severance and/or change in control benefits as described above under "—Offer Letters."

Other Compensation and Benefits

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental and vision plans, in each case on the same basis as all of our other employees. We pay the premiums for the medical, disability, and accidental death and dismemberment insurance for all of our employees, including our named executive officers. We generally do not provide perquisites or personal benefits to our named executive officers.

401(k) Plan

Our named executive officers are eligible to participate in our defined contribution retirement plan that provides eligible employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may elect to defer up to 90% of their eligible compensation into the plan on a pretax or after tax basis, up to annual limits prescribed by the Code.

Equity Benefit Plans

We believe that our ability to grant equity-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of our stockholders. In addition, we believe that our ability to grant options and other equity-based awards helps us to attract, retain and motivate employees, consultants and directors, and encourages them to devote their best efforts to our business and financial success. The principal features of our equity incentive plans are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which are filed as exhibits to the registration statement of which this prospectus forms a part.

2021 Equity Incentive Plan

In June 2021, our board of directors adopted, and our stockholders approved, our 2021 Plan. We expect our 2021 Plan will become effective on the date of the underwriting agreement related to this offering. Our 2021 Plan came into existence upon its adoption by our board of directors, but no grants will be made under our 2021 Plan prior to its effectiveness. Once our 2021 Plan becomes effective, no further grants will be made under our 2018 Plan.

Awards. Our 2021 Plan provides for the grant of incentive stock options (ISOs) within the meaning of Section 422 of the Code, to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options (NSOs), stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of awards to our employees, directors and consultants and any of our affiliates' employees and consultants.

Authorized Shares. Initially, the maximum number of shares of our common stock that may be issued under our 2021 Plan after it becomes effective will not exceed 68,856,698 shares of our common stock, which is the sum of (i) 24,700,000 new shares, plus (ii) an additional number of shares not to exceed 44,156,698 shares, consisting of (a) shares that remain available for the issuance of awards under our 2018 Plan as of immediately prior to the time our 2021 Plan becomes effective and (b) any shares of our common stock subject to outstanding stock options or other stock awards granted under our 2018 Plan that, on or after our 2021 Plan becomes effective, terminate or expire prior to exercise or settlement; are not issued because the award is settled in cash; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of shares of our common stock reserved for issuance under our 2021 Plan will automatically increase on January 1 of each year for a period of ten years, beginning on January 1, 2022 and continuing through January 1, 2031, in an amount equal to (1) 5% of the total number of shares of our common stock outstanding on December 31 of the immediately preceding year, or (2) a lesser number of shares determined by our board of directors no later than December 31 of the immediately preceding year. The maximum number of shares of our common stock that may be issued on the exercise of ISOs under our 2021 Plan is 206,570,094 shares.

Shares subject to stock awards granted under our 2021 Plan that expire or terminate without being exercised in full or that are paid out in cash rather than in shares will not reduce the number of shares available for issuance under our 2021 Plan. Shares withheld under a stock award to satisfy the exercise, strike or purchase price of a stock award or to satisfy a tax withholding obligation will not reduce the number of shares available for issuance under our 2021 Plan. If any shares of our common stock issued pursuant to a stock award are forfeited back to or repurchased or reacquired by us (i) because of a failure to meet a contingency or condition required for the vesting of such shares; (ii) to satisfy the exercise, strike or purchase price of a stock award; or (iii) to satisfy a tax withholding obligation in connection with a stock award, the shares that are forfeited or repurchased or reacquired will revert to and again become available for issuance under our 2021 Plan.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, administers our 2021 Plan. Our board of directors may delegate to one or more of our officers the authority to (i) designate employees (other than officers) to receive specified stock awards; and (ii) determine the number of shares subject to such stock awards. Under our 2021 Plan, our board of directors has the authority to determine stock award recipients, the types of stock awards to be granted, grant dates, the number of shares subject to each stock award, the fair market value of our common stock, and the provisions of each stock award, including the period of exercisability and the vesting schedule applicable to a stock award.

Under our 2021 Plan, our board of directors also generally has the authority to effect, with the consent of any materially adversely affected participant, (i) the reduction of the exercise, purchase, or strike price of any outstanding option or stock appreciation right; (ii) the cancellation of any outstanding option or stock appreciation right and the grant in substitution therefore of other awards, cash, or other consideration; or (iii) any other action that is treated as a repricing under generally accepted accounting principles.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the administrator. The administrator determines the exercise price for stock options, within the terms and conditions of our 2021 Plan, except the exercise price of a stock option generally will not be less than 100% of the fair market value of our common stock on the date of grant. Options granted under our 2021 Plan will vest at the rate specified in the stock option agreement as determined by the administrator.

The administrator determines the term of stock options granted under our 2021 Plan, up to a maximum of 10 years. Unless the terms of an optionholder’s stock option agreement, or other written

agreement between us and the optionholder, provide otherwise, if an optionholder's service relationship with us or any of our affiliates ceases for any reason other than disability, death, or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws. If an optionholder's service relationship with us or any of our affiliates ceases due to death, or an optionholder dies within a certain period following cessation of service, a beneficiary may generally exercise any vested options for a period of 18 months following the date of death. If an optionholder's service relationship with us or any of our affiliates ceases due to disability, the optionholder may generally exercise any vested options for a period of 12 months following the cessation of service. In the event of a termination for cause, options generally terminate upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the administrator and may include (i) cash, check, bank draft or money order; (ii) a broker-assisted cashless exercise; (iii) the tender of shares of our common stock previously owned by the optionholder; (iv) a net exercise of the option if it is an NSO; or (v) other legal consideration approved by the administrator.

Unless the administrator provides otherwise, options generally are not transferable except by will or the laws of descent and distribution. Subject to approval of the administrator or a duly authorized officer, an option may be transferred pursuant to a domestic relations order, official marital settlement agreement, or other divorce or separation instrument.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an award holder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our parent or subsidiary corporations unless (i) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant; and (ii) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock unit awards are granted under restricted stock unit award agreements adopted by the administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, or other written agreement between us and the recipient, restricted stock unit awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past or future services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Stock Appreciation Rights. Stock appreciation rights are granted under stock appreciation right agreements adopted by the administrator. The administrator determines the purchase price or strike price for a stock appreciation right, which generally will not be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under our 2021 Plan will vest at the rate specified in the stock appreciation right agreement as determined by the administrator. Stock appreciation rights may be settled in cash or shares of our common stock or in any other form of payment as determined by our board of directors and specified in the stock appreciation right agreement.

The administrator determines the term of stock appreciation rights granted under our 2021 Plan, up to a maximum of 10 years. If a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability, or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. This period may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate upon the termination date. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. Our 2021 Plan permits the grant of performance awards that may be settled in stock, cash or other property. Performance awards may be structured so that the stock or cash will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period. Performance awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, our common stock.

The performance goals may be based on any measure of performance selected by our board of directors. The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by our board of directors at the time the performance award is granted, our board will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (i) to exclude restructuring or other nonrecurring charges; (ii) to exclude exchange rate effects; (iii) to exclude the effects of changes to generally accepted accounting principles; (iv) to exclude the effects of any statutory adjustments to corporate tax rates; (v) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (vi) to exclude the dilutive effects of acquisitions or joint ventures; (vii) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (viii) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (ix) to exclude the effects of stock-based compensation and the award of bonuses under our bonus plans; (x) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; and (xi) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles.

Other Stock Awards. The administrator may grant other awards based in whole or in part by reference to our common stock. The administrator will set the number of shares under the stock award (or cash equivalent) and all other terms and conditions of such awards.

Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid to any non-employee director with respect to any fiscal year, including awards granted and cash fees paid by us to such non-employee director, will not exceed $1,000,000 in total value.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (i) the class and maximum number of shares reserved for issuance under our 2021 Plan, (ii) the class and maximum number of shares by which the share reserve may increase automatically each year, (iii) the class and maximum number of shares that may be issued on the exercise of ISOs and (iv) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. In the event of a corporate transaction (as defined in the 2021 Plan), unless otherwise provided in a participant's stock award agreement or other written agreement with us or one of our affiliates or unless otherwise expressly provided by the administrator at the time of grant, any stock awards outstanding under our 2021 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by us with respect to the stock award may be assigned to the successor (or its parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then (i) with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the corporate transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full (or, in the case of performance awards with multiple vesting levels depending on the level of performance, vesting will accelerate at 100% of the target level) to a date prior to the effective time of the corporate transaction (contingent upon the effectiveness of the corporate transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the corporate transaction, and any reacquisition or repurchase rights held by us with respect to such stock awards will lapse (contingent upon the effectiveness of the corporate transaction); and (ii) any such stock awards that are held by persons other than current participants will terminate if not exercised (if applicable) prior to the effective time of the corporate transaction, except that any reacquisition or repurchase rights held by us with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the corporate transaction.

In the event a stock award will terminate if not exercised prior to the effective time of a corporate transaction, the administrator may provide, in its sole discretion, that the holder of such stock award may not exercise such stock award but instead will receive a payment equal in value to the excess (if any) of (i) the value of the property the participant would have received upon the exercise of the stock award, over (ii) any per share exercise price payable by such holder, if applicable. In addition, any escrow, holdback, earn out or similar provisions in the definitive agreement for the corporate transaction may apply to such payment to the same extent and in the same manner as such provisions apply to the holders of our common stock.

Change in Control. Stock awards granted under our 2021 Plan may be subject to acceleration of vesting and exercisability upon or after a change in control (as defined in the 2021 Plan) as may be provided in the applicable stock award agreement or in any other written agreement between us or any affiliate and the participant, but in the absence of such provision, no such acceleration will automatically occur.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2021 Plan at any time, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2021 Plan. No stock awards may be granted under our 2021 Plan while it is suspended or after it is terminated.

2021 Employee Stock Purchase Plan

In June 2021, our board of directors adopted, and our stockholders approved, our ESPP. Our ESPP will become effective immediately prior to and contingent upon the execution of the underwriting agreement related to this offering. The purpose of our ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. Our ESPP includes two components. One component is designed to allow eligible U.S. employees to purchase our common stock in a manner that may qualify for favorable tax treatment under Section 423 of the Code. The other component permits the grant of purchase rights that do not qualify for such favorable tax treatment in order to allow deviations necessary to permit participation by eligible employees who are foreign nationals or employed outside of the United States while complying with applicable foreign laws.

Share Reserve. Our ESPP authorizes the issuance of 2,470,000 shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each year for a period of ten years, beginning on January 1, 2022 and continuing through January 1, 2031, by the lesser of (i) 1% of the total number of shares of our common stock outstanding on December 31 of the immediately preceding year; and (ii) 4,940,000 shares, except before the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (i) and (ii).

Administration. Our board of directors, or a duly authorized committee of our board of directors, administers our ESPP. Our ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under our ESPP, our board of directors may specify offerings with durations of not more than 27 months and to specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. Our ESPP provides that an offering may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in our ESPP and to contribute, normally through payroll deductions, up to 15% of their earnings (as defined in our ESPP) for the purchase of our common stock under our ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in our ESPP at a price per share that is not less than the lesser of (i) 85% of the fair market value of a share of our common stock on the first day of an offering; or (ii) 85% of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in our ESPP, as determined by our board of directors: (i) being customarily employed for more than 20 hours per week; (ii) being customarily employed for more than five months per calendar year; or (iii) continuous employment with us or one of our affiliates for a period of time (not

to exceed two years). No employee may purchase shares under our ESPP at a rate in excess of $25,000 worth of our common stock (based on the fair market value per share of our common stock at the beginning of an offering) for each calendar year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under our ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. Our ESPP provides that in the event there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or similar transaction, our board of directors will make appropriate adjustments to: (i) the class(es) and maximum number of shares reserved under our ESPP; (ii) the class(es) and maximum number of shares by which the share reserve may increase automatically each year; (iii) the class(es) and number of shares subject to, and purchase price applicable to, outstanding offerings and purchase rights; and (iv) the class(es) and number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. Our ESPP provides that in the event of a corporate transaction (as defined in the ESPP), any then-outstanding rights to purchase our common stock under our ESPP may be assumed, continued, or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within 10 business days before such corporate transaction, and such purchase rights will terminate immediately after such purchase.

Plan Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP, except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

2018 Equity Incentive Plan

Our board of directors adopted, and our stockholders approved, the 2018 Plan in August 2018. The 2018 Plan was most recently amended in January 2021. The 2018 Plan will be terminated on the date the 2021 Plan becomes effective, and thereafter no further stock awards will be granted under the 2018 Plan. However, any outstanding stock awards granted under the 2018 Plan will remain outstanding, subject to the terms of our 2018 Plan and award agreements, until such outstanding options are exercised or until any stock awards terminate or expire by their terms.

Awards. Our 2018 Plan provides for the grant of ISOs, NSOs, restricted stock units, stock appreciation rights and restricted stock awards. ISOs may only be granted to our employees, including employees of any parent or subsidiary. All other stock awards may be granted to our employees, directors and consultants, including employees and consultants of any parent or subsidiary.

Authorized Shares. As of March 31, 2021, options to purchase 40,556,956 shares of our common stock were outstanding, and 3,723,796 shares of our common stock remained available for future issuance under our 2018 Plan. The options outstanding as of March 31, 2021 had a weighted-average exercise price of $3.92 per share. Subject to capitalization adjustments, the maximum aggregate number of shares of our common stock that may be issued under the 2018 Plan is 47,044,980 shares, and the maximum number of shares issuable pursuant to ISOs is 94,089,960 shares.

Plan Administration. Our board or a duly authorized committee of our board administers our 2018 Plan and the awards granted under it. Under our 2018 Plan, the administrator has the authority to, among other things, determine who will be granted stock awards, to determine the terms and conditions of each stock award (including the number of shares subject to the stock award, when the stock award will vest and, as applicable, become exercisable), to accelerate the time(s) at which a stock award may vest or be exercised, and to construe and interpret the terms of our 2018 Plan and stock awards granted thereunder.

Options. Options granted under our 2018 Plan have terms substantially similar to options that may be granted under our 2021 Plan once it becomes effective.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, proportionate adjustments will be made to (i) the class and maximum number of shares reserved for issuance under our 2018 Plan, and (ii) the class and number of shares and exercise price or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. Our 2018 Plan provides that in the event of an acquisition or other combination (such terms as defined under our 2018 Plan), stock awards outstanding under our 2018 Plan will be treated as provided in the agreement evidencing such acquisition or other combination, which may provide for one or more of the following: (i) continuation of outstanding stock awards, if we are the successor entity; (ii) assumption or substitution of outstanding stock awards by the successor or acquiring entity in accordance with the terms of the 2018 Plan; (iii) the full or partial exercisability or vesting and accelerated expiration of outstanding stock awards; (iv) the settlement of the fair market value of such stock awards (whether or not then vested or exercisable) in cash, cash equivalents, or securities of the successor entity (or its parent if any) (or the cancellation without consideration of any awards without value); or (v) the termination of outstanding stock awards, without the payment of any consideration that are not exercised upon or prior to the acquisition or other combination within such time specified by the administrator. Immediately following an acquisition or other combination, outstanding stock awards will terminate and cease to be outstanding, except to the extent such stock awards, have been continued, assumed or substituted, as described above.

Plan Amendment or Termination. Our board has the authority to terminate or amend our 2018 Plan at any time, except any amendment of our 2018 Plan will be subject to stockholder approval if required by applicable law. The termination or amendment of our 2018 Plan will not affect any share previously issued or any stock award previously granted under our 2018 Plan. As described above, our 2018 Plan will be terminated upon the effective date of the 2021 Plan and no future awards will be granted under the 2018 Plan following such termination.

Limitations on Liability and Indemnification

Our amended and restated certificate of incorporation, which will become effective immediately after the closing of this offering, will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director’s duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation will authorize us to indemnify our directors, officers, employees and other agents to the fullest extent permitted by Delaware law. Our amended and restated bylaws will provide that we are required to indemnify our directors and officers to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our amended and restated bylaws will also provide that, on satisfaction of certain conditions, we will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee, or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding.

We believe that these amended and restated certificate of incorporation and amended and restated bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for directors, executive officers, or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Rule 10b5-1 Plans

Our directors, officers and key employees may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades under parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers may also buy or sell additional shares outside of a Rule 10b5-1 plan when they do not possess of material nonpublic information, subject to compliance with the terms of our insider trading policy. During the first 180 days from this offering, the sale of any shares under such plan would be subject to the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following includes a summary of transactions since our inception and any currently proposed transactions to which we have been or are to be a party in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under the section titled “Executive Compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders.

Convertible Note

In August 2018, we issued and sold a convertible promissory note in the principal amount of $500,000 to ARCH Venture Partners which converted into 274,751 shares of Series A convertible preferred stock in connection with the Series A convertible preferred stock financing described below. Mr. Nelsen, a member of our board of directors, is a Managing Director of Arch Venture Partners IX, LLC, an entity affiliated with ARCH Venture Partners. Messrs. Nelsen and Bishop, members of our board of directors, were designated to our board by ARCH Venture Partners.

Series A Convertible Preferred Stock Financing

In multiple closings held between September 2018 and February 2019, we issued and sold an aggregate of 97,933,475 shares of our Series A convertible preferred stock at a purchase price of $1.8288 per share for an aggregate purchase price of $179,100,739.08.

The following table summarizes the Series A convertible preferred stock purchased by holders of more than 5% of our capital stock and entities affiliated with our executive officers and members of our board of directors.

Participants[1]	Shares of Series A Convertible Preferred Stock Purchased (#)	Aggregate Purchase Price ($)
Entities affiliated with ARCH Venture Partners[2]	35,542,432	64,999,999.66
Foresite Capital Fund IV, L.P.	10,936,132	19,999,998.21
Gemini Investments, L.P.	410,104	749,998.20
Lyell Investors, LLC[3]	3,765,842	6,886,971.85

(1) Additional details regarding these stockholders and their equity holdings are included in this prospectus under the section titled “Principal Stockholders.”
(2) Consists of (i) 17,771,216 shares of Series A Convertible Preferred Stock issued to ARCH Venture Fund IX, L.P. and (ii) 17,771,216 shares of Series A Convertible Preferred Stock issued to ARCH Venture Fund IX Overage, L.P. Mr. Nelsen, a member of our board of directors, is a managing director of AVP IX LLC. Mr. Nelson may be deemed to share the power to direct the disposition and vote of the shares held by ARCH IX and ARCH IX Overage, but disclaims beneficial ownership except to any pecuniary interest therein. Messrs. Nelsen and Bishop, members of our board of directors, were designated to our board by ARCH Venture Partners.
(3) Dr. Klausner and Ms. Friedman are members of our board of directors and a manager and member of Lyell Investors, LLC, respectively. Dr. Klausner and Ms. Friedman may be deemed to share the power to direct the disposition and vote of the shares held by Lyell Investors, but disclaim beneficial ownership of all shares held by Lyell Investors except to any pecuniary interest therein.

Series B Convertible Preferred Stock Financing

In multiple closings held between March 2019 and May 2019, we issued and sold an aggregate of 23,929,531 shares of our Series B convertible preferred stock at a purchase price of $6.776145 per share for an aggregate purchase price of $162,149,971.88.

The following table summarizes the Series B convertible preferred stock purchased by holders of more than 5% of our capital stock and entities affiliated with our executive officers and members of our board of directors.

Participants[1]	Shares of Series B Convertible Preferred Stock Purchased (#)	Aggregate Purchase Price ($)
Foresite Capital Fund IV, L.P.	1,475,765	9,999,997.63
Gemini Investments, L.P.	14,757,653	99,999,996.59

(1) Additional details regarding these stockholders and their equity holdings are included in this prospectus under the section titled “Principal Stockholders.”

Series AA Convertible Preferred Stock Financing

In July 2019, we issued and sold an aggregate of 30,253,189 shares of our Series AA convertible preferred stock at a purchase price of $6.776145 per share for an aggregate purchase price of $204,999,995.38.

The following table summarizes the Series AA convertible preferred stock purchased by holders of more than 5% of our capital stock and entities affiliated with our executive officers and members of our board of directors.

Participants[1]	Shares of Series AA Convertible Preferred Stock Purchased (#)	Aggregate Purchase Price ($)
Glaxo Group Limited	30,253,189	204,999,995.38

(1) Additional details regarding this stockholder and its equity holdings are included in this prospectus under the section titled “Principal Stockholders.”

Series C Convertible Preferred Stock Financing

In March 2020, we issued and sold an aggregate of 42,905,042 shares of our Series C convertible preferred stock at a purchase price of $11.49049 per share for an aggregate purchase price of $492,999,956.08.

The following table summarizes the Series C convertible preferred stock purchased by holders of more than 5% of our capital stock and entities affiliated with our executive officers and members of our board of directors.

Participants[1]	Shares of Series C Convertible Preferred Stock Purchased (#)	Aggregate Purchase Price ($)
Entities affiliated with ARCH Venture Partners[2]	870,284	9,999,989.60
Foresite Capital Fund IV, L.P.	870,284	9,999,989.60
Milky Way Investments Group Limited	17,405,698	199,999,998.82

(1) Additional details regarding these stockholders and their equity holdings are included in this prospectus under the section titled "Principal Stockholders."
(2) Consists of (i) 435,142 shares of Series C Convertible Preferred Stock issued to ARCH Venture Fund IX, L.P. and (ii) 435,142 shares of Series C Convertible Preferred Stock issued to ARCH Venture Fund IX Overage, L.P. Mr. Nelsen, a member of our board of directors, is a managing director of AVP IX LLC. Mr. Nelson may be deemed to share the power to direct the disposition and vote of the shares held by ARCH IX and ARCH IX Overage, but disclaims beneficial ownership except to any pecuniary interest therein. Messrs. Nelsen and Bishop, members of our board of directors, were designated to our board by ARCH Venture Partners.

Stock Repurchases

In March 2020, we repurchased 546,806 shares of its Series A convertible preferred stock from Richard D. Klausner and Rachel D. Klausner, Trustees of the Klausner Family Revocable Trust of May 8, 2014 at the then estimated fair value of $7.76 per share for a purchase price of $4.2 million.

In March 2020, we repurchased 2,032,166 shares of its common stock from Richard D. Klausner at the then estimated fair value of $5.81 per share for a purchase price of $11.8 million.

Collaboration and License Agreement with GSK

In May 2019, we entered into a Collaboration and License Agreement with GSK for potential T cell therapies that apply our platform technologies and cell therapy innovations to TCRs or CARs under distinct collaboration programs. We received a non-refundable upfront payment of $45.0 million under the GSK Agreement. We are entitled to certain payments upon the achievement of specified development and commercial milestones (for each selected target that is already within GSK's pipeline and meet certain criteria, we are eligible to receive up to an aggregate of approximately $400.0 million, and for each selected target that is not already within GSK's pipeline and meet certain criteria we are eligible to receive up to an aggregate of approximately $900.0 million). We are also entitled to potential technology validation milestone payments of up to an aggregate of approximately $200.0 million.

In connection with the GSK Agreement, in May 2019, we also entered into a Stock Purchase Agreement with GSK (GSK Stock Purchase Agreement), pursuant to which we sold and issued 30,253,189 shares of Series AA convertible preferred stock at a price of $6.776145 per share in July 2019.

Employment Agreements and Stock Option Grants to Directors and Executive Officers

We have entered into employment agreements with certain of our named executive officers, and granted stock options to our named executive officers and certain of our directors, as more fully described in the sections titled "Executive Compensation" and "Management—Non-Employee Director Compensation."

Investors' Rights Agreement

In March 2020, we entered into an Amended and Restated Investors' Rights Agreement (the Rights Agreement) with certain holders of more than 5% of our outstanding capital stock, including ARCH Venture Fund IX, L.P., ARCH Venture Fund IX Overage, L.P., Foresite Capital Fund IV, L.P., Gemini Investments, L.P., Glaxo Group Limited, Milky Way Investments Group Limited and certain affiliates of our directors.

The Rights Agreement grants to the holders of our outstanding convertible preferred stock certain rights, including certain registration rights with respect to the registrable securities held by them. See the section titled "Description of Capital Stock—Registration Rights" for additional information. In addition, the Rights Agreement imposes certain affirmative obligations on us, including our obligation to, among other things, (i) grant each holder who holds at least 7,736,917 shares of our convertible preferred stock (the Major Investors) a right of first offer with respect to future sales of our equity, excluding the shares to be offered and sold in this offering, and grant certain information and inspection rights to such Major Investors. Each of these obligations will terminate in connection with the closing of this offering.

Voting Agreement

In April 2021, we entered into an Amended and Restated Voting Agreement (the Voting Agreement) with certain holders of more than 5% of our outstanding capital stock, including ARCH Venture Fund IX, L.P., ARCH Venture Fund IX Overage, L.P., Foresite Capital Fund IV, L.P., Gemini Investments, L.P., Glaxo Group Limited, Milky Way Investments Group Limited and certain affiliates of our directors.

Pursuant to the Voting Agreement, as amended, ARCH Venture Fund IX, L.P. and ARCH Venture Fund IX Overage, L.P., collectively, have the right to designate two members to be elected to our board of directors. See the section titled "Management—Composition of Our Board of Directors." The Voting Agreement will terminate by its terms in connection with the closing of this offering and none of our stockholders will have any continuing rights regarding the election or designation of members of our board of directors following this offering.

Right of First Refusal and Co-Sale Agreement

In March 2020, we entered into an Amended and Restated Right of First Refusal and Co-Sale Agreement (the Co-Sale Agreement) with certain holders of more than 5% of our outstanding capital stock, including ARCH Venture Fund IX, L.P., ARCH Venture Fund IX Overage, L.P., Foresite Capital Fund IV, L.P., Gemini Investments, L.P., Glaxo Group Limited, Milky Way Investments Group Limited and certain affiliates of our directors.

Pursuant to the Co-Sale Agreement, we have a right of first refusal in respect of certain sales of securities by certain holders of our common stock and convertible preferred stock. To the extent we do not exercise such right in full, the Major Investors are granted certain rights of first refusal and co-sale in respect of such sale. The Co-Sale Agreement will terminate in connection with the closing of this offering.

Limitations on Liability and Indemnification Agreements

Our amended and restated certificate of incorporation will contain provisions limiting the liability of directors, and our amended and restated bylaws will provide that we will indemnify each of our

directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our employees and other agents when determined appropriate by the board. In addition, we have entered into or intend to enter into an indemnification agreement with each of our directors and executive officers, which will require us to indemnify them. For more information regarding these agreements, see the section titled “Executive Compensation—Limitations on Liability and Indemnification.”

Directed Share Program

At our request, the underwriters have reserved for sale, at the initial public offering price, up to 1,250,000 of the shares offered by this prospectus, excluding the additional shares that the underwriters have a 30-day option to purchase, for sale to certain of our directors and officers and certain other parties related to us.

Policies and Procedures for Transactions with Related Persons

Prior to closing of this offering, we intend to adopt a written policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of our common stock and any members of the immediate family of any of the foregoing persons are not permitted to enter into a related person transaction with us without the approval or ratification of our board of directors or our audit committee. Any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any class of our common stock, or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeds $120,000 (or, if less, 1% of the average of our total assets in a fiscal year) and such person would have a direct or indirect interest, must be presented to our board of directors or our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our board of directors or our audit committee is to consider the material facts of the transaction, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person’s interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our capital stock as of March 31, 2021 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our directors;
- each our of named executive officers; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules and regulations of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership before the offering is based on 217,829,956 shares of our common stock outstanding as of March 31, 2021, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 194,474,431 shares of our common stock in connection with the closing of this offering and including 5,525,002 shares of our unvested restricted common stock subject to repurchase as of such date.

Applicable percentage ownership after the offering is based on 242,829,956 shares of common stock outstanding immediately after the closing of this offering, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 194,474,431 shares of our common stock in connection with the closing of this offering and including 5,525,002 shares of our unvested restricted common stock subject to repurchase as of March 31, 2021. In computing the number of shares beneficially owned by a person and the percentage ownership of such person, we deemed to be outstanding all shares subject to options held by the person that are currently exercisable, or exercisable within 60 days of March 31, 2021. However, except as described above, we did not deem such shares outstanding for the purpose of computing the percentage ownership of any other person. The percentage ownership information does not reflect any potential purchases pursuant to the directed share program or otherwise of any shares of common stock in this offering by the beneficial owners identified in the table below.

Unless otherwise indicated, the address for each beneficial owner listed in the table below is c/o Lyell Immunopharma, Inc., 400 East Jamie Court, Suite 301, South San Francisco, CA 94080.

Name of Beneficial Owner	Number of Shares Beneficially Owned (#)	Percentage of Shares Beneficially Owned	
		Before Offering (%)	After Offering (%)
Greater than 5% Holders:			
Entities affiliated with ARCH Venture Partners(1)	36,412,716	16.7	15.0
Celgene Corporation(2)	10,936,132	5.0	4.5
Foresite Capital Fund IV, L.P.(3)	13,282,181	6.1	5.5
Gemini Investments, L.P.(4)	15,167,757	7.0	6.2
Glaxo Group Limited(5)	30,253,189	13.9	12.5
Milky Way Investments Group Limited(6)	17,405,698	8.0	7.2
Parker Institute for Cancer Immunotherapy(7)	10,936,132	5.0	4.5
Directors and Named Executive Officers:			
Richard D. Klausner, M.D.(8)	16,325,949	7.2	6.5
Elizabeth Homans(9)	4,899,939	2.2	2.0
Stephen Hill(10)	342,186	*	*
Heather Turner(11)	369,269	*	*
Hans Bishop(12)	4,709,844	2.2	1.9
Otis Brawley, M.D.(13)	400,000	*	*
Catherine Friedman(14)	4,515,842	2.1	1.9
Elizabeth Nabel(15)	400,000	*	*
Robert Nelsen(16)	36,412,716	16.7	15.0
William Rieflin(17)	400,000	*	*
Lynn Seely, M.D.(18)	400,000	*	*
All directors and executive officers as a group (12 persons)(19)	69,175,745	31.4	28.2

* Represents beneficial ownership of less than 1%.

(1) Consists of (i) 17,771,216 shares of Series A convertible preferred stock and 435,142 shares of Series C convertible preferred stock held by ARCH Venture Fund IX, L.P. (ARCH IX) and (ii) 17,771,216 shares of Series A convertible preferred stock and 435,142 shares of Series C convertible preferred stock held by ARCH Venture Fund IX Overage, L.P., (ARCH IX Overage). ARCH Venture Partners IX, L.P. (AVP IX LP) is the sole general partner of ARCH IX. ARCH Venture Partners IX Overage, L.P. (AVP IX Overage LP) is the sole general partner of ARCH IX Overage. ARCH Venture Partners IX, LLC (AVP IX LLC) is the sole general partner of each of AVP IX LP and AVP IX Overage LP. Keith Crandell, Clinton Bybee, and Robert Nelsen are managing directors of AVP IX LLC (the AVP IX MDs). AVP IX LP and AVP IX Overage LP may be deemed to beneficially own the shares held by ARCH IX and ARCH IX Overage, respectively, AVP IX LLC may be deemed to beneficially own the shares held by ARCH IX and ARCH IX Overage, and each of the AVP IX MDs may be deemed to share the power to direct the disposition and vote of the shares held by ARCH IX and ARCH IX Overage. AVP IX LP, AVP IX Overage LP, AVP IX LLC, and the AVP IX MDs each disclaim beneficial ownership except to any pecuniary interest therein. The mailing address of ARCH IX and ARCH IX Overage is 8755 W. Higgins Road, Suite 1025, Chicago, IL 60631.

(2) Consists of 10,936,132 shares of Series A convertible preferred stock. Celgene Corporation (Celgene) is wholly owned and controlled by Bristol-Myers Squibb Company. The mailing address of Celgene is 86 Morris Avenue, Summit, New Jersey 07901.

(3) Consists of (i) 10,936,132 shares of Series A convertible preferred stock, (ii) 1,475,765 shares of Series B convertible preferred stock and (iii) 870,284 shares of Series C convertible preferred stock. Foresite Capital Management IV, LLC (FCM IV) is the general partner of Foresite Capital Fund IV, L.P. (Foresite). James Tananbaum is the managing member of FCM IV. FCM IV may be deemed to beneficially own the shares held by Foresite and James Tananbaum may be deemed to have the power to direct the disposition and vote of the shares held by Foresite. FCM IV and James Tananbaum each disclaim beneficial ownership of the shares held by Foresite except to any pecuniary interest therein. The mailing address of Foresite is 600 Montgomery Street, Suite 4500, San Francisco, CA 94111.

(4) Consists of (i) 410,104 shares of Series A convertible preferred stock and (ii) 14,757,653 shares of Series B convertible preferred stock. Gemini GP Limited (GGPL) is the general partner of Gemini Investments, L.P. (Gemini). GGPL holds ultimate voting and investment power over the shares held by Gemini. The mailing address of Gemini is c/o Trident Trust Company (Cayman) Limited, One Capital Place, PO Box 847, Grand Cayman, KY1-1103, Cayman Islands.

(5) Consists of 30,253,189 shares of Series AA convertible preferred stock, of which GSK has sole voting and dispositive power through its indirect wholly-owned subsidiary, Glaxo Group Limited (GGL). The mailing address of each of GSK and GGL is 980 Great West Road, Brentford, Middlesex, TW8 9GS, United Kingdom.
(6) Consists of 17,405,698 shares of Series C convertible preferred stock. Milky Way Investment Group Limited (Milky Way) is wholly owned and controlled by Milky Way Holdings Limited. The mailing address of Milky Way is c/o Trident Trust Company (Cayman) Limited, One Capital Place, PO Box 847, Grand Cayman, KY1-1103, Cayman Islands.
(7) Consists of 10,936,132 shares of Series A convertible preferred stock. The mailing address of Parker Institute of Cancer Immunotherapy is 1 Letterman Drive, Suite D3500, San Francisco, CA 94129.
(8) Consists of (i) 4,967,834 shares of common stock, (ii) 7,592,273 shares of common stock issuable upon exercise of stock options held by Dr. Klausner that are exercisable within 60 days of March 31, 2021 and (iii) 3,765,842 shares of Series A convertible preferred stock held by Lyell Investors, LLC. Dr. Klausner is a manager of Lyell Investors, LLC (Lyell Investors) and may be deemed to share the power to direct the disposition and vote of the shares held by Lyell Investors. Dr. Klausner disclaims beneficial ownership of all shares held by Lyell Investors except to any pecuniary interest therein.
(9) Consists of 4,899,939 shares of common stock issuable upon exercise of stock options held by Ms. Homans that are exercisable within 60 days of March 31, 2021.
(10) Consists of 342,186 shares of common stock issuable upon exercise of stock options held by Mr. Hill that are exercisable within 60 days of March 31, 2021.
(11) Consists of 369,269 shares of common stock issuable upon exercise of stock options held by Ms. Turner that are exercisable within 60 days of March 31, 2021.
(12) Consists of (i) 3,000,000 shares of common stock, (ii) 546,806 shares of Series A convertible preferred stock and (iii) 1,163,038 shares of common stock issuable upon exercise of stock options held by Mr. Bishop that are exercisable within 60 days of March 31, 2021.
(13) Consists of 400,000 shares of common stock issuable upon exercise of stock options held by Dr. Brawley that are exercisable within 60 days of March 31, 2021.
(14) Consists of (i) 650,000 shares of common stock issuable upon exercise of stock options held by Ms. Friedman that are exercisable within 60 days of March 31, 2021, (ii) 100,000 shares of common stock held by The Duane Irrevocable Trust 2020 (Duane Trust) and (iii) 3,765,842 shares of Series A convertible preferred stock held by Lyell Investors. Ms. Friedman is a trustee of the Duane Trust and a member of Lyell Investors, and therefore may be deemed to share the power to direct the disposition and vote of the shares held by each. Ms. Friedman disclaims beneficial ownership of all shares held by Duane Trust and Lyell Investors except to any pecuniary interest therein.
(15) Consists of 400,000 shares of common stock issuable upon exercise of stock options held by Dr. Nabel that are exercisable within 60 days of March 31, 2021.
(16) Mr. Nelsen is an AVP IX MD and may be deemed to beneficially own the shares held by ARCH IX and ARCH IX Overage as discussed in footnote (1). Mr. Nelsen disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein, if any.
(17) Consists of 400,000 shares of common stock issuable upon exercise of stock options held by Mr. Rieflin that are exercisable within 60 days of March 31, 2021.
(18) Consists of 400,000 shares of common stock issuable upon exercise of stock options held by Dr. Seely that are exercisable within 60 days of March 31, 2021.
(19) Consists of (i) 8,067,834 shares of common stock held by our current directors and executive officers as a group, (ii) 43,620,922 shares of common stock issuable upon the conversion of Series A convertible preferred stock held by our current directors and executive officers as a group, (iii) 870,284 shares of common stock issuable upon the conversion of Series C convertible preferred stock held by our current directors and executive officers as a group, and (iv) 16,616,705 shares of common stock issuable upon the exercise of stock options held by our current directors and executive officers that are exercisable within 60 days of March 31, 2021.

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation, which will become effective immediately after the closing of this offering, and the amended and restated bylaws, which will become effective upon the closing of this offering. Copies of these documents have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will be in effect on the closing of this offering.

Upon filing of our amended and restated certificate of incorporation and the closing of this offering, our authorized capital stock will consist of 500,000,000 shares of common stock, par value $0.0001 per share and 10,000,000 shares of preferred stock, par value $0.0001 per share. All of our authorized shares of preferred stock will be undesignated.

As of March 31, 2021, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 194,474,431 shares of our common stock upon the closing of this offering and including 5,525,002 shares of our unvested restricted common stock subject to repurchase as of such date, there were 217,829,956 shares of common stock outstanding and held of record by 103 stockholders.

Common Stock

Voting Rights

The common stock is entitled to one vote per share on any matter that is submitted to a vote of our stockholders. Our amended and restated certificate of incorporation does not provide for cumulative voting for the election of directors. Our amended and restated certificate of incorporation establishes a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of our stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms. The affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of capital stock, voting as a single class, will be required to amend certain provisions of our amended and restated certificate of incorporation, including provisions relating to amending our amended and restated bylaws, the classified structure of our board of directors, the size of our board of directors, removal of directors, director liability, vacancies on our board of directors, special meetings, stockholder notices, actions by written consent and exclusive jurisdiction.

Economic Rights

Except as otherwise expressly provided in our amended and restated certificate of incorporation or required by applicable law, all shares of common stock will have the same rights and privileges and rank equally, share ratably and be identical in all respects for all matters, including those described below.

Dividends. Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine. See the section titled “Dividend Policy” for further information.

Liquidation Rights. On our liquidation, dissolution, or winding-up, the holders of common stock will be entitled to share equally, identically and ratably in all assets remaining after the payment of any liabilities, liquidation preferences and accrued or declared but unpaid dividends, if any, with respect to any outstanding preferred stock, unless a different treatment is approved by the affirmative vote of the holders of a majority of the outstanding shares of such affected class, voting separately as a class.

No Preemptive or Similar Rights

The holders of our shares of common stock are not entitled to preemptive rights, and are not subject to conversion, redemption or sinking fund provisions.

Fully Paid and Non-Assessable

In connection with this offering, our legal counsel will opine that the shares of our common stock to be issued under this offering will be fully paid and non-assessable.

Preferred Stock

Upon the closing of this offering, all of our currently outstanding shares of convertible preferred stock will convert into common stock and we will not have any convertible preferred stock outstanding. Immediately after the closing of this offering, our certificate of incorporation will be amended and restated to delete all references to such shares of convertible preferred stock. Under the amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Stock Options

As of March 31, 2021, 40,556,956 shares of common stock were issuable upon the exercise of outstanding stock options, at a weighted-average exercise price of $3.92 per share. Subsequent to March 31, 2021, we granted an additional 1,930,000 shares of common stock with a weighted-average exercise price of $13.20 per share. Following completion of this offering, 24,700,000 additional shares of our common stock will be reserved for future issuance under the 2021 Plan, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for issuance under the 2021 Plan.

Registration Rights

Upon the closing of this offering and subject to the lock-up agreements entered into in connection with this offering and federal securities laws, certain holders of shares of our common stock, including those shares of our common stock that will be issued upon the conversion of our convertible preferred stock in connection with this offering, will initially be entitled to certain rights with respect to registration of such shares under the Securities Act. These shares are referred to as registrable securities. The holders of these registrable securities possess registration rights pursuant to the terms of our amended and restated investors' rights agreement and are described in additional detail below. The registration of shares of our common stock pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions and limitations, to limit the number of shares the holders may include. The demand, piggyback and Form S-3 registration rights described below will expire no later than three years after the closing of this offering.

Demand Registration Rights

Upon the closing of this offering, holders of an aggregate of 194,474,431 shares of our common stock will be entitled to certain demand registration rights. At any time beginning 180 days after the closing of this offering, the holders of 40% of these shares may request that we register all or a portion of their shares. We are not required to effect more than two registration statements which are declared or ordered effective. Such request for registration must cover shares with an anticipated aggregate offering price of at least $35 million. With certain exceptions, we are not required to effect the filing of a registration statement during the period starting with the date of the filing of, and ending on a date 180 days following the effective date of the registration statement for this offering.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of 194,474,431 shares of our common stock were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations.

Form S-3 Registration Rights

Upon the closing of this offering, holders of an aggregate of 120,501,972 shares of common stock will be entitled to certain Form S-3 registration rights. Holders of 20% of these shares can make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3 and if the reasonably anticipated aggregate net proceeds of the shares offered would equal or exceed $20 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Anti-Takeover Provisions

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws, which are summarized below, may have the effect of delaying,

deferring or discouraging another person from acquiring control of our company. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Certificate of Incorporation and Bylaws to be in Effect in Connection with this Offering

Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the voting power of our shares of common stock will be able to elect all of our directors. Our amended and restated certificate of incorporation, to be effective immediately after the closing of this offering, and our amended and restated bylaws, to be effective on the closing of this offering, will provide for stockholder actions at a duly called meeting of stockholders or, before the date on which all shares of common stock convert into a single class, by written consent. A special meeting of stockholders may be called by a majority of our board of directors, the chair of our board of directors, or our chief executive officer or president. Our amended and restated bylaws will establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors.

As described above in “Management—Composition of Our Board of Directors,” in accordance with our amended and restated certificate of incorporation to be filed in connection with this offering, immediately after this offering, our board of directors will be divided into three classes with staggered three-year terms.

The foregoing provisions will make it more difficult for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

When we have a class of voting stock that is either listed on a national securities exchange or held of record by more than 2,000 stockholders, we will be subject to Section 203 of the DGCL which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, subject to certain exceptions.

Choice of Forum

Our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located

within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) and any appellate court therefrom is the sole and exclusive forum for the following claims or causes of action under the Delaware statutory or common law: (i) any derivative claim or cause of action brought on our behalf; (ii) any claim or cause of action for a breach of fiduciary duty owed by any of our current or former directors, officers, or other employees to us or our stockholders; (iii) any claim or cause of action against us or any of our current or former directors, officers or other employees arising out of or pursuant to any provision of the DGCL, our amended and restated certificate of incorporation, or our bylaws (as each may be amended from time to time); (iv) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws (as each may be amended from time to time, including any right, obligation, or remedy thereunder); (v) any claim or cause of action as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (vi) any claim or cause of action against us or any of our current or former directors, officers, or other employees governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. Our amended and restated certificate of incorporation to be effective on the closing of this offering will further provide that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against an defendant to such complaint. The choice of forum provisions would not apply to claims or causes of action brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

For the avoidance of doubt, these provisions are intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

Additionally, our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that any person or entity holding, owning or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions.

Limitations on Liability and Indemnification

See the section titled "Executive Compensation—Limitations on Liability and Indemnification."

Exchange Listing

Our common stock is currently not listed on any securities exchange. We have applied to have our common stock approved for listing on The Nasdaq Global Market under the symbol "LYEL."

Transfer Agent and Registrar

On the closing of this offering, the transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue | Brooklyn, NY 11219.

SHARES ELIGIBLE FOR FUTURE SALE

Before the closing of this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock, including shares issued on the exercise of outstanding options, in the public market after this offering, or the possibility of these sales or issuances occurring, could adversely affect the prevailing market price for our common stock or impair our ability to raise equity capital.

Based on our shares outstanding as of March 31, 2021, upon the closing of this offering, a total of 242,829,956 shares of common stock will be outstanding, assuming the automatic conversion of all outstanding shares of our convertible preferred stock into 194,474,431 shares of our common stock in connection with the closing of this offering and 5,525,002 shares of unvested restricted common stock subject to repurchase. Of these shares, all of the common stock sold in this offering by us, plus any shares sold by us on exercise of the underwriters' option to purchase additional common stock, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act (Rule 144).

The remaining shares of common stock will be, and shares of common stock subject to stock options will be on issuance, "restricted securities," as that term is defined in Rule 144. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below. Restricted securities may also be sold outside of the United States to non-U.S. persons in accordance with Rule 904 of Regulation S.

Subject to the lock-up agreements described below and the provisions of Rule 144 or Regulation S under the Securities Act, as well as our insider trading policy, these restricted securities will be available for sale in the public market after the date of this prospectus.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, an eligible stockholder is entitled to sell such shares without complying with the manner of sale, volume limitation, or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. To be an eligible stockholder under Rule 144, such stockholder must not be deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and must have beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144, subject to the expiration of the lock-up agreements described below.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell shares on expiration of the lock-up agreements described below. Beginning 90 days after the date of this prospectus, within any three-month period, such stockholders may sell a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately 2,428,300 shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares of common stock from us; or

- the average weekly trading volume of our common stock on The Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 of the Securities Act (Rule 701) generally allows a stockholder who was issued shares under a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days, to sell these shares in reliance on Rule 144, but without being required to comply with the public information, holding period, volume limitation, or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares under Rule 701, subject to the expiration of the lock-up agreements described below.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act with the SEC to register the offer and sale of shares of our common stock that are issuable under our 2018 Plan, 2021 Plan and ESPP. These registration statements will become effective immediately on filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below, and Rule 144 limitations applicable to affiliates.

Lock-up Arrangements

We, and all of our directors, executive officers and the holders of substantially all of our common stock and securities exercisable for or convertible into our common stock outstanding immediately on the closing of this offering, have agreed with the underwriters that, until 180 days after the date of the underwriting agreement related to this offering, we and they will not, without the prior written consent of the representatives of the underwriters, subject to certain exceptions, directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of any of our shares of common stock, or any securities convertible into or exercisable or exchangeable for shares of our common stock, or enter into any hedging, swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the securities, whether any such swap or transaction is to be settled by delivery of our common stock or other securities, in cash or otherwise. These agreements are described in “Underwriting.” The representatives of the underwriters may, in their sole discretion, release any of the securities subject to these lock-up agreements at any time.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain security holders, including the amended and restated investors’ rights agreement, our standard form of option agreement and our standard form of restricted stock agreement, that contain market stand-off provisions or incorporate market stand-off provisions from our equity incentive plan imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

Registration Rights

Upon the closing of this offering, pursuant to our amended and restated investors' rights agreement, the holders of 194,474,431 shares of our common stock, or their transferees, will be entitled to certain rights with respect to the registration of the offer and sale of their shares under the Securities Act, subject to the terms of the lock-up agreements described under the section titled "—Lock-Up Arrangements" above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately on the effectiveness of the registration. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. See the section titled "Description of Capital Stock—Registration Rights" for additional information.

CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of certain material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering. This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, does not address the potential application of the Medicare contribution tax on net investment income, and does not address any estate or gift tax consequences or any tax consequences arising under any state, local or foreign tax laws, or any other U.S. federal tax laws. This discussion is based on the Code, Treasury Regulations promulgated thereunder, judicial decisions and published rulings and administrative pronouncements of the Internal Revenue Service (the IRS), all as in effect on the date of this prospectus. These authorities are subject to differing interpretations and may change, possibly retroactively, resulting in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This discussion is limited to non-U.S. holders who purchase our common stock pursuant to this offering and who hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all of the U.S. federal income tax consequences that may be relevant to an individual non-U.S. holder in light of such non-U.S. holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to non-U.S. holders subject to special rules under the U.S. federal income tax laws, including:

- certain former citizens or long-term residents of the United States;
- partnerships or other pass-through entities (and investors therein);
- "controlled foreign corporations";
- "passive foreign investment companies";
- corporations that accumulate earnings to avoid U.S. federal income tax;
- banks, financial institutions, investment funds, insurance companies, brokers, dealers or traders in securities;
- tax-exempt organizations and governmental organizations;
- tax-qualified retirement plans;
- persons who acquire our common stock through the exercise of an option or otherwise as compensation;
- qualified foreign pension funds as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;
- persons subject to the alternative minimum tax;
- persons subject to special tax accounting rules under Section 451(b) of the Code;
- persons that own or have owned, actually or constructively, more than 5% of our common stock;
- persons who have elected to mark securities to market; and
- persons holding our common stock as part of a hedging or conversion transaction or straddle, or a constructive sale, or other risk reduction strategy or integrated investment.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Partnerships holding our common stock and the partners in such partnerships are urged to consult their tax advisors about the particular U.S. federal income tax consequences to them of holding and disposing of our common stock.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS.

Definition of Non-U.S. Holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is not a “U.S. person” or a partnership (including any entity or arrangement treated as a partnership) for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust (i) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (ii) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions on Our Common Stock

As described in the section titled “Dividend Policy,” we do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our capital stock. However, if we distribute cash or other property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and will first be applied against and reduce a holder’s tax basis in our common stock, but not below zero. Any excess will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described under “—Gain on Disposition of Our Common Stock” below.

Subject to the discussion below regarding effectively connected income, backup withholding and FATCA (as defined below), dividends paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish us or our withholding agent with a valid IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying such holder’s qualification for the reduced rate. This certification must be provided to us or our withholding agent before the payment of dividends and must be updated periodically. In the case of a

non-U.S. holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of the tax treaty, dividends will be treated as paid to the entity or to those holding an interest in the entity. If the non-U.S. holder holds our common stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our withholding agent, either directly or through other intermediaries.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on our common stock are effectively connected with such holder's U.S. trade or business (and are attributable to such holder's permanent establishment or fixed base in the United States if required by an applicable tax treaty), the non-U.S. holder will be exempt from U.S. federal withholding tax. To claim the exemption, the non-U.S. holder must generally furnish a valid IRS Form W-8ECI (or applicable successor form) to the applicable withholding agent.

However, any such effectively connected dividends paid on our common stock generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items.

Non-U.S. holders that do not provide the required certification on a timely basis, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Gain on Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and FATCA (as defined below), a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized on the sale or other disposition of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States;
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition, and certain other requirements are met; or
- we are or become a United States real property holding corporation (a USRPHC) for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder's holding period for our common stock, and our common stock is not regularly traded on an established securities market during the calendar year in which the sale or other disposition occurs.

Determining whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other trade or business assets and our foreign real property interests. We believe that we are not currently and we do not anticipate becoming a USRPHC for U.S. federal income tax purposes, although there can be no assurance we will not in the future become a USRPHC.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such

holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. A non-U.S. holder described in the second bullet point above will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), on gain realized upon the sale or other taxable disposition of our common stock which may be offset by certain U.S.-source capital losses (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses. If we are or become a United States real property holding corporation during the period described in the third bullet point above and our common stock is not regularly traded for purposes of the relevant rules, gain arising from the sale or other taxable disposition of our common stock by a non-U.S. holder will generally be subject to U.S. federal income tax in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply.

Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Annual reports are required to be filed with the IRS and provided to each non-U.S. holder indicating the amount of distributions on our common stock paid to such holder and the amount of any tax withheld with respect to those distributions. These information reporting requirements apply even if no withholding was required because the distributions were effectively connected with the holder's conduct of a U.S. trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, generally will not apply to payments to a non-U.S. holder of dividends on or the gross proceeds of a disposition of our common stock provided the non-U.S. holder furnishes the required certification for its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E or IRS Form W-8ECI, or certain other requirements are met, and if the payor does not have actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Backup withholding is not an additional tax. If any amount is withheld under the backup withholding rules, the non-U.S. holder should consult with a U.S. tax advisor regarding the possibility of and procedure for obtaining a refund or a credit against the non-U.S. holder's U.S. federal income tax liability, if any.

Withholding on Payment to Certain Foreign Accounts or Entities

Sections 1471 through 1474 of the Code (commonly referred to as FATCA), impose a U.S. federal withholding tax of 30% on certain payments made to a "foreign financial institution" (as specially defined under these rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding certain U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or an exemption applies. FATCA also generally will impose a U.S. federal withholding tax of 30% on certain payments made to a non-financial foreign entity unless such entity provides the withholding agent a certification identifying certain direct and indirect U.S. owners of the entity or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Under certain circumstances, a non-U.S. holder might

be eligible for refunds or credits of such taxes. FATCA currently applies to dividends paid on our common stock and would have applied also to payments of gross proceeds from the sale or other disposition of our common stock. The U.S. Treasury Department has released proposed regulations under FATCA providing for the elimination of the federal withholding tax of 30% applicable to gross proceeds of a sale or other disposition of our common stock. Under these proposed Treasury Regulations (which may be relied upon by taxpayers prior to finalization), FATCA will not apply to gross proceeds from sales or other dispositions of our common stock.

Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our common stock.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC, BofA Securities, Inc., J.P. Morgan Securities, LLC and Morgan Stanley & Co. LLC are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
BofA Securities, Inc.	
J.P. Morgan Securities, LLC	
Morgan Stanley & Co. LLC	
Total	25,000,000

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional 3,750,000 shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase 3,750,000 additional shares.

	No Exercise	Full Exercise
Per Share	$ 1.19	$ 1.19
Total	$ 29,750,000	$ 34,212,500

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our officers, directors and holders of substantially all of our common stock and securities convertible into or exchangeable for our common stock have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of our common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the representatives. This agreement does not apply to any existing employee benefit plans. See "Shares Eligible for Future Sale" for a discussion of certain transfer restrictions.

Prior to the offering, there has been no public market for the shares. The initial public offering price has been negotiated among us and the representatives. Among the factors to be considered in

determining the initial public offering price of the shares, in addition to prevailing market conditions, will be our historical performance, estimates of the business potential and our earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to list our common stock on The Nasdaq Global Market under the symbol “LYEL”.

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A “covered short position” is a short position that is not greater than the amount of additional shares for which the underwriters’ option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. “Naked” short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on NYSE, Nasdaq NMS or relevant exchange, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $3,845,960. We will reimburse the underwriters for certain of their expenses incurred in connection with this offering in an amount up to $50,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and

their respective affiliates have provided, and may in the future provide, a variety of these services to us and to persons and entities with relationships with us, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to our assets, securities and/or instruments (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with us. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Directed Share Program

At our request, the underwriters have reserved for sale, at the initial public offering price, up to 1,250,000 of the shares offered by this prospectus, excluding the additional shares that the underwriters have a 30-day option to purchase, for sale to certain of our directors and officers and certain other parties related to us. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. If purchased by any of our officers or directors, these shares will be subject to the terms of lock-up agreements described above. Other than the underwriting discount described on the front cover of this prospectus, the underwriters will not be entitled to any commission with respect to shares of our common stock sold pursuant to the directed share program.

Selling Restrictions

European Economic Area

In relation to each EEA Member State (each a "**Relevant Member State**"), no common shares (the "Shares") have been offered or will be offered pursuant to the Offering to the public in that Relevant Member State prior to the publication of a prospectus in relation to the Shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Regulation, except that the Shares may be offered to the public in that Relevant Member State at any time:

a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation) subject to obtaining the prior consent of the Joint Global Coordinators for any such offer; or

c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation, provided that no such offer of the Shares shall require the Company and/or Selling Shareholders or any Bank to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an 'offer to the public' in relation to the Shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase any Shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Each person in a Relevant Member State who receives any communication in respect of, or who acquires any Shares under, the Offering contemplated hereby will be deemed to have represented, warranted and agreed to and with each of the Underwriters and their affiliates and the Company that:

a) it is a qualified investor within the meaning of the Prospectus Regulation; and

b) in the case of any Shares acquired by it as a financial intermediary, as that term is used in Article 5 of the Prospectus Regulation, (i) the Shares acquired by it in the Offering have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, as that term is defined in the Prospectus Regulation, or have been acquired in other circumstances falling within the points (a) to (d) of Article 1(4) of the Prospectus Regulation and the prior consent of the Joint Global Coordinators has been given to the offer or resale; or (ii) where the Shares have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those Shares to it is not treated under the Prospectus Regulation as having been made to such persons.

The Company, the Underwriters and their affiliates, and others will rely upon the truth and accuracy of the foregoing representation, acknowledgement and agreement. Notwithstanding the above, a person who is not a qualified investor and who has notified the Joint Global Coordinators of such fact in writing may, with the prior consent of the Joint Global Coordinators, be permitted to acquire Shares in the Offering.

United Kingdom

This Prospectus and any other material in relation to the common shares (the "Shares") described herein is only being distributed to, and is only directed at, and any investment or investment activity to which this Prospectus relates is available only to, and will be engaged in only with persons who are (i) persons having professional experience in matters relating to investments who fall within the definition of investment professionals in Article 19(5) of the FPO; or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the FPO; (iii) outside the UK; or (iv) persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of any Shares may otherwise lawfully be communicated or caused to be communicated, (all such persons together being referred to as "**Relevant Persons**"). The Shares are only available in the UK to, and any invitation, offer or agreement to purchase or otherwise acquire the Shares will be engaged in only with, the Relevant Persons. This Prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other person in the UK. Any person in the UK that is not a Relevant Person should not act or rely on this Prospectus or any of its contents.

No Shares have been offered or will be offered pursuant to the Offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the Shares which has been approved by the Financial Conduct Authority, except that the Shares may be offered to the public in the United Kingdom at any time:

a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the Global Coordinators for any such offer; or

c) in any other circumstances falling within Section 86 of the FSMA.

provided that no such offer of the Shares shall require the Company and/or any Underwriters or any of their affiliates to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the Shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase or subscribe for any Shares and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Each person in the UK who acquires any Shares in the Offer or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company, the Underwriters and their affiliates that it meets the criteria outlined in this section.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"); or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder; or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be

accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA; (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (i) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA); (ii) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA; (iii) where no consideration is or will be given for the transfer; (iv) where the transfer is by operation of law; (v) as specified in Section 276(7) of the SFA; or (vi) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (i) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA); (ii) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets); (iii) where no consideration is or will be given for the transfer; (iv) where the transfer is by operation of law; (v) as specified in Section 276(7) of the SFA; or (vi) as specified in Regulation 32.

Singapore Securities and Futures Act Product Classification—Solely for the purposes of its obligations pursuant to Sections 309B(1)(a) and 309B(1)(c) of the SFA, we have determined, and hereby notify all relevant persons (as defined in Section 309A of the SFA) that the common shares are "prescribed capital markets products" (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the FIEA). The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

LEGAL MATTERS

The validity of the shares of our common stock being offered in this prospectus will be passed upon for us by Cooley LLP. Certain legal matters in connection with this offering will be passed upon for the underwriters by Latham & Watkins LLP.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2019 and 2020, and for the years then ended as set forth in their report. We've included our consolidated financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC also maintains an internet website that contains reports and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

On the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above.

We also maintain a website at www.lyell.com. Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only as an inactive textual reference.

LYELL IMMUNOPHARMA, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Lyell Immunopharma, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Lyell Immunopharma, Inc. (the Company) as of December 31, 2019 and 2020, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2020, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

Seattle, Washington
April 12, 2021

Lyell Immunopharma, Inc.
Consolidated Balance Sheets
(in thousands, except per share amounts)

	As of December 31, 2019	As of December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 96,674	$ 140,406
Short-term marketable securities	339,375	472,213
Prepaid expenses and other current assets	4,210	4,928
Total current assets	440,259	617,547
Restricted cash	1,798	466
Long-term marketable securities	34,983	79,995
Other investments	34,000	83,448
Property and equipment, net	17,976	77,045
Right-of-use assets, net	25,729	47,010
Other non-current assets	886	2,769
Total assets	$ 555,631	$ 908,280
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 2,844	$ 9,396
Accrued liabilities and other current liabilities	14,254	28,021
Success payment liabilities	436	5,773
Deferred revenue	4,511	6,095
Total current liabilities	22,045	49,285
Operating lease liabilities, net of current portion	27,125	50,957
Deferred revenue, net of current portion	98,406	89,066
Other non-current liabilities	—	532
Total liabilities	147,576	189,840
Commitments and contingencies (Note 16)		
Convertible preferred stock, $0.0001 par value; 152,537 and 195,021 shares authorized at December 31, 2019 and 2020, respectively; 152,116 and 194,474 shares issued and outstanding at December 31, 2019 and 2020, respectively	519,163	1,010,968
Stockholders' deficit:		
Common stock, $0.0001 par value; 205,600 and 264,905 shares authorized at December 31, 2019 and 2020, respectively; 11,181 and 15,570 shares issued and outstanding at December 31, 2019 and 2020, respectively	1	2
Additional paid-in capital	18,108	41,357
Accumulated other comprehensive income	454	256
Accumulated deficit	(129,671)	(334,143)
Total stockholders' deficit	(111,108)	(292,528)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 555,631	$ 908,280

The accompanying notes are an integral part of these consolidated financial statements.

Lyell Immunopharma, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except per share amounts)

	Year Ended December 31,	
	2019	2020
Revenue	$ 657	$ 7,756
Operating expenses (income):		
Research and development	63,595	182,243
General and administrative	39,151	46,881
Other operating income, net	—	(9,431)
Total operating expenses	102,746	219,693
Loss from operations	(102,089)	(211,937)
Interest income, net	8,121	5,939
Other (expense) income, net	(35,409)	1,526
Net loss	(129,377)	(204,472)
Other comprehensive gain (loss):		
Net unrealized gain (loss) on marketable securities	454	(198)
Net comprehensive loss	$ (128,923)	$ (204,670)
Net loss attributed to common stockholders:		
Net loss	$ (129,377)	$ (204,472)
Deemed dividends upon issuance or repurchase of convertible preferred stock	(1,144)	(3,582)
Net loss attributed to common stockholders	$ (130,521)	$ (208,054)
Net loss per common share, basic and diluted	$ (24.04)	$ (15.69)
Weighted-average shares used to compute net loss per common share, basic and diluted	5,429	13,258

The accompanying notes are an integral part of these consolidated financial statements.

Lyell Immunopharma, Inc.
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Retained Earnings (Accumulated Deficit)	Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2018	74,406	$ 120,296	1,092	$ —	$ 826	$ —	$ 24	$ 850
Issuance of Series A convertible preferred stock, net of $29 in issuance costs	23,527	89,380	—	—	—	—	—	—
Issuance of Series B convertible preferred stock, net of $133 in issuance costs	23,930	162,018	—	—	—	—	—	—
Issuance of Series AA convertible preferred stock, net of $101 in issuance costs	30,253	146,325	—	—	—	—	—	—
Deemed dividends on issuance of Series A convertible preferred stock	—	1,144	—	—	(826)	—	(318)	(1,144)
Issuance of common stock to strategic partners	—	—	910	—	2,562	—	—	2,562
Repurchase of common stock	—	—	—	—	(185)	—	—	(185)
Stock-based compensation	—	—	9,179	1	15,731	—	—	15,732
Other comprehensive income	—	—	—	—	—	454	—	454
Net loss	—	—	—	—	—	—	(129,377)	(129,377)
Balance as of December 31, 2019	152,116	$ 519,163	11,181	$ 1	$ 18,108	$ 454	$ (129,671)	$ (111,108)
Issuance of Series C convertible preferred stock, net of $533 in issuance costs	42,905	492,467	—	—	—	—	—	—
Issuance of common stock to strategic partners	—	—	275	—	1,004	—	—	1,004
Issuance of common stock for asset acquisition	—	—	688	—	4,000	—	—	4,000
Issuance of common stock upon exercise of stock options	—	—	113	—	373	—	—	373
Stock-based compensation	—	—	5,345	1	33,260	—	—	33,261
Repurchase of convertible preferred stock	(547)	(662)	—	—	(3,582)	—	—	(3,582)
Repurchase of common stock	—	—	(2,032)	—	(11,806)	—	—	(11,806)
Other comprehensive loss	—	—	—	—	—	(198)	—	(198)
Net loss	—	—	—	—	—	—	(204,472)	(204,472)
Balance as of December 31, 2020	194,474	$1,010,968	15,570	$ 2	$ 41,357	$ 256	$ (334,143)	$ (292,528)

The accompanying notes are an integral part of these consolidated financial statements.

Lyell Immunopharma, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2019	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (129,377)	$ (204,472)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,256	4,294
Accretion of marketable securities	(1,511)	595
Stock-based compensation expense	15,732	33,261
Change in fair value of success payment liabilities	436	5,337
Change in fair value of warrants	—	(1,323)
Loss on remeasurement of convertible preferred stock tranche liabilities	35,444	—
Gain on sale of assets	—	(4,884)
Expense in connection with equity issuances	3,566	—
Lease expense, net of gain on lease remeasurement	3,127	3,181
Non-cash expense in connection with asset acquisition	—	3,529
Other	(7)	(56)
Changes in operating assets and liabilities:		
Prepaid expense and other assets	(5,767)	(1,388)
Accounts payable	1,709	(278)
Accrued liabilities and other liabilities	11,949	9,086
Deferred revenue	102,917	(7,756)
Net cash provided by (used in) operating activities	39,474	(160,874)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(16,047)	(51,481)
Purchases of marketable securities	(610,842)	(864,909)
Sales and maturities of marketable securities	238,456	686,322
Purchases of other investments	(34,000)	(43,448)
Net cash used in investing activities	(422,433)	(273,516)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of convertible preferred stock, net of issuance costs	351,341	492,467
Proceeds from exercise of stock options	—	373
Payments for the repurchase of common stock	(185)	(11,806)
Payments for the repurchase of preferred stock	—	(4,244)
Net cash provided by financing activities	351,156	476,790
Net (decrease) increase in cash, cash equivalents, and restricted cash	(31,803)	42,400
Cash, cash equivalents and restricted cash at beginning of period	130,275	98,472
Cash, cash equivalents and restricted cash at end of period	$ 98,472	$ 140,872
SUPPLEMENTAL CASH FLOW INFORMATION		
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 3,185	$ 12,740
Operating lease right-of-use assets obtained in exchange for lease obligations	$ 23,656	$ 30,475
Remeasurement of operating lease right of use asset for lease modification	$ —	$ (8,958)
Cash received for amounts related to tenant improvement allowances	$ 2,194	$ 2,966
Cash paid for amounts included in the measurement of lease liabilities	$ 1,464	$ 5,147
Other investments received for sale of assets	$ —	$ 6,000
Non-cash deemed dividends on convertible preferred stock	$ 1,144	$ —

The accompanying notes are an integral part of these consolidated financial statements.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements

1. Organization

Lyell Immunopharma, Inc. (the "Company") was incorporated in Delaware in June 2018. The Company is a T cell reprogramming company dedicated to the mastery of T cells to eradicate solid tumors. The Company is building a multi-modality product pipeline. The Company's primary activities since incorporation have been to develop T cell therapies, perform research and development, acquire technology, enter into strategic collaboration and license arrangements, enable manufacturing activities in support of its product candidate development efforts, organize and staff the Company, business plan, establish its intellectual property portfolio, raise capital and provide general and administrative support for these activities.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The consolidated financial statements include the accounts of Lyell Immunopharma, Inc. and its wholly-owned subsidiaries. All significant intercompany transactions and balances are eliminated in consolidation.

Use of Estimates

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make judgments, estimates and assumptions that affect reported amounts and related disclosures. Specific accounts that require management estimates include, but are not limited to, stock-based compensation, valuation of success payments, revenue recognition, the fair value of convertible preferred and common stock and accrued expenses. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ materially from those estimates.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' deficit that are excluded from net loss. For the years ended December 31, 2019 and 2020 this was comprised of unrealized gains and losses on the Company's marketable securities.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with original maturities of three months or less from the purchase date to be cash equivalents. Cash equivalents consist primarily of amounts invested in money market accounts. The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same such amounts shown in the consolidated statements of cash flows (in thousands):

	December 31,	
	2019	2020
Cash and cash equivalents	$96,674	$140,406
Restricted cash	1,798	466
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	$98,472	$140,872

Restricted cash is cash held in bank accounts and is used as collateral for letters of credits issued in conjunction with the Company's lease agreements and collateral associated with the Company's corporate credit card program.

Marketable Securities

The Company generally invests its excess cash in investment grade short-to intermediate-term fixed income securities. Such investments are included in cash and cash equivalents, short-term marketable securities or long-term marketable securities, classified as available-for-sale and are carried at fair value. Unrealized gains and losses are excluded from net loss and are reported as a component of comprehensive loss. Realized gains and losses on available-for-sale securities are included in other (expense) income, net. The cost of investments sold is based on the specific-identification method. Investments in securities with maturities of less than one year, or those which the Company intends to use to fund current operations, are included in current assets.

Each reporting period, the Company evaluates whether declines in fair value below carrying value are due to expected credit losses, as well as the Company's ability and intent to hold the investment until a forecasted recovery occurs. Expected credit losses are recorded as an allowance through other (expense) income, net.

Other Investments

The Company determines at the inception of each arrangement whether an investment or other interest is considered a variable interest entity ("VIE"). If the investment or other interest is determined to be a VIE, the Company evaluates whether it is considered the primary beneficiary. The primary beneficiary of a VIE is the party that meets both of the following criteria: (i) has the power to direct the activities that most significantly impact the VIE's economic performance; and (ii) has the obligation to absorb losses or the right to receive benefits from the VIE. For investments in VIEs in which the Company is considered the primary beneficiary, the assets, liabilities and results of operations of the VIE are consolidated in its consolidated financial statements. As of December 31, 2019 and 2020, there were no VIEs for which the Company was the primary beneficiary.

The Company accounts for its strategic equity interests in non-publicly traded companies for which it does not have the ability to exercise significant influence in accordance with Accounting

Standards Codification ("ASC") 321, *Investments – Equity Securities* ("ASC 321"). Upon acquisition, these investments are measured at cost, which represents the then fair value. Under ASC 321, the Company can elect to subsequently measure the investments at initial cost, minus impairment and any changes, plus or minus, resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. This election must be made for each investment separately. The Company has made this election for all investments in this category and will continue to measure these investments using this method until they no longer qualify to be measured in accordance with this method. Changes in the carrying value of other investments are recognized through net loss. Each reporting period, the Company performs a qualitative assessment to evaluate whether the investment is impaired. The Company's assessment includes a review of recent operating results and trends, recent sales/acquisitions of the investee securities and other factors that raise concerns about the investee's ability to continue as a going concern. If the investment is impaired, an impairment charge is recognized in the amount by which the carrying amount of the investment exceeds the estimated fair value of the investment, with the impairment charge recognized through net loss.

Additionally, the Company holds an investment in equity warrants giving it the right to acquire stock of a non-publicly traded company. Equity warrant investments are recorded within other assets at the estimated fair value, with gains and losses recognized in other (expense) income, net.

Property and Equipment, Net

Property and equipment primarily consist of laboratory equipment, computer equipment and software, furniture and fixtures and leasehold improvements. Property and equipment are stated at cost less accumulated depreciation. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is recorded in other (expense) income, net in the period realized. Maintenance and repairs are expensed as incurred.

The Company has determined the estimated life of the assets to be as follows:

Laboratory equipment	5 years
Computer equipment and software	3 years
Furniture and fixtures	5 years
Leasehold improvements	Shorter of asset's useful life or remaining lease term

Impairment of Long-Lived Assets

Long-lived assets are reviewed each reporting period for impairment or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, which may warrant adjustments to carrying values or estimated useful lives. Recoverability is measured by comparison of the carrying amount of an asset group to the future net undiscounted cash flows that the assets are expected to generate. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset. There has been no impairment of long-lived assets for any of the periods presented.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Acquisitions

The Company evaluates acquisitions of assets and other similar transactions to assess whether or not the transaction should be accounted for as a business combination or asset acquisition by first applying a screen to determine if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. If the screen is met, the transaction is accounted for as an asset acquisition. If the screen is not met, further determination is required as to whether or not the Company has acquired inputs and processes that have the ability to create outputs which would meet the requirements of a business in which case the transaction is accounted for using the acquisition method of accounting, which requires, among other things, that assets acquired and liabilities assumed be recognized at their estimated fair values as of the acquisition date, and that the fair value of acquired intangibles be recorded on the balance sheet. Transaction costs are expensed as incurred. Any excess of the purchase price over the assigned fair values of the net assets acquired is recorded as goodwill. If the Company determines an acquisition does not meet the definition of a business combination under the acquisition method of accounting, the transaction is accounted for as an asset acquisition.

In an asset acquisition, upfront payments allocated to in-process research and development (“IPR&D”) are recorded in research and development expense if it is determined that there is no alternative future use, and subsequent milestone payments are recorded in research and development expense when achieved for technology that has not yet met product feasibility.

Leases

The Company leases certain office, laboratory and manufacturing spaces. In addition to minimum rent, the leases require payment of real estate taxes, insurance, common area maintenance charges and other executory costs. At inception of a contract, the Company determines whether an arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement. For all leases, the Company determines the classification of the lease as either operating or financing. As of December 31, 2019 and 2020, all of the Company’s leases were classified as operating leases.

The Company will recognize right-of-use (“ROU”) assets and lease liabilities at the lease commencement date based on the present value of future lease payments over the lease term. As the Company’s leases do not provide an implicit rate, an incremental borrowing rate at each lease commencement date is used to determine the present value of future lease payments. The incremental borrowing rate is the rate of interest that the Company would pay to borrow equivalent funds on a collateralized basis at the lease commencement date. To estimate the incremental borrowing rate, a credit rating applicable to the Company is estimated using a synthetic credit rating analysis since the Company does not currently have a rating agency-based credit rating. The ROU asset includes any lease payments made prior to the lease commencement date and is reduced by any lease incentives received or deemed payable to the Company. The lease term may include options to extend or terminate the lease when it is reasonably certain that a lease option will be exercised. Lease expense is recognized on a straight-line basis over the lease term within operating expenses on the consolidated statements of operations and comprehensive loss.

The Company has elected the practical expedient to not separate lease and non-lease components for real estate leases. Additionally, the Company has elected the short-term lease recognition exemption for all short-term leases and as a result, lease liabilities and ROU assets are not included on the consolidated balance sheets for leases with an initial term of 12 months or less.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Fair Value of Financial Instruments

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. The fair value hierarchy prioritizes valuation inputs based on the observable nature of those inputs. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The hierarchy defines three levels of valuation inputs:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 – Unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

The Company's financial instruments, in addition to those presented in Note 6, *Fair Value Measurements*, include cash, restricted cash, other investments, accounts payable and accrued liabilities and other current liabilities. The carrying amount of cash, restricted cash, accounts payable and accrued liabilities and other current liabilities approximate fair value because of the short-term nature of these instruments. As described in Note 5, *Other Investments*, other investments are carried at cost, minus impairment and any changes, plus or minus, resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

Convertible Preferred Stock Option

Pursuant to the Series A convertible preferred stock purchase agreement ("Series A SPA") entered into in September 2018, the Company had the right to sell, or "put," additional shares of its Series A convertible preferred stock in subsequent closings, contingent upon the approval of the Company's board of directors, as well as potential obligations to issue additional convertible preferred shares upon the occurrence of certain events. As of December 31, 2018, certain holders of Series A convertible preferred stock were obligated to purchase an additional aggregate of 23,272,720 shares at $1.83 per share in a subsequent closing. Such closing was contingent upon the approval by the Company's board of directors, and the Company was obligated to sell the same number of shares upon the occurrence of certain events.

The Company assessed its rights and obligations to sell additional shares and determined that these rights and obligations were a single unit of accounting that created an obligation for the Company to issue additional shares of its Series A convertible preferred stock and represented a freestanding financial instrument that was recorded as a convertible preferred stock tranche liability in 2018 ("Series A Tranche Liability"). The Series A Tranche Liability was recorded at fair value on issuance with subsequent changes in fair value being recorded in other (expense) income, net.

In February 2019, pursuant to the Series A SPA, the Company exercised its right to sell and certain holders of Series A convertible preferred stock were obligated to purchase an additional 22,961,250 shares of its Series A convertible preferred stock at $1.83 per share, resulting in aggregate gross proceeds to the Company of $42.0 million. Prior to the exercise, the Series A convertible preferred stock option was revalued to fair value of $46.4 million, which equated to intrinsic value, resulting in other expense of $35.4 million for the year ended December 31, 2019.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Deemed Dividends Upon Issuance or Repurchase of Convertible Preferred Stock

In addition to the sale of Series A convertible preferred shares sold pursuant to the tranche right discussed above, the Company sold 566,490 shares of Series A convertible preferred stock in January 2019, at which time the estimated fair value of the Series A convertible preferred stock was $3.85 per share, compared with the purchase price per share of $1.83. The differences between the estimated fair value as of the closing dates and the purchase prices were deemed to be equivalent to a preferred stock dividend. As a result, the Company recorded deemed dividends of $1.1 million for the year ended December 31, 2019. The deemed dividends increased convertible preferred stock by $1.1 million, reduced additional paid-in capital by $0.8 million, and increased accumulated deficit by $0.3 million. The deemed dividends increased the net loss attributed to common stockholders by $1.1 million.

In March 2020, 546,806 shares of the Company's Series A convertible preferred stock were repurchased by the Company at the then estimated fair value of $7.76 per share, which was higher than the carrying value of those shares. See Note 10, *Convertible Preferred Stock*. As a result, the Company recorded deemed dividends of $3.6 million for the year ended December 31, 2020. The transaction decreased convertible preferred stock by $0.7 million and reduced additional paid-in capital by $3.6 million. The deemed dividends increased the net loss attributed to common stockholders by $3.6 million.

Revenue

The Company recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements within the scope of ASC 606, *Revenue from Contracts with Customers,* ("ASC 606") the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the performance obligation is satisfied. In applying the ASC 606 framework, the Company must apply judgment to determine the nature of the promises within a revenue contract and whether those promises represent distinct performance obligations. In determining the transaction price, the Company does not include amounts subject to uncertainties unless it is probable that there will be no significant reversal of cumulative revenue when the uncertainty is resolved. Milestone and other forms of variable consideration that the Company may earn are subject to significant uncertainties of research and development related achievements, which generally are deemed to be not probable until such milestones are actually achieved. Additionally, the Company develops assumptions that require judgment to determine the standalone selling price of each performance obligation identified in the contract. The Company then allocates the total transaction price to each performance obligation based on the estimated standalone selling prices of each performance obligation, for which it recognizes revenue as or when the performance obligations are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the variable consideration and any related constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis.

Research and Development Expense

The Company records expense for research and development costs as incurred. Research and development expenses consist of costs incurred by the Company for the discovery and development of

its technology platforms and product candidates and includes costs incurred in connection with strategic collaborations, costs to license technology, personnel-related costs, including stock-based compensation expense, facility and technology related costs, research and laboratory expenses, as well as other expenses, which include consulting fees and other costs. Upfront payments and milestones paid to third parties in connection with technology platforms which have not reached technological feasibility and do not have an alternative future use are expensed as incurred.

General and Administrative Expense

General and administrative costs are expensed as incurred and include personnel-related expenses, including stock-based compensation expense, for personnel in executive, legal, finance and other administrative functions, legal costs, transaction costs related to collaboration and licensing agreements, as well as fees paid for accounting and tax services, consulting fees and facilities costs not otherwise included in research and development expenses. Legal costs include those related to corporate and patent matters.

Success Payments

The Company granted rights to success payments to Fred Hutchinson Cancer Research Center (“Fred Hutch”) and The Board of Trustees of the Leland Stanford Junior University (“Stanford”) pursuant to the terms of its research and collaboration agreements with each of those entities. Pursuant to the terms of these agreements, on each contractually prescribed measurement date, the Company may be required to make success payments based on increases in the estimated per share fair value of the Company’s Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged, payable in cash or cash equivalents or, at the Company’s discretion, publicly-tradeable shares of the Company’s common stock. The Company’s common stock is not currently publicly-tradeable. See Note 3, *Collaboration, License and Success Payment Agreements*. The success payments are accounted for under ASC 718, *Compensation – Stock Compensation*, with the expense being recorded in research and development expenses. Once the service period is complete, the instrument will be accounted for under ASC 815, *Derivatives and Hedging*, and continue to be remeasured each reporting period with all changes in value recognized immediately in other (expense) income, net.

The success payment liability is estimated at fair value at inception and at each reporting period, and the expense is accreted over the service period of the research and collaboration agreement. To determine the estimated fair value of the success payments, the Company uses a Monte Carlo simulation methodology which models the future movement of stock prices based on several key variables combined with empirical knowledge of the process governing the behavior of the stock price. The following variables were incorporated in the estimated fair value of the success payment liability: estimated fair value of the Series A convertible preferred stock, expected volatility, risk-free interest rate and the estimated number and timing of valuation measurement dates on the basis of which payments may be triggered. The computation of expected volatility was estimated based on available information about the historical volatility of stocks of similar publicly traded companies for a period matching the expected term assumption.

The potential payments for both the Fred Hutch and Stanford success payments are based on multiples of increased value ranging from 10x to 50x based on a comparison of the estimated per share fair value of the Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged, relative to its original $1.83 issuance price. The aggregate success payments to Fred Hutch and Stanford are not to exceed $200.0 million for

each entity, which would only occur upon a 50 times increase in value. For each entity, each threshold is associated with a success payment, ascending from $10.0 million at $18.29 per share to $200.0 million at $91.44 per share, payable if such threshold is reached during the measurement period. Any previous success payments made are credited against the success payment owed as of any valuation date, so that each entity does not receive multiple success payments in connection with the same threshold. The term of each success payment agreement ends on the earlier to occur of (i) the nine year anniversary of the date of the agreement and (ii) a change in control transaction.

The following table summarizes the aggregate potential success payments, which are payable to Fred Hutch and Stanford, respectively, in cash or cash equivalents or, at the Company's discretion, publicly-tradeable shares of the Company's common stock:

Fred Hutch

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

Stanford

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

The success payments will be owed if the estimated per share fair value of the Series A convertible preferred stock on the contractually specified valuation measurement dates during the term of the success payment agreement equals or exceeds the above outlined multiples. The valuation measurement dates are triggered by the following events: the one-year anniversary of an initial public offering ("IPO") of the Company's common stock and each two-year anniversary of the IPO thereafter, the closing of a change in control transaction, and the last day of the term of the success payment agreement, unless the term has ended due to the closing of a change of control transaction.

Concentrations of Credit Risk and Off-Balance Sheet Risk

The Company maintains its cash and cash equivalents and restricted cash with high quality, accredited financial institutions. These amounts, at times, may exceed federally insured limits. The Company also makes short-term investments in money market funds, U.S. Treasury securities, U.S. government agency securities, corporate bonds and commercial paper, which can be subject to certain credit risk. However, the Company mitigates the risks by investing in high-grade instruments, limiting exposure to any one issuer or type of investment and monitoring the ongoing creditworthiness of the financial institutions and issuers. The Company has not experienced any credit losses in such accounts and does not believe it is exposed to significant risk on these funds. The Company has no off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts, or other hedging arrangements.

Risks and Uncertainties

The Company is subject to a number of risks similar to other biopharmaceutical companies in the early stage, including, but not limited to, the need to obtain adequate additional funding, the need to

manage cash burn, the inability to hire key employees, possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its product candidates, competitors developing new superior technological innovations, the need to successfully commercialize and gain market acceptance of the Company's products and access to, maintenance of and protection of its proprietary technology and ensuring freedom to operate. If the Company does not successfully commercialize or partner any of its product candidates, it will be unable to generate product revenue or achieve profitability.

Claims and Contingencies

From time to time, the Company may become involved in litigation and proceedings relating to claims arising from the ordinary course of business. The Company accrues a liability if the likelihood of an adverse outcome is probable and the amount is estimable. If the likelihood of an adverse outcome is only reasonably possible (as opposed to probable), or if an estimate is not determinable, the Company provides disclosure of a material claim or contingency.

Stock-Based Compensation

Under ASC 718, the Company measures and recognizes expense for restricted stock awards ("RSAs") and stock options granted to employees, directors and consultants based on the fair value of the awards on the date of grant. The fair value of stock options is estimated at the date of grant using the Black-Scholes option pricing model, which requires the use of subjective assumptions and for management to apply judgment and make estimates, including:

- Expected term – The expected term represents the period that the stock-based awards are expected to be outstanding. The Company use the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- Expected volatility – Since the Company is not yet a public company and does not have any trading history for its common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a time period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle and area of specialty. The Company will continue to apply this process until sufficient historical information regarding the volatility of its own stock price becomes available.
- Risk-free interest rate – The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- Expected dividend – The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.
- Fair value of the Company's common stock.

The Company utilizes significant estimates and assumptions in determining the fair value of its common stock for financial reporting purposes. The Company recorded expense for RSAs and stock options at prices not less than the fair market value of its common stock as determined by the board of directors, taking into consideration input from management and an independent third-party valuation

analysis, and in accordance with the American Institute of Certified Public Accountants ("AICPA") Accounting and Valuation Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*.

Stock-based compensation expense for RSAs and stock options is recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective award. The Company accounts for forfeitures as they occur.

The Company also granted stock options that vest in conjunction with certain performance conditions to certain key employees. At each reporting date, the Company is required to evaluate whether achievement of the performance conditions is probable. Compensation expense is recorded over the appropriate service period based upon the Company's assessment of accomplishing each performance provision.

Convertible Preferred Stock

The carrying value of the Company's Series A, Series B, Series AA and Series C convertible preferred stock is adjusted to reflect dividends when and if declared by the Company's board of directors. No dividends have been declared by the board of directors since inception. The Company classifies its convertible preferred stock outside of permanent equity as the redemption of such stock is not solely under the control of the Company.

Income Taxes

The Company determines its deferred tax assets and liabilities based on the differences between the financial reporting and tax basis of assets and liabilities. The deferred tax assets and liabilities are measured using the enacted tax rates that will be in effect when the differences are expected to reverse. A valuation allowance is recorded when it is more likely than not that the deferred tax asset will not be recovered. The Company applies judgment in the determination of the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company recognizes any material interest and penalties related to unrecognized tax benefits in income tax expense.

Segments

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment and one reportable segment.

Recent Accounting Pronouncements

Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements,* ("ASU 2016-13"), ASU No. 2019-5 *Financial Instruments – Credit Losses (Topic 326): Targeted Transition Relief,* ASU No. 2019-11*, Codification Improvements to Topic 326, Financial Instruments – Credit Losses* – In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, which implements an impairment model known as the current expected credit loss model that is based on expected losses rather than incurred losses. Under the new guidance, an entity will recognize as an allowance its

estimate of expected credit losses. The Company adopted this standard on January 1, 2020 on a modified-retrospective approach and the adoption did not have a material impact on its consolidated financial statements.

ASU No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606* ("ASU 2018-18") – In November 2018, the FASB issued ASU 2018-18, which clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606 when the counterparty is a customer. In addition, ASU 2018-18 precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. The Company adopted this standard on January 1, 2020, on a retrospective basis to the date of initial application of ASC 606. The adoption did not have a material impact on its consolidated financial statements.

ASU No. 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15") – In 2018, the FASB issued ASU 2018-15, which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this update. The Company adopted this guidance on a prospective basis on January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

3. Collaboration, License and Success Payment Agreements

Fred Hutch

License Agreement – In 2018, the Company entered into a license agreement with Fred Hutch that grants the Company an exclusive, worldwide, sublicensable license under certain patent rights, and a non-exclusive, worldwide, sublicensable license for certain technology, to research, develop, manufacture, improve and commercialize products and processes covered by such patent rights or incorporating such technology for all therapeutic uses for the treatment of human cancer.

The Company is also required to pay Fred Hutch annual license maintenance payments of $50,000 on the second anniversary of the effective date, and each anniversary of the effective date thereafter until the first commercial sale of a licensed product.

Collaboration Agreement – In 2018, the Company entered into a research and collaboration agreement with Fred Hutch ("Fred Hutch Collaboration Agreement"), focused on research and development of cancer immunotherapy products. The Company is committed to fund aggregate research performed by Fred Hutch of $12.0 million under the Fred Hutch Collaboration Agreement and the research will be conducted in accordance with a research plan and budget approved by the parties. The Fred Hutch Collaboration Agreement has a six-year term, which would be extended for three additional one-year extensions if the $12.0 million funding commitment has not yet been met. The Company incurred $3.7 million and $4.1 million in expense in connection with the Fred Hutch Collaboration Agreement for the years ended December 31, 2019 and 2020, respectively.

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Success Payments – In 2018, the Company granted Fred Hutch rights to certain success payments, pursuant to the terms of the Fred Hutch Collaboration Agreement. Pursuant to the terms of the success payment agreement, the Company may be required to make success payments payable in cash or cash equivalents or, at the Company's discretion, publicly-tradeable shares of the Company's common stock when available, based on increases in the estimated per share fair value of the Company's Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged.

The following assumptions were incorporated into the calculation of the estimated fair value of the success payment liability:

	December 31,	
	2019	2020
Fair value of the Series A convertible preferred stock	$ 5.08	$ 9.07
Risk-free interest rate	1.56% - 2.23%	0.10% - 1.52%
Expected volatility	75%	80%
Expected term (in years)	1.00 - 7.97	1.00 - 6.97

The Company utilizes estimates and assumptions in determining the estimated success payment liabilities and associated expense. A small change in the valuation of the Company's Series A convertible preferred stock may have a relatively large change in the estimated fair value of the success payment liability and associated expense.

The estimated fair value of the success payments to Fred Hutch as of December 31, 2019 and 2020 was $3.8 million and $8.0 million, respectively. The success payment liability is estimated at fair value at inception and at each subsequent reporting period and the expense is accreted over the service period of the Fred Hutch Collaboration Agreement. With respect to Fred Hutch success payment obligations, the Company recognized expense of $0.4 million and $4.8 million for the years ended December 31, 2019 and 2020, respectively.

Stanford

License Agreement – In 2019, the Company entered into a license agreement with Stanford to license specified patent rights. The Company paid an upfront license fee of $0.4 million upon the execution of the agreement which was recorded as research and development expense for the year ended December 31, 2019. The Company also issued Stanford 910,000 shares of its common stock in consideration for the license agreement and recognized $2.6 million in research and development expense for the year ended December 31, 2019 based on the estimated fair value of the common stock on the issuance date. The Company granted a right for Stanford to purchase an additional $5.0 million of the Company's Series B convertible preferred stock at fair value. In March 2019, Stanford exercised this right and purchased 737,882 shares of the Company's Series B convertible preferred stock.

The Company is also required to pay Stanford annual license maintenance payments of $50,000 on the second anniversary of the effective date, and each anniversary of the effective date thereafter until the date of the first commercial sale of a licensed product.

Milestone payments to Stanford of up to a maximum of $3.7 million per target are payable upon achievement of certain specified clinical and regulatory milestones. The Company is also obligated to

pay Stanford $2.5 million collectively for all licensed products upon the achievement of a certain commercial milestone. Additionally, low single-digit tiered royalties based on annual net sales of the licensed products are payable to Stanford.

Collaboration Agreement – In October 2020, the Company entered into a research and collaboration agreement with Stanford ("Stanford Collaboration Agreement"), focused on research and development of cellular immunotherapy products. The Stanford Collaboration Agreement has a four-year term. The Company is committed to fund aggregate research performed by Stanford of $12.0 million under the Stanford Collaboration Agreement, and the research will be conducted in accordance with a research plan and budget approved by the parties. The Company incurred $0.8 million in expense in connection with the Stanford Collaboration Agreement for the year ended December 31, 2020.

Success Payments – In October 2020, the Company granted Stanford rights to certain success payments, pursuant to the terms of the Stanford Collaboration Agreement. Pursuant to the terms of the success payment agreement, the Company may be required to make success payments payable in cash or cash equivalents or, at the Company's discretion, publicly-tradeable shares of the Company's common stock when available, based on increases in the estimated per share fair value of the Company's Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged.

The following assumptions were incorporated into the calculation of the estimated fair value of the success payment liability:

	December 31, 2020
Fair value of the Series A convertible preferred stock	$ 9.07
Risk-free interest rate	0.10% - 1.53%
Expected volatility	80%
Expected term (in years)	1.00 - 8.75

The Company utilizes estimates and assumptions in determining the estimated success payment liabilities and associated expense. A small change in the valuation of the Company's Series A convertible preferred stock may have a relatively large change in the estimated fair value of the success payment liability and associated expense.

The estimated fair value of the success payments to Stanford as of December 31, 2020 was $8.9 million. The success payment liability is estimated at fair value at inception and at each subsequent reporting period and the expense is accreted over the service period of the Stanford Collaboration Agreement. With respect to Stanford success payment obligations, the Company recognized expense of $0.6 million for the year ended December 31, 2020.

GSK

In 2019, the Company entered into a Collaboration and License Agreement, amended in June 2020 ("GSK Agreement") with GlaxoSmithKline Intellectual Property (No. 5) Limited and Glaxo Group Limited (together, "GSK") for potential T cell therapies that apply the Company's platform technologies and cell therapy innovations with T cell receptors ("TCRs") or chimeric antigen receptors ("CARs") under distinct collaboration programs. The GSK Agreement has defined two initial collaboration targets and allows GSK to nominate seven additional targets through July 2024. The Company is expected to

perform research and development services for each selected target up until a defined point (the "GSK Option Point"), at which time GSK will decide whether or not to exercise an option to obtain a license from the Company ("License Option") and take over the future development and commercialization. For each selected target, both parties will determine whether it will be developed under a Proof of Concept ("PoC") Development Program or Component Development Program. For a PoC Development Program, the Company is expected to conduct both preclinical and clinical development for the target and present clinical trial data to GSK in connection with their evaluation of whether to exercise the License Option. For a Component Development Program, the Company is obligated to perform preclinical studies only. Along with the research activities, the Company will also appoint three representatives to the joint steering committee ("JSC") and be responsible for the manufacture of all compounds and products necessary for its research and development activities.

The Company received a non-refundable upfront payment of $45.0 million under the GSK Agreement. The Company is entitled to certain payments upon the achievement of specified development and sales milestones (for each selected target that is already within GSK's pipeline and meet certain criteria, the Company is eligible to receive up to an aggregate of approximately $400.0 million, and for each selected target that is not already within GSK's pipeline and meet certain criteria the Company is eligible to receive up to an aggregate of approximately $900.0 million) and tiered royalties on a per-product basis ranging from low to high single digits for targets that are already within GSK's pipeline and meet certain criteria, or from high single digit to low teens for all other targets. The Company is also entitled to potential milestone payments based on validating the Company's technology in a clinical setting up to an aggregate of approximately $200.0 million. Royalties and milestones are paid once per target, even if there is more than one Lyell innovation applied to a T cell therapy directed to that target. Any amounts received from GSK are generally non-refundable unless the Company terminates a collaboration target for safety or feasibility reasons and the funding received from GSK exceeds the costs incurred for the terminated target.

In connection with the GSK Agreement, in May 2019, the Company also entered into a Stock Purchase Agreement with GSK (the "GSK Stock Purchase Agreement"), pursuant to which the Company agreed to sell 30,253,189 shares of Series AA convertible preferred stock at a price of $6.78 per share. As of the issuance date, the estimated fair value of the Series AA convertible preferred stock was $4.84 per share, compared with the purchase price per share of $6.78. The difference of $58.6 million between the estimated fair value of the stock as of the issuance date and the purchase price was deemed to be additional consideration for the GSK Agreement. As a result, the total upfront payment for accounting purposes allocated to the GSK Agreement was $103.6 million.

The GSK Agreement was deemed to be within the scope of ASC 606 because GSK engaged the Company to provide research and development services, which are outputs of its ongoing activities, in exchange for consideration.

The Company identified the following two distinct performance obligations: (i) research and development services related to the two initial collaboration targets, inclusive of the JSC participation and the manufacture of compounds necessary for providing the research and development services and (ii) a material right for GSK to nominate seven additional collaboration targets for which the Company will perform research and development services until the GSK Option Point.

To allocate revenue among the performance obligations, the Company determined standalone selling prices ("SSP") of each obligation. For the research and development services, the SSP was calculated using a cost-plus margin approach. For the material right, the Company allocated the

transaction price to the material right by reference to the underlying research and development services expected to be provided and the corresponding expected consideration. All amounts included in the transaction price are allocated to performance obligations proportionate to their SSPs.

As of December 31, 2020, the transaction price was deemed to be $103.6 million, consisting of the upfront payment of $45.0 million under the GSK Agreement and the $58.6 million allocated from the GSK Stock Purchase Agreement. Other than the upfront payment and the amounts allocated from the GSK Stock Purchase Agreement, all other contingent consideration that may be earned under the GSK Agreement is subject to uncertainties including but not limited to target addition, research and investigational new drug enabling studies, initiation of clinical trials, and other related achievements. Consequently, the transaction price currently does not include any such contingent consideration that, if included, could result in a probable significant reversal of cumulative revenue when related uncertainties become resolved. The Company will re-evaluate the transaction price at each reporting period. If and when contingent consideration is included in the transaction price, it will be allocated to the two performance obligations proportionate to their SSPs and a cumulative catchup in revenue will be recorded for the portion of the services already completed. The remaining amounts will be deferred and recognized as the services are rendered.

The research and development services are transferred as the services are performed, with cost used as the measure of progress compared to total estimated cost to complete. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. The determination of the percentage of completion requires the Company to estimate the costs to complete the project. The Company makes a detailed estimate of the costs to complete, which is reassessed every reporting period based on the latest project plan and discussions with project teams. If a change in facts or circumstances occurs, the estimate will be adjusted, and the revenue will be recognized based on the revised estimate. The difference between the cumulative revenue recognized based on the previous estimate and the revenue recognized based on the revised estimate would be recognized as an adjustment to revenue in the period in which the change in estimate occurs. The Company recognized revenue related to the research and development services related to the two initial targets of $0.7 million and $7.8 million for the years ended December 31, 2019 and 2020, respectively. Revenue recognized for the year ended December 31, 2020 previously was included in deferred revenue as of December 31, 2019.

PACT

In June 2020, the Company entered into an agreement (the “PACT Agreement”) with PACT Pharma, Inc. (“PACT”) to jointly develop and test a next generation personalized anti-cancer T cell therapy against solid tumors. The Company paid PACT an upfront non-refundable payment of $50.0 million upon execution of the PACT Agreement, which was recorded in research and development expense for the year ended December 31, 2020. In November 2020, the parties agreed to suspend research and development activity under the PACT Agreement, and neither party would be required to conduct any further work under the development plan (including manufacturing development) nor incur any financial obligations (including milestone payments) that might otherwise arise, for as long as the parties continued to negotiate in good faith to resolve the issues that have arisen between them relating to the PACT Agreement.

In June 2020 in connection with the entry into the PACT Agreement, the Company also entered into a stock purchase agreement with PACT (“PACT SPA”), pursuant to which the Company purchased 17,806,901 shares of Series C-1 convertible preferred stock at a purchase price of $2.81

per share. As of the purchase date, the estimated fair value of the Series C-1 convertible preferred stock was $2.05 per share, and the difference between the estimated fair value of the preferred stock as of the purchase date and the purchase price of $13.6 million was deemed to be additional consideration for the PACT Agreement and recognized as research and development expense. As a result, the total upfront payment paid in connection with the PACT Agreement was $63.6 million and included in R&D expense.

Subsequently, in February 2021, the Company filed a demand for arbitration seeking, among other things, rescission of the PACT Agreement and the PACT SPA and recovery of the consideration paid thereunder.

National Cancer Institute

In December 2020, the Company entered into a license agreement with the National Cancer Institute ("NCI") to license specified patents and know-how rights. The Company recorded an upfront license fee of $0.1 million upon the execution of the agreement which was recorded as research and development expense for the year ended December 31, 2020. The Company is required to pay NCI a minimum annual maintenance fee of $75,000, which payments may be credited against earned royalties.

Milestone payments to NCI up to a maximum of $3.1 million are payable upon achievement of certain specified clinical and regulatory milestones and up to a maximum of $12.0 million collectively for all licensed products upon achievement of certain commercial milestones. The Company is also obligated to pay low single-digit royalties based on annual net sales of the licensed products.

4. Cash Equivalents and Marketable Securities

The fair value and amortized cost of cash equivalents and marketable securities by major security type as of December 31, 2019 and 2020 are presented in the following table (in thousands):

	December 31, 2019			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Money market funds	$ 34,223	$ —	$ —	$ 34,223
U.S. Treasury securities	187,996	297	(1)	188,292
U.S. government agency securities	118,828	79	(4)	118,903
Corporate debt securities	118,245	96	(13)	118,328
Total cash equivalents and marketable securities	$459,292	$ 472	$ (18)	$459,746

Classified as:	Fair Value
Cash equivalents	$ 85,388
Short-term marketable securities	339,375
Long-term marketable securities	34,983
Total cash equivalents and marketable securities	$ 459,746

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	December 31, 2020			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Money market funds	$ 50,513	$ —	$ —	$ 50,513
U.S. Treasury securities	202,674	27	—	202,701
U.S. government agency securities	205,558	207	(1)	205,764
Corporate debt securities	211,086	34	(11)	211,109
Total cash equivalents and marketable securities	$669,831	$ 268	$ (12)	$670,087

Classified as:	Fair Value
Cash equivalents	$ 117,879
Short-term marketable securities	472,213
Long-term marketable securities	79,995
Total cash equivalents and marketable securities	$ 670,087

As of December 31, 2019 and 2020, the fair value of securities held by the Company in an unrealized loss position was $54.7 million and $132.6 million, respectively, and as of December 31, 2019 and 2020, securities held by the Company in an unrealized loss position have been in the continuous loss position for less than 12 months. The Company evaluated its securities for other-than-temporary impairment and considers the decline in market value for the securities to be primarily attributable to current economic and market conditions. The Company does not intend to sell these securities nor does the Company believe that it will be required to sell these securities before recovery of their amortized cost basis. Gross realized gains and losses were *de minimis* for the years ended December 31, 2019 and 2020 and as a result, amounts reclassified out of accumulated other comprehensive loss for the years ended December 31, 2019 and 2020 were also *de minimis*.

As of December 31, 2019 and 2020, all of the Company's marketable securities had a maturity date of two years or less, were available for use, and were classified as available-for-sale.

5. Other Investments

In 2020, the Company made a strategic equity investment of $13.0 million in Outpace Bio, Inc. ("Outpace"), a privately-held company, which represented a minority ownership interest at the time of the strategic investment. Outpace is engaged in the research and development of protein and cell technology platforms and has financed its activities via issuances of preferred stock. The Company determined that Outpace is a VIE as the at-risk equity holders, as a group, lack the characteristics of a controlling financial interest. The Company does not have majority voting rights, representation on Outpace's board of directors, or the power to direct the activities of this entity, and therefore it is not the primary beneficiary. As of December 31, 2020, the carrying value of the Company's investment in Outpace is $13.0 million, which is recorded in other investments.

From time to time, the Company makes minority ownership strategic investments. As of December 31, 2019 and 2020, the aggregate carrying amounts of the Company's strategic investments in non-publicly traded companies were $34.0 million and $83.4 million, respectively. These investments are measured at initial cost, minus impairment and changes, plus or minus, resulting from observable price changes in orderly transactions for the identical or a similar investment of the same

issuer. There were no adjustments recorded to the carrying amount for other investments for the years ended December 31, 2019 and 2020.

6. Fair Value Measurements

The following table sets forth the fair value of the Company's financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Money market funds	$34,223	$ —	$ —	$ 34,223
U.S. Treasury securities	—	188,292	—	188,292
U.S. government agency securities	—	118,903	—	118,903
Corporate debt securities	—	118,328	—	118,328
Total financial assets	$34,223	$425,523	$ —	$459,746
Financial liabilities:				
Success payment liabilities	$ —	$ —	$ 436	$ 436
Total financial liabilities	$ —	$ —	$ 436	$ 436

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Money market funds	$50,513	$ —	$ —	$ 50,513
U.S. Treasury securities	—	202,701	—	202,701
U.S. government agency securities	—	205,764	—	205,764
Corporate debt securities	—	211,109	—	211,109
Equity warrant investment	—	—	1,323	1,323
Total financial assets	$50,513	$619,574	$ 1,323	$671,410
Financial liabilities:				
Success payment liabilities	$ —	$ —	$ 5,773	$ 5,773
Total financial liabilities	$ —	$ —	$ 5,773	$ 5,773

The Company measures the fair value of money market funds based on quoted prices in active markets for identical assets or liabilities. The Level 2 marketable securities include U.S. Treasury and government agency securities, and corporate debt securities. The Company's Level 2 securities are valued using third-party pricing sources. The pricing services utilize industry standard valuation models. Inputs utilized include market pricing based on real-time trade data for the same or similar securities and other significant inputs derived from or corroborated by observable market data.

The Level 3 financial instruments include an equity warrant investment and success payment liabilities. The Company's Level 3 financial instruments are valued using valuation models which include the Black Scholes model for valuing the equity warrant investment and a Monte Carlo simulation for the success payment liabilities. See Note 2, *Significant Accounting Policies* and Note 3, *Collaboration, License and Success Payment Agreements*, for additional discussion on the valuation methodology and the related significant inputs.

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Notes to Consolidated Financial Statements—(Continued)

The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial assets and liabilities (in thousands):

	Equity Warrant Investment	Success Payment Liabilities	Convertible Preferred Tranche Liabilities
Balance at December 31, 2018	$ —	$ —	$ 10,938
Change in fair value (1)	—	436	35,444
Settlement	—	—	(46,382)
Balance at December 31, 2019	—	436	—
Additions	1,380	—	—
Change in fair value (1)	(57)	5,337	—
Balance at December 31, 2020	$ 1,323	$ 5,773	$ —

(1) The change in fair value associated with the equity warrant investment and convertible preferred tranche liabilities is recorded in other (expense) income, net and the change in fair value associated with success payments liabilities is recorded in research and development expense.

7. Property and Equipment, Net

Property and equipment, net, consisted of the following (in thousands):

	December 31, 2019	December 31, 2020
Laboratory equipment	$ 11,182	$ 17,083
Leasehold improvements	3,693	8,452
Computer equipment and software	591	724
Furniture and fixtures	178	178
Construction in progress	3,588	55,712
Property and equipment, at cost	19,232	82,149
Less: Accumulated depreciation	(1,256)	(5,104)
Total property and equipment, net	$ 17,976	$ 77,045

Depreciation expense was $1.3 million and $4.2 million for the years ended December 31, 2019 and 2020, respectively.

8. Accrued Liabilities and Other Current Liabilities

Accrued liabilities and other current liabilities consisted of the following (in thousands):

	December 31, 2019	December 31, 2020
Accrued compensation and related benefits	$ 8,911	$ 14,850
Accrued property and equipment	2,426	5,910
Current lease liabilities	344	3,617
Accrued research and development expenses	1,338	2,575
Other	1,235	1,069
Total accrued liabilities and other current liabilities	$ 14,254	$ 28,021

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

9. Leases

In 2018, the Company entered into an operating lease for approximately 34,000 square feet of office and laboratory space in Seattle, Washington, with an initial lease term expiring in December 2028. The Company has two five-year options to extend the lease, which are not reasonably assured.

In 2019, the Company entered into an operating lease for approximately 34,000 square feet of office and laboratory space in South San Francisco, California. The initial lease term expires in August 2029 with no option to extend the lease. In August 2019, the Company amended the lease to add an additional approximately 6,000 square feet of office and laboratory space for a total of approximately 40,000 square feet. In August 2019, the Company also amended the lease to add an early termination right, which allows the Company to terminate the lease by the delivery of 12 months advance written notice to the landlord delivered no later than December 2020. In December 2020, the Company exercised the early termination right and the lease term will end in December 2021. The Company remeasured the remaining consideration in the contract, which resulted in a gain of $2.9 million, which was recognized in other operating income, net.

In 2019, the Company entered into two operating lease agreements for a combined approximately 73,000 square feet of space to develop a cell therapy manufacturing facility located in Bothell, Washington, with initial terms expiring in May 2030. The Company has two 90-month options to extend the leases, which are not reasonably assured.

In 2019, the Company entered into an operating lease agreement for approximately 108,000 square feet of office and laboratory space located in South San Francisco, California. The initial lease term expires in January 2031 with the option to extend the term for another 10 years, which is not reasonably assured.

The following table summarizes the Company's future minimum operating lease commitments, including expected lease incentives to be received, as of December 31, 2020 (in thousands):

Year Ending December 31:	
2021	$ 10,096
2022	10,734
2023	11,054
2024	11,385
2025	11,898
Thereafter	58,962
Total undiscounted lease payments	114,129
Less: imputed interest	(41,497)
Less: tenant improvement allowances	(18,057)
Total operating lease liabilities(1)	$ 54,575

(1) Total operating lease liabilities consisted of $3.6 million included in accrued liabilities and other current liabilities and $51.0 million in long-term lease liabilities.

The operating lease costs for all operating leases were $4.6 million and $11.2 million for the years ended December 31, 2019 and 2020, respectively. The operating lease costs and total commitments for short-term leases was *de minimis* for the years ended December 31, 2019 and 2020. Variable lease costs for operating leases were $1.0 million and $2.1 million for the years ended

December 31, 2019 and 2020, respectively. The weighted average remaining lease term and discount rate for operating leases as of December 31, 2020 was 9.0 years and 9.6%, respectively.

10. Convertible Preferred Stock

During 2019, the Company sold shares of its Series A, Series B and Series AA convertible preferred stock. The Company sold 23,527,740 shares of Series A convertible preferred stock at a price of $1.83 per share for proceeds of $43.0 million. The Company sold 23,929,531 shares of its Series B convertible preferred stock at a price of $6.78 per share for proceeds of $162.0 million, net of issuance costs of $0.1 million. The Company sold 30,253,189 shares of its Series AA convertible preferred stock at an estimated fair value of $4.84 per share for proceeds of $146.3 million, net of issuance costs of $0.1 million.

In March 2020, the Company sold 42,905,042 shares of its Series C convertible preferred stock at a price of $11.49 per share for proceeds of $492.5 million, net of issuance costs of $0.5 million. In connection with this financing, the Company amended and restated its certificate of incorporation to increase its authorized capital stock to 264,905,000 shares designated as common stock and 195,021,237 shares designated as preferred stock, of which 97,933,475 shares are designated as Series A convertible preferred stock, 23,929,531 shares are designated as Series B convertible preferred stock, 30,253,189 shares are designated as Series AA convertible preferred stock and 42,905,042 shares are designated as Series C convertible preferred stock.

In March 2020, the Company repurchased 546,806 shares of its Series A convertible preferred stock from a related party for a purchase price of $4.2 million.

Conversion

Shares of the Company's Series A, Series B, Series AA and Series C preferred stock are convertible into common stock based on a defined conversion ratio, which was initially set at one-for-one, adjustable for certain events. No such adjustment had occurred as of December 31, 2019 and 2020.

The preferred stock is convertible into common stock at the option of the holder at any time without any additional consideration, and all shares convert automatically upon the closing of the sale of shares of common stock in an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), provided that such offering results in at least $50.0 million of gross proceeds to the Company. The Company's Series A, Series B, Series AA and Series C convertible preferred stock will automatically convert into shares of common stock upon the vote or written consent of the holders of at least a majority of the outstanding Series A, Series B, Series AA and Series C convertible preferred stock voting together as a single class on an as-converted to common stock basis.

Dividends

Each holder of the Company's Series A, Series B, Series AA and Series C convertible preferred stock is entitled to receive non-cumulative dividends, when and if declared by the Company's board of directors, at an annual rate of 8% of the original issue price prior to and in preference to the payment of a dividend on common stock. No dividends have been declared to date.

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Notes to Consolidated Financial Statements—(Continued)

Liquidation Preference

In the event that the Company is liquidated either voluntarily or involuntarily, or if any event occurs that is deemed a liquidation under the Company's certificate of incorporation, each holder of the Company's Series A, Series B, Series AA and Series C convertible preferred stock will be entitled to receive a liquidation preference out of any proceeds from the liquidation before any distributions are made to the holders of common stock. The liquidation preference for each share of the Series A, Series B and Series C convertible preferred stock is equal to the original issue price for such series (plus any declared but unpaid dividends), which is $1.83 for each of the Series A convertible preferred stock, $6.78 for each of the Series B convertible preferred stock and $11.49 for each of the Series C convertible preferred stock or the amount per share as would have been payable had all shares of Series A, Series B and Series C convertible preferred been converted into common stock, respectively. The liquidation preference for each share of the Series AA convertible preferred stock is equal to fifty percent (50%) of the original issue price of Series AA preferred stock of $6.78 per share (plus any declared but unpaid dividends), which is $3.39 for each of the Series AA convertible preferred stock, or the amount per share as would have been payable had all shares of Series AA convertible preferred been converted into common stock.

Voting Rights

Each holder of convertible preferred stock votes (on an as-converted to common stock basis) with the other voting stock of the Company. Certain actions specified in the certificate of incorporation require the consent of at least a majority of the Company's Series A convertible preferred stock, Series B convertible preferred stock, Series AA convertible preferred stock and Series C convertible preferred stock, together as a single class on an as-converted to common stock basis. Certain actions specified in the certificate of incorporation may also require the consent of at least a majority of the Series A convertible preferred stock, voting as a single class, and/or at least a majority of the Series B convertible preferred stock, voting as a single class, and/or at least a majority of the Series AA convertible preferred stock, voting as a single class and/or at least a majority of the Series C convertible preferred stock, voting as a single class. Certain actions specified in the certificate of incorporation require the consent of at least a majority of the Series A convertible preferred stock, Series B and Series C convertible preferred stock voting together, separately as a single class.

In addition, the stockholders of the Company have entered into a voting agreement pursuant to which one of the holders of Series A convertible preferred stock is permitted to designate two members of the Company's board of directors, which right expires upon an IPO.

Redemption Rights

The stockholders holding the majority of the Series A convertible preferred stock had the right to request redemption of their shares at the original issue price for each share plus all declared, but unpaid dividends, commencing on the 121st day after the original issue date of September 20, 2018 if certain events had not occurred. In January 2019, the redemption right pursuant to the Series A SPA was waived based on the Company's board of directors' determination regarding the status of certain events, as permitted by the Series A SPA.

Convertible Preferred Stock Option

In February 2019, pursuant to the Series A SPA, the Company exercised its right to sell and certain holders of Series A convertible preferred stock were obligated to purchase an additional

22,961,250 shares of its Series A preferred stock at $1.83 per share in exchange for $42.0 million. See Note 2, *Significant Accounting Policies.*

11. Common Stock

As of December 31, 2019 and 2020, there were 11,180,711 shares and 15,569,788 shares of the Company's common stock outstanding, respectively, excluding 13,663,338 shares and 7,562,503 shares, respectively, of RSAs outstanding that are subject to vesting requirements.

The Company is required to reserve sufficient shares of common stock for future issuance upon the conversion of convertible preferred stock. As of December 31, 2020, the Company had reserved 195,021,237 shares of common stock for future conversion of its Series A, Series B, Series AA and Series C convertible preferred stock.

Each share of the Company's common stock is entitled to one vote, subject to certain voting rights of its Series A, Series B, Series AA and Series C convertible preferred stock.

In March 2020, the Company repurchased 2,032,166 shares of its common stock from a related party for a purchase price of $11.8 million.

12. Stock-Based Compensation

Equity Incentive Plan

In 2018, the Company established the 2018 Equity Incentive Plan (the "2018 Plan") under which it may grant incentive stock options, non-statutory stock options, RSAs, restricted stock units, stock appreciation rights, and other stock-based awards. Terms of stock awards, including vesting requirements, are determined by the board of directors or by a committee authorized by the Company's board of directors, subject to provisions of the 2018 Plan. The term of any stock option granted under the 2018 Plan cannot exceed ten years. Generally, awards granted by the Company vest over four years, but may be granted with different vesting terms.

Initially, the Company's board of directors approved a plan that provided for a reserve of 100,000 shares of its common stock for issuance pursuant to awards granted under the 2018 Plan to eligible employees, directors and consultants. The board of directors have approved amendments to the plan to increase the reserve to 42,744,980 shares as of December 31, 2020.

As of December 31, 2020, 5,808,847 shares were available for future issuance pursuant to the 2018 Plan.

Prior to the adoption of the 2018 Plan, the Company issued 20,450,000 of founder's RSAs to certain employees, directors and consultants.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Stock-Based Compensation Expense

Stock-based compensation expense by classification included within the consolidated statements of operations and comprehensive loss was as follows (in thousands):

	Year Ended December 31,	
	2019	2020
Research and development	$ 4,926	$ 14,977
General and administrative	10,806	18,284
Total stock-based compensation expense	$ 15,732	$ 33,261

Stock-based compensation expense for the year ended December 31, 2020 includes the impact of stock options modifications. Stock option modifications in 2020 were due to the reduction in the service levels for certain employees, changes in the vesting schedules and an increase to certain awards' post termination exercise window. The total amount of incremental stock-based compensation expense associated with these modifications was $19.8 million, of which $5.7 million was recognized for the year ended December 31, 2020. Amounts relating to options that were already vested were recorded on the date of the modification and amounts relating to options that were unvested are expensed over the remaining service life of the options. Stock-based compensation expense also includes the impact of RSA modifications due to reduction in the service levels for certain employees and accelerated vesting, resulting in an incremental expense of $29.8 million, of which $11.8 million was recognized for the year ended December 31, 2020.

Stock-based compensation expense for the year ended December 31, 2019 includes the impact of the Company repricing certain stock options in December 2019 by canceling all existing outstanding option grants with a per share exercise price at, and higher than, $4.78 in exchange for new option grants at an exercise price of $3.65 per share. Except for the change in exercise price, the new options had the same terms and conditions as the original options, including the contractual term, vesting schedule and the vesting start date. The total amount of incremental stock-based compensation expense associated with the repricing was $3.3 million, of which, $0.6 million and $0.7 million was recognized for the years ended December 31, 2019 and 2020, respectively. Amounts relating to options that were already vested were recorded on the date of the modification and amounts relating to options that were unvested are expensed over the remaining vesting term of the new options. Stock-based compensation expense also includes the impact of the accelerated vesting of certain RSAs in 2019, resulting in an incremental expense of $8.6 million, which was recorded for the year ended December 31, 2019.

Total stock-based compensation cost related to unvested awards not yet recognized and the weighted- average periods over which the awards are expected to be recognized as of December 31, 2020 were as follows:

Unrecognized stock-based compensation cost (in thousands)	$ 87,075
Expected weighted-average period compensation cost to be recognized (in years)	2.54

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

Restricted Stock Awards

A summary of the Company's RSAs activity were as follows:

	Number of Shares	Weighted-Average Value at Grant Date Per Share
Unvested shares as of December 31, 2018	24,696,373	$ 0.02
Vested	(9,179,046)	0.03
Forfeited	(1,853,989)	0.10
Unvested shares as of December 31, 2019	13,663,338	0.0001
Vested	(5,344,585)	0.0001
Forfeited	(756,250)	0.0001
Unvested shares as of December 31, 2020	7,562,503	$ 0.0001

The fair value of RSAs vested during the years ended December 31, 2019 and 2020 was $33.5 million and $29.4 million, respectively.

Stock Options

A summary of the Company's stock option activity were as follows:

	Number of Stock Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Options outstanding as of December 31, 2018	8,460,548	$ 0.10		
Granted	18,742,669	4.85		
Canceled or forfeited	(175,000)	4.84		
Options outstanding as of December 31, 2019	27,028,217	$ 2.54		
Granted	12,989,880	5.11		
Exercised	(113,195)	3.29		
Canceled or forfeited	(5,491,013)	3.67		
Options outstanding as of December 31, 2020	34,413,889	$ 3.33	8.67	$ 100,223
Options exercisable as of December 31, 2020	19,379,578	$ 2.25	8.32	$ 77,244

The fair value of stock options granted to employees, directors and consultants was estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Year Ended December 31,	
	2019	2020
Risk-free interest rate	1.91%	0.79%
Expected volatility	75%	75%
Expected term (in years)	6.08	6.11
Expected dividend yield	0%	0%

The weighted-average grant date fair value of options granted for the years ended December 31, 2019 and 2020 was $2.24 per share and $3.36 per share, respectively. The intrinsic value of options

exercised during the year ended December 31, 2020 was $0.3 million. No options were exercised for the year ended December 31, 2019.

13. Income Taxes

As of December 31, 2019 and 2020, the Company had U.S. federal net operating loss ("NOL") carryforwards of approximately $64.4 million and $116.1 million, respectively, which were available to reduce future taxable income. The Company also had U.S. federal and state tax credits of $2.3 million and $5.0 million as of December 31, 2019 and 2020, respectively, which may be used to offset future tax liabilities. The federal NOL carryforward period is indefinite, while the tax credits will begin to expire in 2039. The aforementioned carryforwards may become subject to annual limitations in the event of certain cumulative changes in the ownership interest of significant stockholders. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities.

A reconciliation of income taxes computed using the U.S. federal statutory rate to that reflected in operations follows:

	Year Ended December 31,	
	2019	2020
Federal statutory tax	21.00%	21.00%
State tax, net of federal benefit	0.52	4.71
Valuation allowance	(15.27)	(24.60)
Convertible preferred stock tranche liabilities	(5.75)	—
Stock-based compensation	(1.69)	(1.77)
Tax credits	1.24	0.95
Other	(0.05)	(0.29)
Effective income tax rate	0.00%	0.00%

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

The principal components of the Company's net deferred tax assets were as follows (in thousands):

	Year Ended December 31,	
	2019	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 13,524	$ 28,692
Tax credit carryforwards	2,318	4,980
Accrued liabilities & allowances	1,797	3,518
Deferred revenue	—	8,997
Amortization	2,095	14,375
Investment basis difference	—	3,334
Lease liability	5,768	13,421
Stock-based compensation	1,038	5,175
Other	95	1,454
Gross deferred tax assets	26,635	83,946
Valuation allowance	(20,734)	(71,093)
Deferred tax assets, net of valuation allowance	5,901	12,853
Deferred tax liabilities:		
Right-of-use asset	(5,201)	(11,221)
Property and equipment	(700)	(1,632)
Deferred tax liabilities	(5,901)	(12,853)
Net deferred tax assets	$ —	$ —

The Company maintains a full valuation allowance on its net U.S. deferred tax assets. The assessment regarding whether a valuation allowance is required considers the evaluation of both positive and negative evidence when concluding whether it is more likely than not that deferred tax assets are realizable. In making this assessment, significant weight is given to evidence that can be objectively verified. In its evaluation, the Company considered its cumulative loss in recent years and its forecasted losses in the near-term as significant negative evidence. Based upon a review of the four sources of income identified within ASC 740, *Accounting for Income Taxes* ("ASC 740"), the Company determined that the negative evidence outweighed the positive evidence and a full valuation allowance on its U.S. net deferred tax assets will be maintained. The valuation allowance relates primarily to net U.S. deferred tax assets from net operating loss carryforwards, research and development tax credit carryforwards, research and development expenses capitalized and amortized for tax but deducted for GAAP and stock-based compensation.

The Company will continue to assess the realizability of its deferred tax assets and adjust the valuation allowance as required by ASC 740. The increase in the valuation allowance was $50.4 million for the year ended December 31, 2020.

The Company evaluates its uncertain tax positions based on a determination of whether it is more likely than not such position will be sustained based upon its technical merits and upon examination by the relevant income tax authorities with all facts known. The Company applies judgment in its measurement of an uncertain tax position recorded in its consolidated financial statements and tax return. As of December 31, 2019 and 2020, the Company had no uncertain tax positions.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

The Company is generally subject to examination by the U.S. federal and local income tax authorities for all tax years in which a loss carryforward is available. The Company is currently not under examination by the Internal Revenue Service or other jurisdictions for any tax years.

14. Net Loss Per Share

Basic and diluted net loss per share attributed to common stockholders is calculated by dividing net loss attributed to common stockholders by the weighted average number of common shares outstanding during the period, without consideration for common stock equivalents. The Company's potentially dilutive shares, which include preferred stock, unvested RSAs and options to purchase common stock, are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

The amounts in the table below were excluded from the calculation of diluted net loss per share attributed to common stockholders for the periods indicated due to their anti-dilutive effect:

	Year Ended December 31,	
	2019	2020
Series A convertible preferred stock	97,933,475	97,386,669
Series B convertible preferred stock	23,929,531	23,929,531
Series AA convertible preferred stock	30,253,189	30,253,189
Series C convertible preferred stock	—	42,905,042
Unvested RSAs	13,663,338	7,562,503
Options to purchase common stock	27,028,217	34,413,889
Total	192,807,750	236,450,823

15. Employee Benefit Plan

In January 2019, the Company adopted a 401(k) retirement and savings plan (the "401(k) Plan") covering all of its employees. The 401(k) Plan allows employees to make pre- and post-tax contributions up to the maximum allowable amount set by the IRS. As of December 31, 2020, the Company had not made any matching contributions to the 401(k) Plan on behalf of participants.

16. Commitments and Contingencies

Collaboration and License Agreements

We have entered into certain collaboration and license agreements, including those identified in Note 3, *Collaboration, License and Success Payment Agreements* above, with third parties that include the funding of certain development, manufacturing and commercialization efforts with the potential for future milestone and royalty payments upon the achievement of pre-established developmental, regulatory and/or commercial milestones. The Company's obligation to fund these efforts is contingent upon continued involvement in the programs and/or the lack of any adverse events which could cause the discontinuance of the programs. Due to the nature of these agreements, the future potential payments are inherently uncertain, and accordingly no amounts had been recorded for the potential future achievement of these targets as of December 31, 2019 and 2020.

17. Related-Party Transactions

The Company is party to the GSK Agreement, who is a holder of more than 10% of the Company's equity. See Note 3, *Collaboration, License and Success Payment Agreements*. All revenue

recognized for the years ended December 31, 2019 and 2020 as well as deferred revenue and deferred revenue, net of current portion, as of December 31, 2019 and 2020 was in connection with the GSK Agreement.

In March 2020, the Company repurchased 546,806 shares of its Series A convertible preferred stock and 2,032,166 shares of its common stock from a related party. See Note 10, *Convertible Preferred Stock* and Note 11, *Common Stock*.

18. Asset Acquisition and Asset Sale

Asset Acquisition

In May 2020, the Company completed the acquisition of 100% of the outstanding equity of Immulus, Inc. (“Immulus”), a company focused on developing technology platforms that enable the development and production of cell therapeutics. As consideration for the acquisition, the Company paid $3.5 million in cash and issued an aggregate of 688,463 shares of its common stock, with an estimated fair value of $4.0 million. The Company also incurred $0.5 million of direct expenses, for total consideration of $8.0 million.

The Company concluded the acquisition did not meet the accounting definition of a business as inputs were acquired, but no processes or outputs were acquired. Consequently, the Company accounted for the transaction as an asset acquisition with the value concentrated in IPR&D. The following table summarizes the fair value of assets acquired (in thousands):

Other assets	$	487
In-process research and development (IPR&D)		7,528
Total assets acquired	$	8,015

The amount allocated to the IPR&D asset was charged to research and development expenses for the year ended December 31, 2020 as this asset had no alternative future use at the time of the acquisition transaction.

In addition, the Company is also required to make milestone payments of up to $37.0 million to the former stockholders of Immulus upon successful completion of specified development milestones. Triggering of these milestones payments was not considered probable as of the date of the acquisition, and no expense has been recorded for these milestones for the year ended December 31, 2020.

Asset Sale

In November 2020, the Company entered into a contribution agreement with Outpace, wherein the Company contributed tangible and intangible assets consisting of equipment and intellectual property to Outpace. As consideration for the contributed tangible and intangible assets, Outpace issued the Company 3,033,382 shares of its Series A convertible preferred stock with an estimated fair value of $6.0 million. The carrying amount of the contributed assets was $1.1 million, which resulted in the Company recognizing a gain in other operating (expense) income, net of $4.9 million for the year ended December 31, 2020. The Company also acquired 3,539,319 shares of Outpace’s Series A convertible preferred stock for a cash investment of $7.0 million. See Note 5, *Other Investments*.

Lyell Immunopharma, Inc.
Notes to Consolidated Financial Statements—(Continued)

19. Subsequent Events

From January 1, 2021 to April 12, 2021, the Company granted stock options to purchase 9,371,532 shares of common stock with a weighted-average exercise price of $6.86 per share to certain employees pursuant to the 2018 Plan. In January 2021, Company's board of directors amended the 2018 Plan to increase the number of shares reserved for issuance thereunder to 47,044,980 shares.

Lyell Immunopharma, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except per share amounts)

	December 31, 2020	March 31, 2021 (unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 140,406	$ 244,370
Short-term marketable securities	472,213	360,563
Prepaid expenses and other current assets	4,928	4,802
Total current assets	617,547	609,735
Restricted cash	466	466
Long-term marketable securities	79,995	35,204
Other investments	83,448	83,448
Property and equipment, net	77,045	95,478
Right-of-use assets, net	47,010	49,396
Other non-current assets	2,769	3,462
Total assets	$ 908,280	$ 877,189
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 9,396	$ 7,121
Accrued liabilities and other current liabilities	28,021	26,035
Success payment liabilities	5,773	15,740
Deferred revenue	6,095	7,916
Total current liabilities	49,285	56,812
Operating lease liabilities, net of current portion	50,957	57,756
Deferred revenue, net of current portion	89,066	84,808
Other non-current liabilities	532	893
Total liabilities	189,840	200,269
Commitments and contingencies (Note 12)		
Convertible preferred stock, $0.0001 par value; 195,021 shares authorized at December 31, 2020 and March 31, 2021; 194,474 shares issued and outstanding at December 31, 2020 and March 31, 2021	1,010,968	1,010,968
Stockholders' deficit:		
Common stock, $0.0001 par value; 264,905 shares authorized at December 31, 2020 and March 31, 2021; 15,570 and 17,831 shares issued and outstanding at December 31, 2020 and March 31, 2021, respectively	2	2
Additional paid-in capital	41,357	54,973
Accumulated other comprehensive income	256	163
Accumulated deficit	(334,143)	(389,186)
Total stockholders' deficit	(292,528)	(334,048)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 908,280	$ 877,189

The accompanying notes are an integral part of these condensed consolidated financial statements.

Lyell Immunopharma, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended March 31,	
	2020	2021
Revenue	$ 1,256	$ 2,445
Operating expenses (income):		
Research and development	25,500	41,529
General and administrative	8,880	16,831
Other operating income, net	(120)	(545)
Total operating expenses	34,260	57,815
Loss from operations	(33,004)	(55,370)
Interest income, net	2,341	354
Other income (expense), net	1,423	(27)
Net loss	(29,240)	(55,043)
Other comprehensive gain (loss):		
Net unrealized gain (loss) on marketable securities	632	(93)
Net comprehensive loss	$ (28,608)	$ (55,136)
Net loss attributed to common stockholders:		
Net loss	$ (29,240)	$ (55,043)
Deemed dividends upon repurchase of convertible preferred stock	(3,582)	—
Net loss attributed to common stockholders	$ (32,822)	$ (55,043)
Net loss per common share, basic and diluted	$ (2.82)	$ (3.19)
Weighted-average shares used to compute net loss per common share, basic and diluted	11,656	17,272

The accompanying notes are an integral part of these condensed consolidated financial statements.

Lyell Immunopharma, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands)
(unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2019	152,116	$ 519,163	11,181	$ 1	$ 18,108	$ 454	$ (129,671)	$ (111,108)
Issuance of Series C convertible preferred stock, net of $531 in issuance costs	42,905	492,469	—	—	—	—	—	—
Issuance of common stock to strategic partners	—	—	275	—	1,004	—	—	1,004
Repurchase of convertible preferred stock	(547)	(662)	—	—	(3,582)	—	—	(3,582)
Repurchase of common stock	—	—	(2,032)	—	(11,806)	—	—	(11,806)
Stock-based compensation	—	—	1,289	—	3,274	—	—	3,274
Other comprehensive income	—	—	—	—	—	632	—	632
Net loss	—	—	—	—	—	—	(29,240)	(29,240)
Balance as of March 31, 2020	194,474	$1,010,970	10,713	$ 1	$ 6,998	$ 1,086	$ (158,911)	$ (150,826)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2020	194,474	$1,010,968	15,570	$ 2	$ 41,357	$ 256	$ (334,143)	$ (292,528)
Issuance of common stock upon exercise of stock options	—	—	242	—	884	—	—	884
Stock-based compensation	—	—	2,019	—	12,732	—	—	12,732
Other comprehensive loss	—	—	—	—	—	(93)	—	(93)
Net loss	—	—	—	—	—	—	(55,043)	(55,043)
Balance as of March 31, 2021	194,474	$1,010,968	17,831	$ 2	$ 54,973	$ 163	$ (389,186)	$ (334,048)

The accompanying notes are an integral part of these condensed consolidated financial statements.

Lyell Immunopharma, Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Three Months Ended March 31,	
	2020	2021
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (29,240)	$ (55,043)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	776	1,958
Stock-based compensation expense	3,274	12,732
Change in fair value of success payment liabilities	2,070	9,967
Change in fair value of warrants	(1,380)	43
Non-cash lease expense	1,575	1,040
Other	(121)	483
Changes in operating assets and liabilities:		
Prepaid expense and other assets	(1,333)	(342)
Accounts payable	921	634
Accrued liabilities and other liabilities	1,121	(2,632)
Deferred revenue	(1,255)	(2,437)
Net cash used in operating activities	(23,592)	(33,597)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(6,881)	(19,190)
Purchases of marketable securities	(239,032)	(48,291)
Sales and maturities of marketable securities	129,834	204,158
Net cash (used in) provided by investing activities	(116,079)	136,677
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of convertible preferred stock, net of issuance costs	492,469	—
Proceeds from exercise of stock options	—	884
Payments for the repurchase of common stock	(11,806)	—
Payments for the repurchase of preferred stock	(4,244)	—
Net cash provided by financing activities	476,419	884
Net increase in cash, cash equivalents and restricted cash	336,748	103,964
Cash, cash equivalents and restricted cash at beginning of period	98,472	140,872
Cash, cash equivalents and restricted cash at end of period	$ 435,220	$ 244,836
Represented by:		
Cash and cash equivalents	$ 434,754	$ 244,370
Restricted cash	466	466
Total	$ 435,220	$ 244,836
SUPPLEMENTAL CASH FLOW INFORMATION		
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 2,201	$ 13,543
Operating lease right-of-use assets obtained in exchange for lease obligations	$ 30,476	$ —
Remeasurement of operating lease right of use asset for lease modification	$ 2,774	$ 4,208
Cash received for amounts related to tenant improvement allowances	$ 998	$ 2,063
Cash paid for amounts included in the measurement of lease liabilities	$ 897	$ 1,362
Deferred offering costs included in accounts payable and accrued liabilities	$ —	$ 398

The accompanying notes are an integral part of these condensed consolidated financial statements.

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

1. Organization

Lyell Immunopharma, Inc. (the "Company") was incorporated in Delaware in June 2018. The Company is a T cell reprogramming company dedicated to the mastery of T cells to eradicate solid tumors. The Company is building a multi-modality product pipeline. The Company's primary activities since incorporation have been to develop T cell therapies, perform research and development, acquire technology, enter into strategic collaboration and license arrangements, enable manufacturing activities in support of its product candidate development efforts, organize and staff the Company, business plan, establish its intellectual property portfolio, raise capital and provide general and administrative support for these activities.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The condensed consolidated financial statements include the accounts of Lyell Immunopharma, Inc. and its wholly-owned subsidiaries. All significant intercompany transactions and balances are eliminated in consolidation.

Use of Estimates

The preparation of the Company's condensed consolidated financial statements in conformity with GAAP requires management to make judgments, estimates and assumptions that affect reported amounts and related disclosures. Specific accounts that require management estimates include, but are not limited to, stock-based compensation, valuation of success payments, revenue recognition, the fair value of convertible preferred and common stock and accrued expenses. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ materially from those estimates.

Unaudited Condensed Consolidated Financial Statements

The condensed consolidated balance sheet as of March 31, 2021, and the condensed consolidated statements of operations and comprehensive loss, cash flows and convertible preferred stock and stockholders' deficit for the three months ended March 31, 2020 and 2021 are unaudited. The unaudited condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair presentation of the Company's financial position as of March 31, 2021, results of operations and cash flows for the three months ended March 31, 2020 and 2021. The financial data and the other financial information disclosed in these notes to the condensed consolidated financial statements related to the three months ended March 31, 2020 and 2021 are also unaudited. The condensed consolidated results of operations for the three months ended March 31, 2021 are not necessarily indicative of results to be expected for the year ending December 31, 2021 or for any other future annual or interim period. The consolidated balance sheet as of December 31, 2020 included herein was derived from the audited consolidated financial statements as of that date. These condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the related notes thereto included elsewhere in this registration statement.

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

Concentrations of Credit Risk and Off-Balance Sheet Risk

The Company maintains its cash and cash equivalents and restricted cash with high quality, accredited financial institutions. These amounts, at times, may exceed federally insured limits. The Company also makes short-term investments in money market funds, U.S. Treasury securities, U.S. government agency securities, corporate bonds and commercial paper, which can be subject to certain credit risk. However, the Company mitigates the risks by investing in high-grade instruments, limiting exposure to any one issuer or type of investment and monitoring the ongoing creditworthiness of the financial institutions and issuers. The Company has not experienced any credit losses in such accounts and does not believe it is exposed to significant risk on these funds. The Company has no off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts or other hedging arrangements.

Deferred Offering Costs

The Company capitalizes incremental legal, accounting, filing and other third-party fees that are directly associated with the planned initial public offering ("IPO") as other non-current assets until the IPO is consummated. After consummation of the IPO, these costs will be recorded in stockholders' deficit as a reduction of additional paid-in-capital generated as a result of the offering. In the event the offering is terminated, or delayed, deferred offering costs will be expensed. As of March 31, 2021, the Company had incurred $0.4 million in deferred offering costs related to the planned IPO, which was recorded in other non-current assets.

3. Collaboration, License and Success Payment Agreements

Fred Hutch

In 2018, the Company entered into a license agreement with Fred Hutchinson Cancer Research Center ("Fred Hutch") pertaining to certain patent rights. In 2018, the Company also entered into a research and collaboration agreement ("Fred Hutch Collaboration Agreement"), focused on research and development of cancer immunotherapy products and the Company recognized $1.0 million of research and development expenses in connection with the Fred Hutch Collaboration Agreement for both the three months ended March 31, 2020 and 2021.

In 2018, the Company also granted Fred Hutch rights to certain success payments. The potential payments for the Fred Hutch success payments are based on multiples of increased value ranging from 10x to 50x based on a comparison of the estimated per share fair value of the Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged, relative to its original $1.83 issuance price. The aggregate success payments to Fred Hutch are not to exceed $200.0 million, which would only occur upon a 50 times increase in value. Each threshold is associated with a success payment, ascending from $10.0 million at $18.29 per share to $200.0 million at $91.44 per share, payable if such threshold is reached during the measurement period. Any previous success payments made are credited against the success payment owed as of any valuation date, such that Fred Hutch does not receive multiple success payments in connection with the same threshold. The term of the success payment agreement ends on the earlier to occur of (i) the nine year anniversary of the date of the agreement and (ii) a change in control transaction.

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

The following table summarizes the aggregate potential success payments, which are payable to Fred Hutch in cash or cash equivalents or, at the Company's discretion, publicly-tradeable shares of the Company's common stock:

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

The success payments will be owed if the estimated per share fair value of the Series A convertible preferred stock on the contractually specified valuation measurement dates during the term of the success payment agreement equals or exceeds the above outlined multiples. The valuation measurement dates are triggered by the following events: the one-year anniversary of an IPO of the Company's common stock and each two-year anniversary of the IPO thereafter, the closing of a change in control transaction, and the last day of the term of the success payment agreement, unless the term has ended due to the closing of a change of control transaction.

The estimated fair value of the success payments to Fred Hutch as of December 31, 2020 and March 31, 2021 was $8.0 million and $18.2 million, respectively. The success payment liability is estimated at fair value at inception and at each subsequent reporting period and the expense is accreted over the service period of the Fred Hutch Collaboration Agreement. With respect to Fred Hutch success payment obligations, the Company recognized expense of $2.1 million and $8.1 million, which was recorded in research and development expense for the three months ended March 31, 2020 and 2021, respectively.

Stanford

In 2019, the Company entered into a license agreement with The Board of Trustees of the Leland Stanford Junior University ("Stanford") pertaining to certain patent rights. In October 2020, the Company entered into a research and collaboration agreement with Stanford ("Stanford Collaboration Agreement"), focused on research and development of cellular immunotherapy products and the Company recognized $0.8 million of research and development expenses in connection with the Stanford Collaboration Agreement for the three months ended March 31, 2021. As the Stanford Collaboration Agreement was entered into in October 2020, no expense was recognized for the three months ended March 31, 2020.

In October 2020, the Company also granted Stanford rights to certain success payments. The potential payments for the Stanford success payments are based on multiples of increased value ranging from 10x to 50x based on a comparison of the estimated per share fair value of the Series A convertible preferred stock, or any security into which such stock has been converted or for which it has been exchanged, relative to its original $1.83 issuance price. The aggregate success payments to Stanford are not to exceed $200.0 million, which would only occur upon a 50 times increase in value. Each threshold is associated with a success payment, ascending from $10.0 million at $18.29 per share to $200.0 million at $91.44 per share, payable if such threshold is reached during the measurement period. Any previous success payments made are credited against the success payment owed as of any valuation date, so that Stanford does not receive multiple success payments in connection with the same threshold. The term of each success payment agreement ends on the earlier to occur of (i) the nine year anniversary of the date of the agreement and (ii) a change in control transaction.

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

The following table summarizes the aggregate potential success payments, which are payable to Stanford in cash or cash equivalents or, at the Company's discretion, publicly-tradeable shares of the Company's common stock:

Multiple of initial equity value at issuance	10x	20x	30x	40x	50x
Per share Series A convertible preferred stock price required for payment	$18.29	$36.58	$54.86	$73.15	$91.44
Aggregate success payment(s) (in millions)	$ 10	$ 40	$ 90	$ 140	$ 200

The success payments will be owed if the estimated per share fair value of the Series A convertible preferred stock on the contractually specified valuation measurement dates during the term of the success payment agreement equals or exceeds the above outlined multiples. The valuation measurement dates are triggered by the following events: the one-year anniversary of an IPO of the Company's common stock and each two-year anniversary of the IPO thereafter, the closing of a change in control transaction, and the last day of the term of the success payment agreement, unless the term has ended due to the closing of a change of control transaction.

The estimated fair value of the success payments to Stanford as of December 31, 2020 and March 31, 2021 was $8.9 million and $19.6 million, respectively. The success payment liability is estimated at fair value at inception and at each subsequent reporting period and the expense is accreted over the service period of the Stanford Collaboration Agreement. With respect to Stanford success payment obligations, the Company recognized expense of $1.9 million, which was recorded in research and development expense for the three months ended March 31, 2021. As the rights to success payments were granted to Stanford in October 2020, no expense was recognized for the three months ended March 31, 2020.

GSK

In 2019, the Company entered into a Collaboration and License Agreement, amended in June 2020 ("GSK Agreement") with GlaxoSmithKline Intellectual Property (No. 5) Limited and Glaxo Group Limited (together, "GSK") for potential T cell therapies that apply the Company's platform technologies and cell therapy innovations with T cell receptors ("TCRs") or chimeric antigen receptors ("CARs") under distinct collaboration programs. The GSK Agreement has defined two initial collaboration targets and allows GSK to nominate seven additional targets through July 2024. The Company is expected to perform research and development services for each selected target up until a defined point (the "GSK Option Point"), at which time GSK will decide whether or not to exercise an option to obtain a license from the Company ("License Option") and take over the future development and commercialization. For each selected target, both parties will determine whether it will be developed under a Proof of Concept ("PoC") Development Program or Component Development Program. For a PoC Development Program, the Company is expected to conduct both preclinical and clinical development for the target and present clinical trial data to GSK in connection with their evaluation of whether to exercise the License Option. For a Component Development Program, the Company is obligated to perform preclinical studies only. Along with the research activities, the Company will also appoint three representatives to the joint steering committee ("JSC") and be responsible for the manufacture of all compounds and products necessary for its research and development activities.

The Company received a non-refundable upfront payment of $45.0 million under the GSK Agreement. The Company is entitled to certain payments upon the achievement of specified development and sales milestones (for each selected target that is already within GSK's pipeline and

meet certain criteria, the Company is eligible to receive up to an aggregate of approximately $400.0 million, and for each selected target that is not already within GSK's pipeline and meet certain criteria the Company is eligible to receive up to an aggregate of approximately $900.0 million) and tiered royalties on a per-product basis ranging from low to high single digits for targets that are already within GSK's pipeline and meet certain criteria, or from high single digit to low teens for all other targets. The Company is also entitled to potential milestone payments based on validating the Company's technology in a clinical setting up to an aggregate of approximately $200.0 million. Royalties and milestones are paid once per target, even if there is more than one Lyell innovation applied to a T cell therapy directed to that target. Any amounts received from GSK are generally non-refundable unless the Company terminates a collaboration target for safety or feasibility reasons and the funding received from GSK exceeds the costs incurred for the terminated target.

In connection with the GSK Agreement, in May 2019, the Company also entered into a Stock Purchase Agreement with GSK (the "GSK Stock Purchase Agreement"), pursuant to which the Company agreed to sell 30,253,189 shares of Series AA convertible preferred stock at a price of $6.78 per share. As of the issuance date, the estimated fair value of the Series AA convertible preferred stock was $4.84 per share, compared with the purchase price per share of $6.78. The difference of $58.6 million between the estimated fair value of the stock as of the issuance date and the purchase price was deemed to be additional consideration for the GSK Agreement. As a result, the total upfront payment for accounting purposes allocated to the GSK Agreement was $103.6 million.

The GSK Agreement was deemed to be within the scope of ASC 606 because GSK engaged the Company to provide research and development services, which are outputs of its ongoing activities, in exchange for consideration.

The Company identified the following two distinct performance obligations: (i) research and development services related to the two initial collaboration targets, inclusive of the JSC participation and the manufacture of compounds necessary for providing the research and development services and (ii) a material right for GSK to nominate seven additional collaboration targets for which the Company will perform research and development services until the GSK Option Point.

To allocate revenue among the performance obligations, the Company determined standalone selling prices ("SSP") of each obligation. For the research and development services, the SSP was calculated using a cost-plus margin approach. For the material right, the Company allocated the transaction price to the material right by reference to the underlying research and development services expected to be provided and the corresponding expected consideration. All amounts included in the transaction price are allocated to performance obligations proportionate to their SSPs.

As of March 31, 2021, the transaction price was deemed to be $103.6 million, consisting of the upfront payment of $45.0 million under the GSK Agreement and the $58.6 million allocated from the GSK Stock Purchase Agreement. Other than the upfront payment and the amounts allocated from the GSK Stock Purchase Agreement, all other contingent consideration that may be earned under the GSK Agreement is subject to uncertainties including but not limited to target addition, research and investigational new drug enabling studies, initiation of clinical trials, and other related achievements. Consequently, the transaction price currently does not include any such contingent consideration that, if included, could result in a probable significant reversal of cumulative revenue when related uncertainties become resolved. The Company will re-evaluate the transaction price at each reporting period. If and when contingent consideration is included in the transaction price, it will be allocated to the two performance obligations proportionate to their SSPs and a cumulative catchup in revenue will

be recorded for the portion of the services already completed. The remaining amounts will be deferred and recognized as the services are rendered.

The research and development services are transferred as the services are performed, with cost used as the measure of progress compared to total estimated cost to complete. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. The determination of the percentage of completion requires the Company to estimate the costs to complete the project. The Company makes a detailed estimate of the costs to complete, which is reassessed every reporting period based on the latest project plan and discussions with project teams. If a change in facts or circumstances occurs, the estimate will be adjusted, and the revenue will be recognized based on the revised estimate. The difference between the cumulative revenue recognized based on the previous estimate and the revenue recognized based on the revised estimate would be recognized as an adjustment to revenue in the period in which the change in estimate occurs.

The Company recognized revenue related to the research and development services related to the two initial targets of $1.3 million and $2.4 million for the three months ended March 31, 2020 and 2021, respectively. Changes in deferred revenue during the three months ended March 31, 2021 were as follows (in thousands):

Deferred revenue balance at December 31, 2020	$95,161
Revenue recognized during the period	(2,437)
Deferred revenue balance at March 31, 2021	$92,724

PACT

In June 2020, the Company entered into an agreement (the “PACT Agreement”) with PACT Pharma, Inc. (“PACT”) to jointly develop and test a next generation personalized anti-cancer T cell therapy against solid tumors. The Company paid PACT an upfront non-refundable payment of $50.0 million upon execution of the PACT Agreement. In November 2020, the parties agreed to suspend research and development activity under the PACT Agreement, and neither party would be required to conduct any further work under the development plan (including manufacturing development) nor incur any financial obligations (including milestone payments) that might otherwise arise, for as long as the parties continued to negotiate in good faith to resolve the issues that have arisen between them relating to the PACT Agreement.

In June 2020 in connection with the entry into the PACT Agreement, the Company also entered into a stock purchase agreement with PACT (“PACT SPA”), pursuant to which the Company purchased 17,806,901 shares of Series C-1 convertible preferred stock at a purchase price of $2.81 per share. As of the purchase date, the estimated fair value of the Series C-1 convertible preferred stock was $2.05 per share, and the difference between the estimated fair value of the preferred stock as of the purchase date and the purchase price of $13.6 million was deemed to be additional consideration for the PACT Agreement and recognized as research and development expense. As a result, the total upfront payment paid in connection with the PACT Agreement was $63.6 million and included in research and development expense. The remaining $36.4 million associated with the PACT Series C-1 convertible preferred stock was recorded in other investments.

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Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

In February 2021, the Company filed a demand for arbitration seeking, among other things, rescission of the PACT Agreement and the PACT SPA and recovery of the consideration paid thereunder.

4. Cash Equivalents and Marketable Securities

The fair value and amortized cost of cash equivalents and marketable securities by major security type as of December 31, 2020 and March 31, 2021 are presented in the following table (in thousands):

	December 31, 2020			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Money market funds	$ 50,513	$ —	$ —	$ 50,513
U.S. Treasury securities	202,674	27	—	202,701
U.S. government agency securities	205,558	207	(1)	205,764
Corporate debt securities	211,086	34	(11)	211,109
Total cash equivalents and marketable securities	$669,831	$ 268	$ (12)	$670,087

Classified as:	Fair Value
Cash equivalents	$ 117,879
Short-term marketable securities	472,213
Long-term marketable securities	79,995
Total cash equivalents and marketable securities	$ 670,087

	March 31, 2021			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Money market funds	$178,644	$ —	$ —	$178,644
U.S. Treasury securities	137,460	42	—	137,502
U.S. government agency securities	158,934	130	—	159,064
Corporate debt securities	145,539	4	(13)	145,530
Total cash equivalents and marketable securities	$620,577	$ 176	$ (13)	$620,740

Classified as:	Fair Value
Cash equivalents	$ 224,973
Short-term marketable securities	360,563
Long-term marketable securities	35,204
Total cash equivalents and marketable securities	$ 620,740

As of December 31, 2020 and March 31, 2021, the fair value of securities held by the Company in an unrealized loss position was $132.6 million and $93.3 million, respectively, and as of December 31, 2020 and March 31, 2021, securities held by the Company in an unrealized loss position have been in

the continuous loss position for less than 12 months. The Company evaluated its securities for other-than-temporary impairment and considers the decline in market value for the securities to be primarily attributable to current economic and market conditions. The Company does not intend to sell these securities nor does the Company believe that it will be required to sell these securities before recovery of their amortized cost basis. Gross realized gains and losses were *de minimis* for the three months ended March 31, 2020 and 2021 and as a result, amounts reclassified out of accumulated other comprehensive loss for the three months ended March 31, 2020 and 2021 were also *de minimis*.

As of December 31, 2020 and March 31, 2021, all of the Company's marketable securities had a maturity date of two years or less, were available for use and were classified as available-for-sale.

5. Other Investments

From time to time, the Company makes minority ownership strategic investments. As of December 31, 2020 and March 31, 2021, the aggregate carrying amounts of the Company's strategic investments in non-publicly traded companies were $83.4 million. These investments are measured at initial cost, minus impairment and changes, plus or minus, resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. There were no adjustments recorded to the carrying amount for other investments for the three months ended March 31, 2020 and 2021.

In November 2020, the Company made a strategic equity investment of $13.0 million in Outpace Bio, Inc. ("Outpace"), a privately-held company, which represented a minority ownership interest at the time of the strategic investment. Outpace is engaged in the research and development of protein and cell technology platforms and has financed its activities via issuances of preferred stock. The Company determined that Outpace is a variable interest entity ("VIE") as the at-risk equity holders, as a group, lack the characteristics of a controlling financial interest. The Company does not have majority voting rights, representation on Outpace's board of directors, or the power to direct the activities of this entity and therefore it is not the primary beneficiary. As of December 31, 2020 and March 31, 2021, the carrying value of the Company's investment in Outpace is $13.0 million, which is recorded in other investments.

6. Fair Value Measurements

The following table sets forth the fair value of the Company's financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Money market funds	$50,513	$ —	$ —	$ 50,513
U.S. Treasury securities	—	202,701	—	202,701
U.S. government agency securities	—	205,764	—	205,764
Corporate debt securities	—	211,109	—	211,109
Equity warrant investment	—	—	1,323	1,323
Total financial assets	$50,513	$619,574	$1,323	$671,410
Financial liabilities:				
Success payment liabilities	$ —	$ —	$5,773	$ 5,773
Total financial liabilities	$ —	$ —	$5,773	$ 5,773

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Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

	March 31, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Money market funds	$ 178,644	$ —	$ —	$ 178,644
U.S. Treasury securities	—	137,502	—	137,502
U.S. government agency securities	—	159,064	—	159,064
Corporate debt securities	—	145,530	—	145,530
Equity warrant investment	—	—	1,281	1,281
Total financial assets	$ 178,644	$ 442,096	$ 1,281	$ 622,021
Financial liabilities:				
Success payment liabilities	$ —	$ —	$ 15,740	$ 15,740
Total financial liabilities	$ —	$ —	$ 15,740	$ 15,740

The Company measures the fair value of money market funds based on quoted prices in active markets for identical assets or liabilities. The Level 2 marketable securities include U.S. Treasury and government agency securities and corporate debt securities. The Company's Level 2 securities are valued using third-party pricing sources. The pricing services utilize industry standard valuation models. Inputs utilized include market pricing based on real-time trade data for the same or similar securities and other significant inputs derived from or corroborated by observable market data.

The Level 3 financial instruments include an equity warrant investment and success payment liabilities. The Company's Level 3 financial instruments are valued using valuation models which include the Black Scholes model for valuing the equity warrant investment and a Monte Carlo simulation for the success payment liabilities. To determine the estimated fair value of the success payments, the Company uses a Monte Carlo simulation methodology which models the future movement of stock prices based on several key variables combined with empirical knowledge of the process governing the behavior of the stock price. The following variables were incorporated in the estimated fair value of the success payment liabilities: estimated fair value of the Series A convertible preferred stock, expected volatility, risk-free interest rate and the estimated number and timing of valuation measurement dates on the basis of which payments may be triggered. The computation of expected volatility was estimated based on available information about the historical volatility of stocks of similar publicly traded companies for a period matching the expected term assumption.

The following assumptions were incorporated into the calculation of the estimated fair value of the Fred Hutch success payment liability:

	December 31, 2020	March 31, 2021
Fair value of the Series A convertible preferred stock	$ 9.07	$ 14.99
Risk-free interest rate	0.10% - 1.52%	0.06% - 2.71%
Expected volatility	80%	75%
Expected term (in years)	1.00 - 6.97	0.75 - 6.72

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Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

The following assumptions were incorporated into the calculation of the estimated fair value of the Stanford success payment liability:

	December 31, 2020	March 31, 2021
Fair value of the Series A convertible preferred stock	$ 9.07	$ 14.99
Risk-free interest rate	0.10% - 1.53%	0.06% - 2.71%
Expected volatility	80%	75%
Expected term (in years)	1.00 - 8.75	0.75 - 8.50

The Company utilizes estimates and assumptions in determining the estimated success payment liabilities and associated expense. A small change in the valuation of the Company's Series A convertible preferred stock may have a relatively large change in the estimated fair value of the success payment liability and associated expense.

The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial assets and liabilities (in thousands):

	Equity Warrant Investment	Success Payment Liabilities
Balance at December 31, 2020	$ 1,323	$ 5,773
Change in fair value(1)	(42)	9,967
Balance at March 31, 2021	$ 1,281	$ 15,740

(1) The change in fair value associated with the equity warrant investment is recorded in other income (expense), net and the change in fair value associated with success payments liabilities is recorded in research and development expense.

7. Leases

The Company's lease portfolio is comprised of operating leases for laboratory, office and manufacturing facilities located in South San Francisco, California, Seattle, Washington and Bothell, Washington with contractual periods expiring between December 2021 and March 2031.

In addition to minimum rent, the leases require payment of real estate taxes, insurance, common area maintenance charges and other executory costs. These additional charges are considered variable lease costs and are recognized in the period in which the costs are incurred.

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Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

The following table summarizes the Company's future minimum operating lease commitments, including expected lease incentives to be received, as of March 31, 2021 (in thousands):

Year ending December 31:	
2021 (remaining nine months)	$ 7,031
2022	10,733
2023	11,054
2024	11,385
2025	11,898
Thereafter	60,564
Total undiscounted lease payments	112,665
Less: imputed interest	(36,414)
Less: tenant improvement allowances	(15,902)
Total operating lease liabilities(1)	$ 60,349

(1) Total operating lease liabilities consisted of $2.5 million included in accrued liabilities and other current liabilities and $57.8 million in long-term lease liabilities.

The operating lease costs for all operating leases were $2.5 million and $2.4 million for the three months ended March 31, 2020 and 2021, respectively. The operating lease costs and total commitments for short-term leases was *de minimis* for the three months ended March 31, 2020 and 2021. Variable lease costs for operating leases were $0.4 million and $1.1 million for the three months ended March 31, 2020 and 2021, respectively.

8. Convertible Preferred Stock

In March 2020, the Company sold 42,905,042 shares of its Series C convertible preferred stock at a price of $11.49 per share for proceeds of $492.5 million, net of issuance costs of $0.5 million. In connection with this financing, the Company amended and restated its certificate of incorporation to increase its authorized capital stock to 264,905,000 shares designated as common stock and 195,021,237 shares designated as preferred stock, of which 97,933,475 shares are designated as Series A convertible preferred stock, 23,929,531 shares are designated as Series B convertible preferred stock, 30,253,189 shares are designated as Series AA convertible preferred stock and 42,905,042 shares are designated as Series C convertible preferred stock.

In March 2020, the Company repurchased 546,806 shares of its Series A convertible preferred stock from a related party for a purchase price of $4.2 million.

Conversion

Shares of the Company's Series A, Series B, Series AA and Series C preferred stock are convertible into common stock based on a defined conversion ratio, which was initially set at one-for-one, adjustable for certain events. No such adjustment had occurred as of December 31, 2020 and March 31, 2021.

The preferred stock is convertible into common stock at the option of the holder at any time without any additional consideration, and all shares convert automatically upon the closing of the sale of shares of common stock in an underwritten public offering pursuant to an effective registration

statement under the Securities Act of 1933, as amended (the "Securities Act"), provided that such offering results in at least $50.0 million of gross proceeds to the Company. The Company's Series A, Series B, Series AA and Series C convertible preferred stock will automatically convert into shares of common stock upon the vote or written consent of the holders of at least a majority of the outstanding Series A, Series B, Series AA and Series C convertible preferred stock voting together as a single class on an as-converted to common stock basis.

Dividends

Each holder of the Company's Series A, Series B, Series AA and Series C convertible preferred stock is entitled to receive non-cumulative dividends, when and if declared by the Company's board of directors, at an annual rate of 8% of the original issue price prior to and in preference to the payment of a dividend on common stock. No dividends have been declared to date.

Liquidation Preference

In the event that the Company is liquidated either voluntarily or involuntarily, or if any event occurs that is deemed a liquidation under the Company's certificate of incorporation, each holder of the Company's Series A, Series B, Series AA and Series C convertible preferred stock will be entitled to receive a liquidation preference out of any proceeds from the liquidation before any distributions are made to the holders of common stock. The liquidation preference for each share of the Series A, Series B and Series C convertible preferred stock is equal to the original issue price for such series (plus any declared but unpaid dividends), which is $1.83 for each of the Series A convertible preferred stock, $6.78 for each of the Series B convertible preferred stock and $11.49 for each of the Series C convertible preferred stock or the amount per share as would have been payable had all shares of Series A, Series B and Series C convertible preferred been converted into common stock, respectively. The liquidation preference for each share of the Series AA convertible preferred stock is equal to fifty percent (50%) of the original issue price of Series AA preferred stock of $6.78 per share (plus any declared but unpaid dividends), which is $3.39 for each of the Series AA convertible preferred stock, or the amount per share as would have been payable had all shares of Series AA convertible preferred been converted into common stock.

Voting Rights

Each holder of convertible preferred stock votes (on an as-converted to common stock basis) with the other voting stock of the Company. Certain actions specified in the certificate of incorporation require the consent of at least a majority of the Company's Series A convertible preferred stock, Series B convertible preferred stock, Series AA convertible preferred stock and Series C convertible preferred stock, together as a single class on an as-converted to common stock basis. Certain actions specified in the certificate of incorporation may also require the consent of at least a majority of the Series A convertible preferred stock, voting as a single class, and/or at least a majority of the Series B convertible preferred stock, voting as a single class, and/or at least a majority of the Series AA convertible preferred stock, voting as a single class and/or at least a majority of the Series C convertible preferred stock, voting as a single class. Certain actions specified in the certificate of incorporation require the consent of at least a majority of the Series A convertible preferred stock, Series B and Series C convertible preferred stock voting together, separately as a single class.

In addition, the stockholders of the Company have entered into a voting agreement pursuant to which one of the holders of Series A convertible preferred stock is permitted to designate two members of the Company's board of directors, which right expires upon an IPO.

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Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

9. Common Stock

As of December 31, 2020 and March 31, 2021, there were 15,569,788 shares and 17,830,523 shares of the Company's common stock outstanding, respectively, excluding 7,562,503 shares and 5,525,002 shares, respectively, of restricted stock awards ("RSAs") outstanding that are subject to vesting requirements.

The Company is required to reserve sufficient shares of common stock for future issuance upon the conversion of convertible preferred stock. As of March 31, 2021, the Company had reserved 195,021,237 shares of common stock for future conversion of its Series A, Series B, Series AA and Series C convertible preferred stock.

Each share of the Company's common stock is entitled to one vote, subject to certain voting rights of its Series A, Series B, Series AA and Series C convertible preferred stock.

In March 2020, the Company repurchased 2,032,166 shares of its common stock from a related party for a purchase price of $11.8 million.

10. Stock-Based Compensation

Equity Incentive Plan

In 2018, the Company established the 2018 Equity Incentive Plan (the "2018 Plan") under which it may grant incentive stock options, non-statutory stock options, RSAs, restricted stock units, stock appreciation rights and other stock-based awards. Terms of stock awards, including vesting requirements, are determined by the board of directors or by a committee authorized by the Company's board of directors, subject to provisions of the 2018 Plan. The term of any stock option granted under the 2018 Plan cannot exceed ten years. Generally, awards granted by the Company vest over four years, but may be granted with different vesting terms.

As of March 31, 2021, 3,723,796 shares were available for future issuance pursuant to the 2018 Plan.

Stock-Based Compensation Expense

Stock-based compensation expense by classification included within the condensed consolidated statements of operations and comprehensive loss was as follows (in thousands):

	Three Months Ended March 31,	
	2020	2021
Research and development	$2,047	$ 4,851
General and administrative	1,227	7,881
Total stock-based compensation expense	$3,274	$12,732

Total stock-based compensation cost related to unvested awards not yet recognized and the weighted-average periods over which the awards are expected to be recognized as of March 31, 2021 were as follows:

Unrecognized stock-based compensation cost (in thousands)	$ 104,397
Expected weighted-average period compensation cost to be recognized (in years)	2.85

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

Restricted Stock Awards

A summary of the Company's RSAs activity was as follows:

	Number of Shares	Weighted-Average Value at Grant Date Per Share
Unvested shares as of December 31, 2020	7,562,503	$ 0.0001
Vested	(2,018,751)	0.0001
Forfeited	(18,750)	0.0001
Unvested shares as of March 31, 2021	5,525,002	$ 0.0001

Stock Options

A summary of the Company's stock option activity was as follows:

	Number of Stock Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Options outstanding as of December 31, 2020	34,413,889	$ 3.33		
Granted	8,522,032	6.29		
Exercised	(241,984)	3.65		
Canceled or forfeited	(2,136,981)	3.76		
Options outstanding as of March 31, 2021	40,556,956	$ 3.92	8.74	$ 354,688
Options exercisable as of March 31, 2021	20,152,899	$ 2.36	8.11	$ 207,874

The fair value of stock options granted to employees, directors and consultants was estimated on the date of grant using the Black-Scholes option pricing model using the following weighted-average assumptions:

	Three Months Ended March 31,	
	2020	2021
Risk-free interest rate	1.65%	0.68%
Expected volatility	75%	80%
Expected term (in years)	6.04	6.06
Expected dividend yield	0%	0%

The weighted average grant date fair value of options granted for the three months ended March 31, 2020 and 2021 was $2.46 per share and $4.29 per share, respectively.

11. Net Loss Per Share

Basic and diluted net loss per share attributed to common stockholders is calculated by dividing net loss attributed to common stockholders by the weighted average number of common shares outstanding during the period, without consideration for common stock equivalents. The Company's potentially dilutive shares, which include preferred stock, unvested RSAs and options to purchase common stock, are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

Lyell Immunopharma, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements—(Continued)

The amounts in the table below were excluded from the calculation of diluted net loss per share attributed to common stockholders for the periods indicated due to their anti-dilutive effect:

	Three Months Ended March 31,	
	2020	2021
Series A convertible preferred stock	97,386,669	97,386,669
Series B convertible preferred stock	23,929,531	23,929,531
Series AA convertible preferred stock	30,253,189	30,253,189
Series C convertible preferred stock	42,905,042	42,905,042
Unvested RSAs	12,373,963	5,525,002
Options to purchase common stock	31,153,551	40,556,956
Total	238,001,945	240,556,389

12. Commitments and Contingencies

Collaboration and License Agreements

We have entered into certain collaboration and license agreements, including those identified in Note 3, *Collaboration, License and Success Payment Agreements* above, with third parties that include the funding of certain development, manufacturing and commercialization efforts with the potential for future milestone and royalty payments upon the achievement of pre-established developmental, regulatory and/or commercial milestones. The Company's obligation to fund these efforts is contingent upon continued involvement in the programs and/or the lack of any adverse events which could cause the discontinuance of the programs. Due to the nature of these agreements, the future potential payments are inherently uncertain, and accordingly no amounts had been recorded for the potential future achievement of these targets as of December 31, 2020 and March 31, 2021.

13. Related-Party Transactions

The Company is party to the GSK Agreement, who is a holder of more than 10% of the Company's equity. See Note 3, *Collaboration, License and Success Payment Agreements*. Deferred revenue of $6.1 million and $7.9 million as of December 31, 2020 and March 31, 2021, respectively, and deferred revenue, net of current portion of $89.1 million and $84.8 million as of December 31, 2020 and March 31, 2021, respectively, was in connection with the GSK Agreement. Revenue recognized in connection with the GSK agreement was $1.3 million and $2.4 million for the three months ended March 31, 2020 and 2021, respectively.

In March 2020, the Company repurchased 546,806 shares of its Series A convertible preferred stock and 2,032,166 shares of its common stock from a related party. See Note 8, *Convertible Preferred Stock* and Note 9, *Common Stock*.

14. Subsequent Events

From April 1, 2021 to June 9, 2021, the Company granted stock options to purchase 1,930,000 shares of common stock with a weighted-average exercise price of $13.20 per share pursuant to the 2018 Plan. The Company expects to recognize stock compensation expense of approximately $5 million for these stock option grants based on an assumed initial public offering price of $17.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus. The actual amount of such stock compensation expense will be adjusted based on the actual public offering price determined at pricing.

25,000,000 Shares

Lyell Immunopharma, Inc.

Common Stock

Goldman Sachs & Co. LLC **BofA Securities** **J.P. Morgan** **Morgan Stanley**

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Unless otherwise indicated, all references to "Lyell," the "company," "we," "our," "us" or similar terms refer to Lyell Immunopharma, Inc.

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses to be paid by us, other than underwriting discounts and commissions, in connection with this offering. All amounts shown are estimates except for the Securities and Exchange Commission (the SEC) registration fee, the Financial Industry Regulatory Authority, Inc. (FINRA) filing fee and The Nasdaq Global Market (Nasdaq) listing fee.

	Amount Paid or to Be Paid
SEC registration fee	$ 56,460
FINRA filing fee	225,500
Nasdaq listing fee	295,000
Printing and engraving expenses	380,000
Legal fees and expenses	1,685,000
Accounting fees and expenses	1,200,000
Custodian transfer agent and registrar fees	4,000
Miscellaneous expenses	—
Total	$ 3,845,960

Item 14. Indemnification of Directors and Executive Officers.

Section 145 of the DGCL, authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and executive officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act. Our amended and restated certificate of incorporation that will be in effect immediately after the closing of this offering permits indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the DGCL, and our amended and restated bylaws that will be in effect on the closing of this offering provide that we will indemnify our directors and executive officers and permit us to indemnify our employees and other agents, in each case to the maximum extent permitted by the DGCL.

We have entered into indemnification agreements with our directors and executive officers, whereby we have agreed to indemnify our directors and executive officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or executive officer was, or is threatened to be made, a party by reason of the fact that such director or executive officer is or was a director, executive officer, employee, or agent of Lyell, provided that such director or executive officer acted in good faith and in a manner that the director or executive officer reasonably believed to be in, or not opposed to, the best interest of Lyell.

At present, there is no pending litigation or proceeding involving a director or executive officer of Lyell regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Securities Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

The underwriters are obligated, under certain circumstances, under the underwriting agreement to be filed as Exhibit 1.1 to this Registration Statement, to indemnify us and our officers and directors against liabilities under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding unregistered securities issued by us since our inception in June 2018.

Equity Plan-Related Issuances

1. We have granted to certain of our directors, employees and consultants options to purchase 50,645,129 shares of our common stock with per share exercise prices ranging from $0.10 to $14.40 under the 2018 Plan.
2. We have issued to certain of our directors, employees and consultants an aggregate of 482,545 shares of our common stock at per share purchase prices ranging from $0.10 to $6.24 pursuant to exercises of options under the 2018 Plan for an aggregate purchase price of $1,697,783.
3. We have granted to certain of our directors, employees and consultants 4,263,038 shares of restricted common stock under the 2018 Plan. These issuances were at purchase prices from $0.0001 to $0.10 per share for aggregate consideration of $416,314, payable in cash or consideration for services rendered.

Other Issuances of Capital Stock

4. In multiple closings held between September 2018 and December 2018, we issued and sold an aggregate of 20,450,000 shares of restricted common stock. These issuances were at a purchase price of $0.0001 per share for an aggregate purchase price of $2,045, payable in cash or transfer of technology.
5. In multiple closings held between September 2018 and February 2019, we issued and sold an aggregate of 97,933,475 shares of our Series A convertible preferred stock at a purchase price of $1.8288 per share for an aggregate purchase price of $179,100,739.
6. In December 2018, we issued Fred Hutchinson Cancer Research Center 1,075,000 shares of common stock in consideration for the license agreement.
7. In January 2019, we issued The Board of Trustees of the Leland Stanford Junior University 910,000 shares of common stock in consideration for the license agreement and granted a right for Stanford to purchase an additional $5.0 million of our Series B convertible preferred stock. In March 2019, Stanford exercised this right and purchased 737,882 shares of our Series B convertible preferred stock.
8. In multiple closings held between March 2019 and May 2019, we issued and sold an aggregate of 23,929,531 shares of our Series B convertible preferred stock at a purchase price of $6.776145 per share for an aggregate purchase price of $162,149,972.
9. In May 2019, we entered into a Stock Purchase Agreement with GSK, pursuant to which, in July 2019, we issued and sold 30,253,189 shares of Series AA convertible preferred stock at a price of $6.776145 per share for an aggregate purchase price of $204,999,995.

10. In January 2020, we issued University of Washington 275,000 shares of common stock in consideration for the license agreement.

11. In March 2020, we issued and sold an aggregate of 42,905,042 shares of our Series C convertible preferred stock at a purchase price of $11.49049 per share for an aggregate purchase price of $492,999,956.

12. In May 2020, we issued an aggregate of 688,463 shares of our common stock in consideration for an asset purchase pursuant to a stock purchase agreement at a purchase price of $5.81 per share for an aggregate purchase price of $3,999,970.

The offers, sales and issuances of the securities described in paragraphs (1) through (3) were deemed to be exempt from registration under Rule 701 promulgated under the Securities Act as transactions under compensatory benefit plans and contracts relating to compensation, or under Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving a public offering. The recipients of such securities were our directors, employees or bona fide consultants and received the securities under our equity incentive plans. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about us.

The offers, sales and issuances of the securities described in paragraphs (4) through (12) were deemed to be exempt under Section 4(a)(2) of the Securities Act or Rule 506 of Regulation D under the Securities Act as a transaction by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about us. No underwriters were involved in these transactions.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Number	Description
1.1	Form of Underwriting Agreement.
3.1+	Amended and Restated Certificate of Incorporation, as currently in effect.
3.2	Form of Amended and Restated Certificate of Incorporation, to be in effect immediately after the closing of the offering.
3.3+	Bylaws, as currently in effect.
3.4	Form of Amended and Restated Bylaws, to be in effect immediately after the closing of the offering.
4.1	Form of Common Stock Certificate.
4.2+	Amended and Restated Investors' Rights Agreement, by and among the Registrant and certain of its stockholders, dated March 5, 2020.
5.1	Opinion of Cooley LLP.
10.1+	Lyell Immunopharma, Inc. 2018 Equity Incentive Plan, as amended.

Exhibit Number	Description
10.2+	Forms of Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise and Restricted Stock Award Agreement under the Lyell Immunopharma, Inc. 2018 Equity Incentive Plan.
10.3	Lyell Immunopharma, Inc. 2021 Equity Incentive Plan.
10.4	Forms of Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise under the Lyell Immunopharma, Inc. 2021 Equity Incentive Plan.
10.5	Forms of Restricted Stock Unit Grant Notice and Award Agreement under the Lyell Immunopharma, Inc. 2021 Equity Incentive Plan.
10.6	Lyell Immunopharma, Inc. 2021 Employee Stock Purchase Plan.
10.7	Lyell Immunopharma, Inc. 2021 Non-Employee Director Compensation Policy.
10.8+	Lyell Immunopharma, Inc. Officer Severance Plan.
10.9+	Form of Indemnification Agreement by and between the Registrant and its directors and executive officers.
10.10+	Amended Offer Letter by and between the Registrant and Richard Klausner, dated July 23, 2020.
10.11+	Amended Offer Letter by and between the Registrant and Elizabeth Homans, dated July 23, 2020.
10.12+	Offer Letter by and between the Registrant and Charles Newton, dated February 3, 2021.
10.13+	Offer Letter by and between the Registrant and Heather Turner, dated February 1, 2019.
10.14+	Offer Letter by and between the Registrant and Stephen Hill, dated May 9, 2019.
10.15*	Collaboration and License Agreement by and between the Registrant, GlaxoSmithKline Intellectual Property (No. 5) Limited and Glaxo Group Limited, dated May 23, 2019, as amended.
10.16*+	License Agreement by and between the Registrant and The Board of Trustees of the Leland Stanford Junior University, dated January 29, 2019.
10.17+	Success Payment Agreement, by and between the Registrant and The Board of Trustees of the Leland Stanford Junior University, dated October 1, 2020.
10.18+	Success Payment Agreement, by and between the Registrant and Fred Hutchinson Cancer Research Center, dated December 19, 2018.
10.19+	Standard Office Lease for Building C by and between the Registrant and Bre Wa Office Owner LLC, dated August 28, 2019.
10.20+	Standard Office Lease for Building E by and between the Registrant and Bre Wa Office Owner LLC, dated August 28, 2019.
10.21+	Lease by and between the Registrant and BMR-500 Fairview Avenue LLC, dated November 27, 2018, as amended.
10.22+	Lease Agreement by and between the Registrant and ARE-San Francisco No. 65, LLC, dated August 15, 2019, as amended.
10.23+	Lease Agreement by and between the Registrant and ARE-East Jamie Court, LLC, dated January 14, 2019, as amended.
23.1	Consent of independent registered public accounting firm.

Exhibit Number	Description
23.2	Consent of Cooley LLP (included in Exhibit 5.1).
24.1+	Power of Attorney (included on signature page).

+ Previously filed.
* Portions of this exhibit (indicated by [*]) have been omitted because the registrant has determined that the information is both not material and is the type that the registrant treats as private or confidential.

(b) Financial Statement Schedules.

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or the notes thereto.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant under the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the U.S. Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(c) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of prospectus filed by the registrant under Rule 424(b)(1) or (4) or 497(h) under the Securities Act will be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, as amended, each post-effective amendment that contains a form of prospectus will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time will be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Amendment No. 1 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California on June 9, 2021.

LYELL IMMUNOPHARMA, INC.

By: /s/ Elizabeth Homans
Name: Elizabeth Homans
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Elizabeth Homans Elizabeth Homans	Chief Executive Officer and Director (*Principal Executive Officer*)	June 9, 2021
/s/ Charles Newton Charles Newton	Chief Financial Officer (*Principal Financial and Accounting Officer*)	June 9, 2021
* Richard D. Klausner, M.D.	Executive Chairman and Director	June 9, 2021
* Hans Bishop	Director	June 9, 2021
* Otis Brawley, M.D.	Director	June 9, 2021
* Catherine Friedman	Director	June 9, 2021
* Elizabeth Nabel, M.D.	Director	June 9, 2021
* Robert Nelsen	Director	June 9, 2021
* William Rieflin	Director	June 9, 2021
* Lynn Seely, M.D.	Director	June 9, 2021

*By: /s/ Elizabeth Homans
Elizabeth Homans
Attorney-in-Fact

Exhibit 1.1

Lyell Immunopharma, Inc.

Common Stock

Underwriting Agreement

_____, 2021

Goldman Sachs & Co. LLC
BofA Securities, Inc.
J.P. Morgan Securities LLC
Morgan Stanley & Co. LLC

As representatives (the "Representatives") of the several Underwriters named in Schedule I hereto,

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o BofA Securities, Inc.
One Bryant Park
New York, NY 10036

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, NY 10179

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, NY 10036

Ladies and Gentlemen:

Lyell Immunopharma, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of 25,000,000 shares of the Company's common stock, par value $0.0001 per share (the "Common Stock," and such shares, the "Firm Shares") and, at the election of the Underwriters, up to 3,750,000 additional shares (the "Optional Shares") of Common Stock (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the "Shares").

Goldman Sachs & Co. LLC (the "Directed Share Underwriter") has agreed to reserve up to 5% of the Shares to be purchased by it under this Agreement for sale at the direction of the Company to certain parties related to the Company (such parties, collectively, "Participants" and such program, the "Directed Share Program"). The Shares to be sold by the Directed Share Underwriter pursuant to the Directed Share Program are hereinafter called the "Directed Shares." Any Directed Shares not confirmed for purchase by the deadline established therefor by the Directed Share Underwriter in consultation with the Company will be offered to the public by the Underwriters as set forth in the Prospectus.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) A registration statement on Form S-1 (File No. 333-256470) (the "Initial Registration Statement") in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission"); the Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to the Representatives, excluding the exhibits thereto, have been declared effective by the Commission in such form; other than a registration statement, if any, increasing the size of the offering (a "Rule 462(b) Registration Statement"), filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act"), which became effective upon filing, no other document with respect to the Initial Registration Statement has been filed with the Commission; and no stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and no proceeding for that purpose or pursuant to Section 8A of the Act has been initiated or, to the Company's knowledge, threatened by the Commission (any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424(a) of the rules and regulations of the Commission under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of the Initial Registration Statement and the Rule 462(b) Registration Statement, if any, including all exhibits thereto and including the information contained in the form of final prospectus filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof and deemed by virtue of Rule 430A under the Act to be part of the Initial Registration Statement at the time it was declared effective, each as amended at the time such part of the Initial Registration Statement became effective or such part of the Rule 462(b) Registration Statement, if any, became or hereafter becomes effective, are hereinafter collectively called the "Registration Statement"; the Preliminary Prospectus relating to the Shares that was included in the Registration Statement immediately prior to the Applicable Time (as defined in Section 1(c) hereof) is hereinafter called the "Pricing Prospectus"; such final prospectus, in the form first filed pursuant to Rule 424(b) under the Act, is hereinafter called the "Prospectus"; any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Act or Rule 163B under the Act is hereinafter called a "Testing-the-Waters Communication"; any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a "Written Testing-the-Waters Communication"; and any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Shares is hereinafter called an "Issuer Free Writing Prospectus");

(b) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided*, *however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(b) of this Agreement);

(c) For the purposes of this Agreement, the "Applicable Time" is [●] p.m. (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule II(c) hereto, taken together (collectively, the "Pricing Disclosure Package"), as of the Applicable Time, did not, and as of each Time of Delivery (as defined in Section 4(a) of this Agreement) (as supplemented by any post-effective amendment thereto) will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not , and as of each Time of Delivery (as supplemented by any post-effective amendment thereto) will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(d) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(e) Neither the Company nor any of its subsidiaries has, since the date of the latest audited financial statements included in the Pricing Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole, in each case otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been (x) any change in the capital stock of the Company (other than as a result of (i)

the exercise or settlement (including any "net" or "cashless" exercises or settlement), if any, of stock options or restricted stock units or the award, vesting or settlement, if any, of stock options, restricted stock, or restricted stock units in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of stock upon conversion of Company securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or any of its subsidiaries or (y) any Material Adverse Effect (as defined below); as used in this Agreement, "Material Adverse Effect" shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations or prospects of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus;

(f) The Company and its subsidiaries have good and marketable title to all real property and good and marketable title to all personal property owned by them that is material to their business, in each case free and clear of all liens, encumbrances and defects except such as are described in the Pricing Prospectus or such as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries;

(g) Each of the Company and each of its subsidiaries has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect, and each subsidiary of the Company has been listed in the Registration Statement;

(h) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and Prospectus; and all of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and (except, in the case of any foreign subsidiary, for directors' qualifying shares) are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims, except for such liens or encumbrances described in the Pricing Prospectus and the Prospectus, if any;

(i) The unissued Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights except as have been validly waived or complied with;

(j) With respect to the stock options granted pursuant to the Company's equity plans (the "Stock Options"), (i) each Stock Option intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), so qualifies, (ii) each grant of a Stock Option was duly authorized no later than the date on which the grant of such Stock Option was by its terms to be effective (the "Grant Date") by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, (iii) each such grant was made in accordance with the terms of the applicable Company equity plan and all other applicable laws and regulatory rules or requirements and (iv) each such grant was properly accounted for in accordance with GAAP in the financial statements (including the related notes) of the Company. The Company has not knowingly granted, and there is no and has been no policy or practice of the Company of granting, Stock Options prior to, or otherwise coordinating the grant of Stock Options with, the release or other public announcement of material information regarding the Company or its results of operations or prospects;

(k) The issue and sale of the Shares to be sold by the Company and the compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company or any of its subsidiaries, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, except, in the case of this clauses (A) and (C) for such defaults, breaches, or violations that would not, individually or in the aggregate, have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares to be sold by the Company or the consummation by the Company of the transactions contemplated by this Agreement or the offering of the Directed Shares in any jurisdiction where the Directed Shares are being offered, except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority ("FINRA") of the underwriting terms and arrangements and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(l) Neither the Company nor any of its subsidiaries is (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(m) The statements set forth in the Pricing Prospectus and Prospectus under the caption "Description of Capital Stock", insofar as they purport to constitute a summary of the terms of the Stock, under the caption "Certain Material U.S. Federal Income Tax Consequences to Non-U.S. Holders", and under the caption "Underwriting", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects;

(n) Other than as set forth in the Pricing Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company, is a party or of which any property of the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company, is the subject which, if determined adversely to the Company or any of its subsidiaries (or such officer or director), would individually or in the aggregate reasonably be expected to have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others; there are no current or pending Actions that are required under the Act to be described in the Registration Statement or the Pricing Prospectus that are not so described therein; and there are no statutes, regulations or contracts or other documents that are required under the Act to be filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Prospectus that are not so filed as exhibits to the Registration Statement or described in the Registration Statement and the Pricing Prospectus;

(o) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(p) At the time of filing the Initial Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined under Rule 405 under the Act;

(q) Ernst & Young LLP, who have certified certain financial statements of the Company and its subsidiaries, are independent public accountants as required by the Act and the rules and regulations of the Commission thereunder;

(r) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that (i) complies with the requirements of the Exchange Act applicable to the Company, (ii) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (iii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes-Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law)**;**

(s) Since the date of the latest audited financial statements included in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(t) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(u) The Company has all requisite corporate power and authority to execute and deliver, and to perform its obligations under, this Agreement. This Agreement has been duly authorized, executed and delivered by the Company;

(v) Neither the Company nor any of its subsidiaries, nor any director, officer or employee of the Company or any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i) made, offered, promised or authorized any unlawful contribution, gift, entertainment or other unlawful expense (or taken any act in furtherance thereof); (ii) made, offered, promised or authorized any direct or indirect unlawful payment; or (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or the rules and regulations thereunder, the Bribery Act 2010 of the United Kingdom or any other applicable anti-corruption, anti-bribery or related law, statute or regulation (collectively, "Anti-Corruption Laws"); the Company and its subsidiaries have conducted their businesses in compliance with Anti-Corruption Laws and have instituted and maintained and will continue to maintain policies and procedures

reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of Anti-Corruption Laws;

(w) The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the applicable anti-money laundering laws of the various jurisdictions in which the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulation or guidelines issued, administered or enforced by any governmental agency (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(x) Neither the Company nor any of its subsidiaries, nor any director, officer or employee of the Company or any of its subsidiaries nor, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is (i) currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, Her Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "Sanctions"), (ii) located, organized, or resident in a country or territory that is the subject or target of Sanctions (a "Sanctioned Jurisdiction"), and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions; neither the Company nor any of its subsidiaries is knowingly engaged in, or has, at any time in the past five years, knowingly engaged in, any dealings or transactions with or involving any individual or entity that was or is, as applicable, at the time of such dealing or transaction, the subject or target of Sanctions or with any Sanctioned Jurisdiction; the Company and its subsidiaries have instituted, and maintain, policies and procedures designed to promote and achieve continued compliance with Sanctions;

(y) The financial statements included in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its subsidiaries at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company and its subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles

("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder. All disclosures contained in the Registration Statement, the Pricing Prospectus and the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Act, to the extent applicable;

(z) From the time of initial confidential submission of a registration statement relating to the Shares with the Commission (or, if earlier, the first date on which a Testing-the-Waters Communication was made in reliance on Section 5(d) of the Act) through the date hereof, the Company has been and is an "emerging growth company" as defined in Section 2(a)(19) of the Act (an "Emerging Growth Company");

(aa) The Company and its subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets, domain names, technology, know-how and other intellectual property described in the Registration Statement, Pricing Prospectus, and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted as described in the Registration Statement, Pricing Prospectus, and the Prospectus (collectively, "Intellectual Property"). To the knowledge of the Company, there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement, Pricing Prospectus, and the Prospectus as licensed to the Company or any of its subsidiaries, and the Company and each of its subsidiaries have taken all reasonable steps necessary to secure assignments to their respective title, rights and interests in the Intellectual Property from their respective employees, consultants, agents and contractors. To the knowledge of the Company, no third party has infringed, misappropriated, diluted or otherwise violated, or is infringing, misappropriating, diluting or otherwise violating, any Intellectual Property. To the knowledge of the Company, neither the Company nor any of its subsidiaries is infringing, misappropriating, diluting or otherwise violating, or has infringed, misappropriated, diluted or otherwise violated, any intellectual property rights of third parties. Except as described in the Registration Statement, the Pricing Prospectus, and the Prospectus, the Company and each of its subsidiaries is either the sole owner or the co-owner of the Intellectual Property owned by it and has the valid and enforceable right to use such Intellectual Property without the obligation to obtain consent to sublicense and without a duty of accounting to any co-owner, as applicable. Except as described in the Registration Statement, the Pricing Prospectus, and the Prospectus, neither the Company nor any of its subsidiaries is obligated to pay a material royalty, grant a license or option, or provide other material consideration to any third party in connection with the Intellectual Property of the Company or its subsidiaries. All employees, consultants, agents and contractors

engaged in the development of Intellectual Property on behalf of the Company and its subsidiaries have executed appropriate invention assignment agreements whereby such employees, consultants, agents and contractors presently assign all of their right, title and interest in and to such Intellectual Property to the Company, and to the Company's knowledge, no such agreement has been breached or violated. To the Company's knowledge, no employee of the Company or any of its subsidiaries is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company or such subsidiary. There is no pending or, to the Company's knowledge, threatened in writing action, suit, proceeding or claim by others: (A) challenging the Company's or any of its subsidiaries' rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that either the Company or any of its subsidiaries infringes, misappropriates, dilutes or otherwise violates, or would, upon the manufacturing or commercialization of any product or service described in the Registration Statement, the Pricing Prospectus and the Prospectus as under development, infringe, misappropriate, dilute or otherwise violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company and each of its subsidiaries have materially complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or such subsidiary, and all such agreements are in full force and effect. The product candidates described in the Registration Statement, the Pricing Prospectus, and the Prospectus as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company. No government funding, facilities or resources of a university, college, other educational institution or research center was used in the development of any Intellectual Property that is owned or purported to be owned by the Company or any of its subsidiaries that would confer any governmental agency or body, university, college, other educational institution or research center any claim or right of ownership to any such Intellectual Property;

(bb) (i) All patents and patent applications owned by or exclusively licensed to the Company or its subsidiaries or under which the Company or any of its subsidiaries has rights have, to the knowledge of the Company, been duly and properly filed and each issued patent is being diligently maintained and is valid and enforceable, and the Company is unaware of any facts that would preclude the issuance of a valid and enforceable patent on any pending patent application included in the Intellectual Property; (ii) to the knowledge of the Company, the Company, its subsidiaries, and the parties prosecuting such applications have complied with their duty of candor and disclosure to the U.S. Patent and Trademark Office (the "USPTO") and to any relevant foreign patent authority having similar requirements in connection with such patents and patent applications for which it has filing, prosecution, and/or maintenance responsibilities; and (iii) the Company is not aware of any prior art or public or commercial activity or other facts required to be disclosed to the USPTO or any relevant foreign patent authority that were not disclosed and which would preclude the grant of a patent in connection with any such application or would reasonably be expected to form the basis of a finding of invalidity or unenforceability with respect to any patents that have been issued with respect to such applications;

(cc) The Company and each of its subsidiaries: (i) has operated and currently operates its business in compliance in all material respects with all Health Care Laws (as defined below) applicable to the ownership, testing, development, manufacture, sales, marketing, promotion, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates or any product manufactured or distributed by the Company; (ii) have not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting material non-compliance with (A) any Health Care Laws or (B) or any material licenses, certificates, approvals, clearances, exemptions, authorizations, registrations, permits and supplements or amendments thereto required by any such Health Care Laws ("Regulatory Authorizations"); (iii) possess all material Regulatory Authorizations required to conduct their business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and neither the Company nor any of its subsidiaries are in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the Food and Drug Administration ("FDA"), the Department of Health and Human Services ("HHS") or any comparable foreign or other regulatory authority to which they are subject (collectively, the "Applicable Regulatory Authorities") or any other third party alleging that any product candidate, operation or activity is in material violation of any Health Care Laws or Regulatory Authorizations and the Company has no knowledge that any Applicable Regulatory Authority or other federal, state, local or foreign governmental or regulatory authority or any other third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) have not received written notice that any of the Applicable Regulatory Authority or other federal, state, local or foreign governmental or regulatory authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Regulatory Authorizations and has no knowledge that any of the Applicable Regulatory Authority or other federal, state, local or foreign governmental or regulatory authority is considering such action; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially true, complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); (vii) is not a party to or have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred or non-prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Applicable Regulatory Authority; and (viii) along with its employees, officers, directors and, to the Company's knowledge, agents, has not been excluded, suspended or debarred from participation in any government health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

The term “Health Care Laws” means Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395hhh (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286, 287, 1347 and 1349, and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., (“HIPAA”); the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the Exclusions Law, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq. (“HITECH”); the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations;

(dd) To the Company’s knowledge, the manufacturing facilities and operations of its suppliers and its subsidiaries’ suppliers are operated in compliance in all material respects with all applicable statutes, rules, regulations and policies of the Applicable Regulatory Authorities;

(ee) None of the Company’s product candidates has received marketing approval from any Applicable Regulatory Authority. All clinical and pre-clinical studies and trials that have been or are being conducted or sponsored by or on behalf of the Company or its subsidiaries, or in which the Company’s product candidates have participated, or that are described in the Registration Statement and the Prospectus (collectively, “Company Trials”), were, and if still pending are, being conducted in all material respects in accordance with all applicable Health Care Laws and current Good Clinical Practices and Good Laboratory Practices, standard medical and scientific research procedures and any applicable rules, regulations and policies of the jurisdiction in which such trials and studies are being conducted, including without limitation, 21 C.F.R. Parts 50, 54, 56, 58 and 312. The descriptions of the Company Trials, and the results thereof, contained in the Registration Statement, Pricing Disclosure Package and the Prospectus are accurate and complete in all material respects and fairly present the data derived therefrom. The Company has no knowledge of any studies or trials, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement and the Prospectus. Neither the Company nor any of its subsidiaries has received, and neither the Company nor any of its subsidiaries have any knowledge after due inquiry that any of their respective collaboration partners have received, any written notices, correspondence or other written communications from the Applicable Regulatory Authorities or any other governmental entity requiring or threatening the termination, material modification or suspension of Company Trials, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies or trials, and, to the Company’s knowledge, there are no reasonable grounds for the same. No investigational new drug application or comparable submission filed by or on behalf of the Company or any of its subsidiaries with the FDA has been terminated or suspended by the FDA or any other Applicable Regulatory Authority.

The Company has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in a Company Trial. In using or disclosing patient information received by the Company or any of its subsidiaries in connection with a Company Trial, the Company or such subsidiary has complied in all material respects with all applicable Health Care Laws. To the Company's knowledge, none of the Company Trials involved any investigator who has been disqualified as a clinical investigator or has been found by the FDA to have engaged in scientific misconduct;

(ff) (i) Neither the Company nor any of its subsidiaries is in material violation of any applicable federal, state, local or foreign law or regulation relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including without limitation, laws and regulations relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum and petroleum products (collectively, "Materials of Environmental Concern"), or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Materials of Environmental Concern (collectively, "Environmental Laws"), which violation includes, but is not limited to, noncompliance with any permits or other governmental authorizations required for the operation of the business of the Company or its subsidiaries under applicable Environmental Laws, or noncompliance with the terms and conditions thereof, nor has the Company or any of its subsidiaries received any written communication, whether from a governmental authority, citizens group, employee or otherwise, that alleges that the Company or any of its subsidiaries is in violation of any Environmental Law; (ii) there is no claim, action or cause of action filed with a court or governmental authority, no investigation with respect to which the Company has received written notice, and no written notice by any person or entity alleging potential liability for investigatory costs, cleanup costs, governmental responses costs, natural resources damages, property damages, personal injuries, attorneys' fees or penalties arising out of, based on or resulting from the presence, or release into the environment, of any Material of Environmental Concern at any location owned, leased or operated by the Company or any of its subsidiaries, now or in the past (collectively, "Environmental Claims"), pending or, to the Company's knowledge, threatened against the Company or any of its subsidiaries or any person or entity whose liability for any Environmental Claim the Company or any of its subsidiaries has retained or assumed either contractually or by operation of law; and (iii) to the best of the Company's knowledge, there are no past or present actions, activities, circumstances, conditions, events or incidents, including, without limitation, the release, emission, discharge, presence or disposal of any Material of Environmental Concern, that reasonably could result in a violation of any Environmental Law or form the basis of a potential Environmental Claim against the Company or any of its subsidiaries or against any person or entity whose liability for any Environmental Claim the Company or any of its subsidiaries has retained or assumed either contractually or by operation of law;

(gg) Except as would not reasonably be expected to have a Material Adverse Effect, (i) the Company and its subsidiaries have filed all necessary federal, state and foreign income, property and franchise tax returns and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings, and (ii) the Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 1(x) above in respect of all federal, state and foreign income, property and franchise taxes for all periods as to which the tax liability of the Company or any of its subsidiaries has not been finally determined;

(hh) (i) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), for which the Company, any of its subsidiaries or any member of its "Controlled Group" (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Code) would have any liability (each, a "Plan") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including, but not limited to, ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no Plan has failed (whether or not waived), or is reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan; (iv) no Plan is, or is reasonably expected to be, in "at risk status" (within the meaning of Section 303(i) of ERISA) and no Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA is in "endangered status" or "critical status" (within the meaning of Sections 304 and 305 of ERISA); (v) the fair market value of the assets of each Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan); (vi) no "reportable event" (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which would reasonably be expected to cause the loss of such qualification; (viii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guaranty Corporation, in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA); (ix) to the knowledge of the Company, there is no pending audit or investigation by any governmental agency or any non U.S. regulatory agency with respect to any Plan; and (x) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company or its Controlled Group affiliates compared to the amount of such contributions made in the Company's or its Controlled Group affiliates' most recently completed fiscal year; or (B) a material increase in the Company and its subsidiaries' "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company and its and their subsidiaries' most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (x) hereof, as would not, individually or in the aggregate, have a Material Adverse Effect;

(ii) No labor dispute with employees of the Company exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, contractors or customers except in each case as would not reasonably be expected to have a Material Adverse Effect. The Company has not received any notice of cancellation or termination with respect to any collective bargaining agreement to which it is a party;

(jj) The Company and its subsidiaries are, and at all prior times were, in material compliance with all applicable data privacy and security laws and regulations, including without limitation, as applicable, HIPAA, as amended by HITECH (collectively, "Privacy Laws"). To ensure compliance with the Privacy Laws, contractual obligations, industry standards, and any other legal obligations, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the "Policies") as applicable. "Personal Data" means all personal, personally identifiable, sensitive, confidential or regulated data, including (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; and (iv) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation. The Company and its subsidiaries since inception have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and has provided accurate notice of its Policies then in effect to its customers, employees, third party vendors and representatives as required by applicable laws and regulatory rules or requirements, except where the failure to do so would not, individually or in the aggregate, have a Material Adverse Effect. None of such disclosures made or contained in any of the Policies have been inaccurate, misleading, deceptive or in violation of any Privacy Laws or Policies in any material respect. The execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach of violation of any Privacy Laws or Policies. The Company further certifies that neither it nor any subsidiary: (i) has received written notice of any actual or potential liability under or relating to, or actual or potential material violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law;

(kk) Except as would not have a Material Adverse Effect, (A) the Company's and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, and (B) are free and clear of all bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants; the Company and its subsidiaries have

implemented and maintained commercially reasonable controls, policies, procedures, and safeguards designed to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all Personal Data) used in connection with their businesses, and there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries have complied with and are presently in compliance in all material respects with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, and all industry guidelines, standards, policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification; the Company has implemented backup disaster recovery technology consistent with industry standards and practice;

(ll) The Company has not taken and will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares.

(mm) The statistical and market-related data included in the Pricing Prospectus and the Prospectus are based on or derived from sources that the Company reasonably believes are reliable and accurate in all material respects.

(nn) Neither the Company nor any of its subsidiaries or, to the Company's knowledge, affiliates have taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares.

(oo) No forward-looking statement (within the meaning of Section 27A of the Act and Section 21E of the Exchange Act) included or incorporated by reference in any of the Registration Statement, the Pricing Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith;

(pp) Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included in each of the Registration Statement, the Pricing Prospectus and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects;

(qq) There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans and Sections 302 and 906 related to certifications;

(rr) Neither the Company nor any of its affiliates has taken or will take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company or any of its subsidiaries in connection with the offering of the Shares;

(ss) The Company and each of its subsidiaries have such permits, licenses, approvals, consents, franchises, certificates of need and other approvals or authorizations of governmental or regulatory authorities ("Permits") as are necessary under applicable law to own their respective properties and conduct their respective businesses in the manner described in the Registration Statement, the Pricing Prospectus and the Prospectus, except for any of the foregoing that would not, individually or in the aggregate, have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received notice of any proceedings related to the revocation or modification of any such Permits that, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect;

(tt) The Company and its subsidiaries, taken as a whole, are insured against such losses and risks and in such amounts as are prudent and customary in the businesses in which they are engaged and as required by law;

(uu) The Registration Statement, the Pricing Disclosure Package and the Prospectus, any Preliminary Prospectus and any Issuer Free Writing Prospectuses comply in all material respects, and any further amendments or supplements thereto will comply in all material respects, with any applicable laws or regulations of foreign jurisdictions in which the Pricing Disclosure Package, the Prospectus, any Preliminary Prospectus and any Issuer Free Writing Prospectus, as amended or supplemented, if applicable, are distributed in connection with the Directed Share Program, and no authorization, approval, consent, license, order, registration or qualification of or with any government, governmental instrumentality or court, other than such as have been obtained, is necessary under the securities laws and regulations of foreign jurisdictions in which the Directed Shares are offered outside the United States;

(vv) The Company has specifically directed in writing the allocation of Shares to each Participant in the Directed Share Program, and neither the Directed Share Underwriter nor any other Underwriter has had any involvement or influence, directly or indirectly, in such allocation decision; and

(ww) The Company has not offered, or caused the Directed Share Underwriter or its affiliates to offer, Shares to any person pursuant to the Directed Share Program (i) for any consideration other than the cash payment of the initial public offering price per share set forth in Schedule II hereof or (ii) with the specific intent to unlawfully influence (x) a customer or supplier of the Company to alter the customer or supplier's terms, level or type of business with the Company or (y) a trade journalist or publication to write or publish favorable information about the Company or its products.

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per share of $[●], the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per share set forth in clause (a) of this Section 2 (provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares), that portion of the

number of Optional Shares as to which such election shall have been exercised (to be adjusted by the Representatives so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to [●] Optional Shares, at the purchase price per share set forth in the paragraph above, provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from the Representatives to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by the Representatives but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless the Representatives and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by the Representatives of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Pricing Disclosure Package and the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in definitive or book-entry form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representatives, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representatives at least forty-eight hours in advance. The Company will cause the certificates, if any, representing the Shares to be made available for checking and packaging at least twenty-four hours prior to the Time of Delivery (as defined below) with respect thereto at the office of DTC or its designated custodian (the "Designated Office"). The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York City time, on [●], 2021 or such other time and date as the Representatives and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York City time, on the date specified by the Representatives in the written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the "First Time of Delivery", such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein called the "Second Time of Delivery", and each such time and date for delivery is herein called a "Time of Delivery".

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(l) hereof, will be delivered at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, CA 94025 (the "Closing Location"), and the Shares will be delivered at the Designated Office, all at such Time of Delivery. A meeting will be held at the Closing Location at [●] p.m., New York City time, on the New York Business Day next preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by the Representatives and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Act; to make no further amendment or any supplement to the Registration Statement or the Prospectus prior to the last Time of Delivery which shall be disapproved by the Representatives promptly after reasonable notice thereof; to advise the Representatives, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish the Representatives with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to advise the Representatives, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or other prospectus in respect of the Shares, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, including pursuant to Section 8A under the Act, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or other prospectus relating to the Shares or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order;

(b) Promptly from time to time to take such action as the Representatives may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as the Representatives may reasonably request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares, provided that in connection therewith the Company shall not be required to qualify as a foreign corporation (where not otherwise required) or to file a general consent to service of process in any jurisdiction (where not otherwise required);

(c) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by the Representatives and the Company) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as the Representatives may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus in order to comply with the Act, to notify the Representatives and upon their request to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as the Representatives may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon the Representatives' request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as the Representatives may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(d) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering, Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(e)(1) During the period beginning from the date hereof and continuing to and including the date 180 days after the date of the Prospectus (the "Lock-Up Period"), not to, and not to publicly disclose the intention to, (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Common Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Common Stock or any such substantially similar securities or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, without the Representatives' prior written consent; provided, however, that the Company may (A) effect the transactions contemplated hereby, (B) (y) issue Common Stock upon the conversion of convertible preferred stock outstanding on the date of this Agreement in connection with the offering contemplated by this Agreement, or (z) issue Common Stock, options to purchase Common Stock, restricted stock units or Common Stock upon exercise of options or

settlement of restricted stock units pursuant to any stock option, stock bonus or other stock plan or equity compensation arrangement described in the Registration Statement and the Prospectus, provided that any directors or officers who are recipients thereof have provided to the Representatives a signed lock-up letter in substantially the form attached as Annex I, (C) issue Common Stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise, conversion or settlement and in respect of tax withholding payments due upon the exercise of options or the vesting of equity-based awards) or the settlement of restricted stock units or other equity awards (including net settlement and in respect of tax withholding payments), in each case outstanding on or prior to the date hereof or as otherwise contemplated by any lock-up letter entered into by the Company's stockholders, and if the recipient of any Common Stock issued pursuant to this subsection (C) is a director or officer of the Company, they execute a lock-up letter in substantially the form attached as Annex I, (D) any Common Stock issued pursuant to any non-employee director compensation plan or program, (E) the purchase of Common Stock pursuant to employee stock purchase plans, (F) facilitating the establishment of a trading plan on behalf of a stockholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Common Stock, (G) file a registration statement on Form S-8 or a successor form thereto to register Common Stock issuable pursuant to the terms of a stock option, stock bonus or other stock plan or arrangement described in the Registration Statement and (H) issue shares of Common Stock or any securities convertible into or exchangeable for, or that represent the right to receive, shares of Common Stock issued in connection with any joint venture, commercial or collaborative relationship or the acquisition or license by the Company of the securities, businesses, property or other assets of another person or entity or pursuant to any employment benefit plan assumed by the Company in connection with any such acquisition, provided that in the case of clause (H), the aggregate number of shares that the Company may sell or issue or agree to sell or issue pursuant to clause (H) shall not exceed 5.0% of the total number of shares of Common Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement and (ii) the recipients thereof provide to the Representatives a signed lock-up letter in substantially the form attached as Annex I;

(e)(2) If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter in the form attached as Annex I hereto for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Annex II hereto through a major news service at least two business days before the effective date of the release or waiver.

(f) During a period of two years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company and its consolidated subsidiaries certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company and its subsidiaries for such quarter in reasonable detail provided that no reports, documents or other information need to be furnished pursuant to this Section 5(f) to the extent that they are available on EDGAR;

(g) During a period of two years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to the Representatives copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to the Representatives (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as the Representatives may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission), provided, that no reports, documents or other information needs to be furnished pursuant to this Section 5(g) to the extent they are available on EDGAR or to the extent such provisions of such reports, documents or other information would require public disclosure by the Company under Regulation FD;

(h) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption “Use of Proceeds”;

(i) To use its best efforts to list for quotation the Shares on the Nasdaq Stock Market Inc.’s National Market (“NASDAQ”);

(j) To file with the Commission such information on Form 10-Q or Form 10-K as may be required by Rule 463 under the Act;

(k) If the Company elects to rely upon Rule 462(b), the Company shall file a Rule 462(b) Registration Statement with the Commission in compliance with Rule 462(b) by 10:00 P.M., Washington, D.C. time, on the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Act;

(l) Upon reasonable written request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company’s trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Shares (the “License”); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred;

(m) To promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Shares within the meaning of the Act and (ii) the last Time of Delivery; and

(n) To comply with all applicable securities and other laws, rules and regulations in each jurisdiction in which the Directed Shares are offered in connection with the Directed Share Program.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a "free writing prospectus" as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule II(a) or Schedule II(c) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or Written Testing-the-Waters Communication prepared or authorized by the Company, any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Written Testing-the-Waters Communication would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with the Underwriter Information;

(d) The Company represents and agrees that (i) it has not engaged in, or authorized any other person to engage in, any Testing-the-Waters Communications, other than Testing-the-Waters Communications with the prior consent of the Representatives with entities that the Company reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7), (a)(8), (a)(9), (a)(12) or (a)(13) under the Act; and (ii) it has not distributed, or authorized any other person to distribute, any Written Testing-the-Waters Communications, other than those distributed with the prior consent of the Representatives that are listed on Schedule II hereto; and the Company reconfirms that the Underwriters have been authorized to act on its behalf in engaging in Testing-the-Waters Communications;

(e) Each Underwriter represents and agrees that any Testing-the-Waters Communications undertaken by it were with entities that such Underwriter reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7), (a)(8), (a)(9), (a)(12) or (a)(13) under the Act.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants incurred in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, any Preliminary Prospectus, any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(b) hereof, including the reasonable and documented fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey; (iv) all fees and expenses in connection with listing the Shares on the Exchange; (v) the filing fees incident to, and the reasonable and documented out-of-pocket fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares (such fees and disbursements of counsel for the Underwriters pursuant to subsections (iii) to (v) shall not exceed $50,000); (vi) the cost of preparing stock certificates; (vii) the cost and charges of any transfer agent or registrar; (viii) any documentary, stamp, registration or similar issuance tax or stock transfer tax, including any interest and penalties, on the sale, issuance or delivery of the Shares by the Company to the Underwriters; (ix) all fees and disbursements of counsel for the Underwriters in connection with the Directed Share Program and stamp duties, similar taxes or duties or other taxes, if any, incurred by the Underwriters in connection with the Directed Share Program; (x) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section. It is understood, however, that, except as provided in this Section, and Sections 9, 10 and 13 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may make, all travel expenses of the Underwriters and their representatives, and all lodging expenses of the Underwriters and their representatives in connection with the road show.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; if the Company has elected to rely upon Rule 462(b) under the Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 P.M., Washington, D.C. time, on the date of this Agreement; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose or pursuant to Section 8A of the Act shall have been initiated or threatened by the Commission; no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or, to the Company's knowledge, threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to the Representatives reasonable satisfaction;

(b) Latham & Watkins LLP, counsel for the Underwriters, shall have furnished to the Representatives their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representatives, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Cooley LLP, counsel for the Company, shall have furnished to the Representatives their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representatives;

(d) (i) McDermott Will & Emery LLP, intellectual property counsel for the Company, (ii) Steptoe & Johnson LLP, intellectual property counsel for the Company, and (iii) Sterne, Kessler, Goldstein & Fox P.L.L.C., patent counsel for the Company, each, shall have furnished to the Representatives their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representatives;

(e) On the date of the Prospectus at a time prior to the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Ernst & Young LLP shall have furnished to the Representatives a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to the Representatives;

(f) (i) Neither the Company nor any of its subsidiaries shall have sustained since the date of the latest audited financial statements included in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock (other than as a result of the exercise of stock options or the award of stock options, restricted stock, or restricted stock units in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus) or long-term debt of the Company or any of its subsidiaries or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs,

management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in the judgment of the Representatives so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(g) On or after the Applicable Time (i) no downgrading shall have occurred in the rating accorded the Company's debt securities or preferred stock by any "nationally recognized statistical rating organization", as that term is defined by the Commission for purposes of Rule 436(g)(2) under the Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities or preferred stock;

(h) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange or on NASDAQ; (ii) a suspension or material limitation in trading in the Company's securities on NASDAQ; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in the Representatives judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(i) The Shares to be sold at such Time of Delivery shall have been duly listed for quotation on NASDAQ;

(j) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from each officer, director, and substantially all of the stockholders of the Company, and, if applicable, Participants, substantively in the form attached as Annex I hereto;

(k) The Company shall have complied with the provisions of Section 5(c) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement;

(l) The Company shall have furnished or caused to be furnished to the Representatives at such Time of Delivery certificates of officers of the Company satisfactory to the Representatives as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (e) of this Section and as to such other matters as the Representatives may reasonably request in writing;

(m) At each Time of Delivery, the Representatives shall have received a certificate of the Secretary of the Company, as to such matters as the Representatives may reasonably request in writing; and

(n) At each Time of Delivery, the Company shall have furnished to the Representatives such additional information, certificates, opinions or documents as the Representatives may reasonably request in writing.

9. (a) The Company will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any "roadshow" as defined in Rule 433(h) under the Act (a "roadshow"), any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act or any Testing-the-Waters Communication prepared or authorized by the Company, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any reasonable and documented legal or other expenses incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; *provided*, *however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information.

(b) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information; and will reimburse the

Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, "Underwriter Information" shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the [fifth] paragraph under the caption "Underwriting", and the information contained in the [ninth, tenth, eleventh and fifteenth] paragraphs under the caption "Underwriting".

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute

to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer or other affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) The Company will indemnify and hold harmless the Directed Share Underwriter against any losses, claims, damages and liabilities to which the Directed Share Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims damages or liabilities (or actions in respect thereof) (i) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in any material

prepared by or with the consent of the Company for distribution to Participants in connection with the Directed Share Program or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) arise out of or are based upon the failure of any Participant to pay for and accept delivery of Directed Shares that the Participant agreed to purchase, or (iii) are related to, arise out of or are in connection with the Directed Share Program, and will reimburse the Directed Share Underwriter for any legal or other expenses reasonably incurred by the Directed Share Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; provided, however, that with respect to clauses (ii) and (iii) above, the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability is finally judicially determined to have resulted from the bad faith or gross negligence of the Directed Share Underwriter.

(b) Promptly after receipt by the Directed Share Underwriter of notice of the commencement of any action, the Directed Share Underwriter shall, if a claim in respect thereof is to be made against the Company, notify the Company in writing of the commencement thereof; provided that the failure to notify the Company shall not relieve the Company from any liability that it may have under the preceding paragraph of this Section 10 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the Company shall not relieve it from any liability that it may have to the Directed Share Underwriter otherwise than under the preceding paragraph of this Section 10. In case any such action shall be brought against the Directed Share Underwriter and it shall notify the Company of the commencement thereof, the Company shall be entitled to participate therein and, to the extent that it shall wish, to assume the defense thereof, with counsel satisfactory to the Directed Share Underwriter (who shall not, except with the consent of the Directed Share Underwriter, be counsel to the Company), and, after notice from the Company to the Directed Share Underwriter of its election so to assume the defense thereof, the Company shall not be liable to the Directed Share Underwriter under this subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by the Directed Share Underwriter, in connection with the defense thereof other than reasonable costs of investigation. The Company shall not, without the written consent of the Directed Share Underwriter, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the Directed Share Underwriter is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the Directed Share Underwriter from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of the Directed Share Underwriter.

(c) If the indemnification provided for in this Section 10 is unavailable to or insufficient to hold harmless the Directed Share Underwriter under subsection (a) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then the Company shall contribute to the amount paid or payable by the Directed Share Underwriter as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Directed Share Underwriter on the other from

the offering of the Directed Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then the Company shall contribute to such amount paid or payable by the Directed Share Underwriter in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Directed Share Underwriter on the other in connection with any statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Directed Share Underwriter on the other shall be deemed to be in the same proportion as the total net proceeds from the offering of the Directed Shares (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Directed Share Underwriter for the Directed Shares. If the loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement of a material fact or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, the relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Directed Share Underwriter on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Directed Share Underwriter agree that it would not be just and equitable if contribution pursuant to this subsection (c) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (c). The amount paid or payable by the Directed Share Underwriter as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (c) shall be deemed to include any legal or other expenses reasonably incurred by the Directed Share Underwriter in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (c), the Directed Share Underwriter shall not be required to contribute any amount in excess of the amount by which the total price at which the Directed Shares sold by it and distributed to the Participants exceeds the amount of any damages which the Directed Share Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(d) The obligations of the Company under this Section 10 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of the Directed Share Underwriter and each person, if any, who controls the Directed Share Underwriter within the meaning of the Act and each broker-dealer or other affiliate of the Directed Share Underwriter.

11. (a) If any Underwriter shall default in its obligation to purchase the Shares which it has agreed to purchase hereunder at a Time of Delivery, the Representatives may in their discretion arrange for the Representatives or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter the Representatives do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within

which to procure another party or other parties satisfactory to the Representatives to purchase such Shares on such terms. In the event that, within the respective prescribed periods, the Representatives notify the Company that the Representatives have so arranged for the purchase of such Shares, or the Company notifies the Representatives that it has so arranged for the purchase of such Shares, the Representatives or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in the Representatives' reasonable opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Sections 9 and 10 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

12. The respective indemnities, rights of contribution, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any director, officer, employee, affiliate or controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

13. If this Agreement shall be terminated pursuant to Section 11 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, any Shares are not delivered by or on behalf of the Company as provided herein or the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company will reimburse the Underwriters through the Representatives for all out-of-pocket expenses approved in writing by the Representatives, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

14. In all dealings hereunder, the Representatives shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by the Representatives jointly or by the Representatives on behalf of the Underwriters.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to the Representatives in care of Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Registration Department; in the care of BofA Securities, Inc., One Bryant Park, New York, NY 10036, Attention: Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730); in the care of J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (facsimile: (212) 622-8358); in the care of Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by the Representatives upon request; provided, however, that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to the Representatives at Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Control Room; BofA Securities, Inc., One Bryant Park, New York, NY 10036, Attention: Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730); J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (facsimile: (212) 622-8358); and Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

15. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 12 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, or any director, officer, employee, or affiliate of any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

16. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

17. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement, (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate, and (v) none of the activities of the Underwriters in connection with the transactions contemplated herein constitutes a recommendation, investment advice, or solicitation of any action by the Underwriters with respect to any entity or natural person. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

18. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

19. **This Agreement and any transaction contemplated by this Agreement and any claim, controversy or dispute arising under or related thereto shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would results in the application of any other law than the laws of the State of New York. The Company agrees that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.**

20. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

21. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

22. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

23. Recognition of the U.S. Special Resolution Regimes.

(a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

(c) As used in this section:

"BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

"Covered Entity" means any of the following:

(i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);

(ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with the Company's understanding, please sign and return to us one for the Company and each of the Representatives plus one for each counsel counterparts hereof, and upon the acceptance hereof by the Representatives, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that the Representatives' acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on the Company's part as to the authority of the signers thereof.

Very truly yours,

Lyell Immunopharma, Inc.

By: _____
Name:
Title:

Accepted as of the date hereof:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

BofA Securities, Inc.

By: _____
Name:
Title:

J.P. Morgan Securities LLC

By: _____
Name:
Title:

Morgan Stanley & Co. LLC

By: _____
Name:
Title:

On behalf of each of the Underwriters

SCHEDULE I

Underwriter	Total Number of Firm Shares to be Purchased	Number of Optional Shares to be Purchased if Maximum Option Exercised
Goldman Sachs & Co. LLC		
BofA Securities, Inc.		
J.P. Morgan Securities LLC		
Morgan Stanley & Co. LLC		
Total		

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

[●]

(b) Additional Documents Incorporated by Reference:

[●]

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

The initial public offering price per share for the Shares is $[●].
The number of Shares purchased by the Underwriters is [●].
[Any other pricing disclosure.]

(d) Written Testing-the-Waters Communications:

[●]

ANNEX I

Lyell Immunopharma, Inc.

Lock-Up Agreement

___, 2021

Goldman Sachs & Co. LLC
BofA Securities, Inc.
J.P. Morgan Securities LLC
Morgan Stanley & Co. LLC

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o BofA Securities, Inc.
One Bryant Park
New York, NY 10036

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, NY 10179

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, NY 10036

Re: Lyell Immunopharma, Inc.—Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that you, as representatives (the "Representatives"), propose to enter into an underwriting agreement (the "Underwriting Agreement") on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the "Underwriters"), with Lyell Immunopharma, Inc. a Delaware corporation (the "Company"), providing for a public offering (the "Public Offering") of shares (the "Shares") of the common stock of the Company (the "Common Stock") pursuant to a Registration Statement on Form S-1 to be filed with the Securities and Exchange Commission (the "SEC").

In consideration of the agreement by the Underwriters to purchase, offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, during the period beginning from the date of this Lock-Up Agreement and continuing to and including the date 180 days after the date set forth on the final prospectus used to sell the Shares (the "Lock-Up Period"), the undersigned shall not, and shall not cause or direct any of its

affiliates to, (i) offer, sell, contract to sell, pledge, grant any option to purchase, lend or otherwise dispose of any shares of Common Stock, or any options or warrants to purchase any shares of Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock (such options, warrants or other securities, collectively, "Derivative Instruments"), including without limitation any such shares or Derivative Instruments now owned or hereafter acquired by the undersigned, (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to or which reasonably could be expected to lead to or result in a sale, loan, pledge or other disposition (whether by the undersigned or someone other than the undersigned), or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of any shares of Common Stock or Derivative Instruments, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Common Stock or other securities, in cash or otherwise (any such sale, loan, pledge or other disposition, or transfer of economic consequences described in clause (i) or (ii), a "Transfer") or (iii) otherwise publicly announce any intention to engage in or cause any action or activity described in clause (i) above or transaction or arrangement described in clause (ii) above. The undersigned represents and warrants that the undersigned is not, and has not caused or directed any of its affiliates to be or become, currently a party to any agreement or arrangement that provides for, is designed to or which reasonably could be expected to lead to or result in any Transfer during the Lock-Up Period. For the avoidance of doubt, if the undersigned is an officer or director of the Company, the undersigned agrees that the foregoing provisions shall be equally applicable to any issuer-directed or other Shares the undersigned may purchase in the Public Offering.

If the undersigned is not a natural person, the undersigned represents and warrants that no single natural person, entity or "group" (within the meaning of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended), other than a natural person, entity or "group" (as described above) that has executed a Lock-Up Agreement in substantially the same form as this Lock-Up Agreement, beneficially owns, directly or indirectly, 50% or more of the common equity interests, or 50% or more of the voting power, in the undersigned.

If the undersigned is an officer or director of the Company, (i) the Representatives agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Common Stock, the Representatives will notify the Company of the impending release or waiver and (ii) the Company has agreed, or will agree, in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration or to an "immediate family" member and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

Notwithstanding the foregoing, the undersigned may transfer or otherwise dispose of the undersigned's shares of Common Stock or Derivative Instruments:

(i) as a *bona fide* gift or gifts;

(ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family (as defined below) of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions on transfer set forth herein;

(iii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933) of the undersigned, or to any investment fund or other entity controlled or managed by or under common control with the undersigned or affiliates of the undersigned, or (B) as part of a distribution, transfer or disposition without consideration by the undersigned to its stockholders, partners, members, beneficiaries or other equity holders;

(iv) to the Company in connection with the exercise or settlement of options, warrants or other rights to acquire shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in accordance with their terms (including, in each case, by way of net exercise and/or to cover withholding tax obligations in connection with such exercise or settlement) pursuant to an employee benefit plan, option, warrant or other right disclosed in the final prospectus for the Public Offering;

(v) by will or intestacy, provided that the legatee, heir or other transferee, as the case may be;

(vi) pursuant to a court order or a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage, domestic partnership or civil union;

(vii) to the Company pursuant to agreements under which the Company has (A) the option to repurchase such securities or (B) a right of first refusal with respect to transfers of such securities upon termination of service of the undersigned;

(viii) establish a trading plan pursuant to Rule 10b5-1 under the Securities and Exchange Act of 1934 (the "Exchange Act") for the transfer of the Undersigned's shares of Common Stock, provided that such plan does not provide for any transfers of Common Stock during the Lock-Up Period and no filing under the Exchange Act nor any other public filing or disclosure of such trading plan shall be made during the Lock-Up Period;

(ix) with the prior written consent of the Representatives on behalf of the Underwriters; and

(x) if the undersigned is not an officer or director of the Company, in connection with the sale of the undersigned's shares of Common Stock acquired in the Public Offering or in open market transactions after the Public Offering.

Notwithstanding anything to the contrary, with respect to clauses (i), (ii) and (iii) above, any such transfer shall not involve a disposition for value; with respect to clauses (i), (iii), (iv) and (viii) above, it shall be a condition to such transfer that no filing under the Exchange Act (including, without limitation, Section 16(a) thereof (other than any required Form 5 filing after the end of the calendar year in which such transaction occurs) nor any other public filing or disclosure of such transfer by or on behalf of the undersigned, reporting a change in beneficial ownership, shall be required or voluntarily made until after the expiration of the Lock-Up Period; with respect to clauses (ii), (v) – (vii) and (x) above, any filing made pursuant to Section 16(a) of the Exchange Act shall include a footnote noting that the filing related to the applicable circumstances described in the applicable clause; with respect to clauses (i) – (vi)

above, any donee(s), trustee(s), legatee(s), heir(s), family member(s), or any other transferee(s) or individual(s) who receives securities pursuant to exercise or settlement of an option, warrant, or other right, as applicable, shall execute an agreement stating that such transferee is receiving and holding such securities subject to the restrictions on transfer set forth herein and there shall be no further transfer of such securities except in accordance with this Lock-Up Agreement; with respect to clauses (ii) and (iv) – (vii) above, no public announcements shall be required or shall be made voluntarily by the undersigned in connection with the applicable transfer (besides Section 16(a) filings); provided that any required Schedule 13G (or 13G/A) or 13F (or 13F/A) filing may be made, provided that such filing clearly indicates in the footnotes thereto an explanation of the type of transaction giving rise to the change in ownership.

For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage, domestic partnership, civil union or adoption, not more remote than first cousin.

Furthermore, this Lock-Up Agreement shall not restrict any sale, disposal or transfer of the undersigned's shares of Common Stock or Derivative Instruments to a bona fide third party pursuant to a tender offer for securities of the Company or any merger, consolidation or other business combination involving a Change of Control (as defined below) of the Company occurring after the settlement of the Public Offering, that, in each case, has been approved by the board of directors of the Company; provided that all of the undersigned's shares of Common Stock and Derivative Instruments subject to this Lock-Up Agreement that are not so transferred, sold, tendered or otherwise disposed of remain subject to this Lock-Up Agreement; and provided, further, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the undersigned's shares of Common Stock and Derivative Instruments subject to this Lock-Up Agreement shall remain subject to the restrictions on transfer set forth herein. For the purposes of this paragraph, "Change of Control" means the consummation of any bona fide third party tender offer, merger, consolidation or other similar transaction, the result of which is that any "person" (as defined in Rule 13d-3 of the Exchange Act), or group of persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of a majority of the total voting power of the voting share capital of the Company.

The undersigned now has, and, except as contemplated above, for the duration of this Lock-Up Agreement will have, good and marketable title to the undersigned's shares of Common Stock, free and clear of all liens, encumbrances and claims whatsoever. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's shares of Common Stock except in compliance with the foregoing restrictions. During the Lock-Up Period, the undersigned hereby waives any and all notice requirements and rights with respect to the registration of securities pursuant to any agreement, understanding or anything otherwise setting forth the terms of any security of the Company held by the undersigned, including any registration rights agreement or investors' rights agreement to which the undersigned and the Company may be party; provided, however, that such waiver shall apply only to the proposed Public Offering, and any other action taken by the Company in connection with the proposed Public Offering.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

This Lock-Up Agreement may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com or www.echosign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice, nor have the Underwriters solicited any action from the undersigned, with respect to the Public Offering of the Shares, including this Lock-Up Agreement and the subject matter hereof, and the undersigned has consulted their own legal, accounting, financial, regulatory, tax and other advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Underwriters may provide certain Regulation Best Interest and Form CRS disclosures or other related documentation to you in connection with the Public Offering, the Underwriters are not making a recommendation to you to participate in the Public Offering or sell any Shares at the price determined in the Public Offering, and nothing set forth in such disclosures or documentation is intended to suggest that any Underwriter is making such a recommendation.

This Lock-Up Agreement (and for the avoidance of doubt, the Lock-Up Period described herein) and related restrictions shall automatically terminate upon the earliest to occur, if any, of (i) the Company advising the Representatives in writing prior to the execution of the Underwriting Agreement that it has determined not to proceed with the Public Offering, (ii) the termination of the Underwriting Agreement before the sale of any Shares to the Underwriters, (iii) the registration statement filed with the SEC with respect to the Public Offering contemplated by the Underwriting Agreement is withdrawn or (iv) September 30, 2021, in the event the closing of the Public Offering shall not have occurred on or before such date; provided, however, that the Company may, by written notice to you prior to such date, extend such date for a period of up to an additional 90 days.

This Lock-Up Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

[*Signature Page Follows*]

Very truly yours,

IF AN INDIVIDUAL:

By: _____
(duly authorized signature)

Name: _____
(please print full name)

IF AN ENTITY:

_____
(please print complete name of entity)

By: _____
(duly authorized signature)

Name: _____
(please print full name)

Title: _____
(please print full title)

ANNEX II

Form of Press Release

Lyell Immunopharma, Inc.
[Date]

Lyell Immunopharma, Inc. (the "Company") announced today that Goldman Sachs & Co. LLC, BofA Securities, Inc., J.P. Morgan Securities LLC, and Morgan Stanley & Co. LLC, the joint book-running managers in the Company's recent public sale of shares of common stock, are [waiving] [releasing] a lock-up restriction with respect to shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
LYELL IMMUNOPHARMA, INC.

Lyell Immunopharma, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of the Delaware (the "***DGCL***"), hereby certifies that:

ONE: The name of this corporation is Lyell Immunopharma, Inc. The date of filing the original Certificate of Incorporation of this corporation with the Secretary of State of the State of Delaware (the "***Secretary***") was June 29, 2018.

TWO: The Amended and Restated Certificate of Incorporation of this corporation, attached hereto as **Exhibit A**, is incorporated herein by reference, and restates, integrates and further amends the provisions of the Amended and Restated Certificate of Incorporation of this corporation, as previously amended or supplemented.

THREE: This Amended and Restated Certificate of Incorporation has been duly approved by the board of directors of this corporation.

FOUR: This Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of this corporation in accordance with Sections 228, 242 and 245 of the DGCL.

The Corporation has caused this Amended and Restated Certificate of Incorporation to be signed by its duly authorized officer on June , 2021.

LYELL IMMUNOPHARMA, INC.

By: _____
Elizabeth Homans
Chief Executive Officer

EXHIBIT A

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
LYELL IMMUNOPHARMA, INC.

I.

The name of the corporation is **LYELL IMMUNOPHARMA, INC.** (the "***Corporation***").

II.

The address of the registered office of the Corporation in the State of Delaware is 3500 South Dupont Highway, City of Dover, County of Kent, Delaware 19901, and the name of the registered agent of the Corporation in the State of Delaware at such address is Incorporating Services, Ltd.

III.

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware (the "***DGCL***").

IV.

A. The Corporation is authorized to issue two classes of stock to be designated, respectively, "***Common Stock***" and "***Preferred Stock***." The total number of shares that the Corporation is authorized to issue is 510,000,000 shares. Of such shares, 500,000,000 shares shall be Common Stock, each having a par value of $0.0001 and 10,000,000 shares shall be Preferred Stock, each having a par value of $0.0001.

B. The Preferred Stock may be issued from time to time in one or more series. The board of directors of the Corporation (the "***Board of Directors***") is hereby expressly authorized to provide for the issue of all or any of the shares of the Preferred Stock in one or more series, and to fix the number of shares for each such series and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such shares and as may be permitted by the DGCL. The Board of Directors is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding and not by more than the number of remaining authorized but undesignated shares of Preferred Stock. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock, or any series thereof, may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the outstanding shares of stock of the Corporation entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof irrespective of Section 242(b)(2) of the DGCL, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock.

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the Corporation for their vote; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

V.

For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. MANAGEMENT OF BUSINESS.

The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. Subject to any rights of the holders of shares of any series of Preferred Stock then outstanding to elect additional directors under specified circumstances, the number of directors that shall constitute the Board of Directors shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board of Directors.

B. BOARD OF DIRECTORS.

Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***1933 Act***"), covering the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. Each class will consist, as nearly as possible, of a number of directors equal to one-third of the number of members of the Board of Directors authorized as provided in Section A of this Article V. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the initial term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the initial term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the initial term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting. Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. REMOVAL OF DIRECTORS.

Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed from office without cause. Subject to the rights of any series of Preferred Stock to remove directors elected by the holders of such series of Preferred Stock and any limitation imposed by applicable law, any individual director or the entire Board of Directors may be removed from office with cause by the affirmative vote of the holders of at least 66 2/3% of the voting power of all then outstanding shares of capital stock of the Corporation entitled to vote on the election of such directors.

D. VACANCIES.

Subject to any limitations imposed by applicable law and subject to the rights of the holders of any series of Preferred Stock to elect additional directors or fill vacancies in respect of such directors, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders and except as otherwise provided by applicable law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors or by the sole remaining director, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified or until such director's earlier death, resignation or removal.

E. BYLAW AMENDMENTS.

The Board of Directors is expressly authorized and empowered to adopt, amend or repeal the Bylaws of the Corporation or any provision or provisions thereof. Any adoption, amendment or repeal of the Bylaws of the Corporation or any provision or provisions thereof by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Corporation; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Corporation required by law, such action by stockholders shall require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class.

F. STOCKHOLDER ACTIONS.

1. The directors of the Corporation need not be elected by written ballot unless the Bylaws so provide.

2. No action shall be taken by the stockholders of the Corporation except at an annual or special meeting of stockholders called in accordance with the Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission.

3. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws of the Corporation.

VI.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law.

B. To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which applicable law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise in excess of the indemnification and advancement otherwise permitted by such applicable law. If applicable law is amended after approval by the stockholders of this Article VI to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director to the Company shall be eliminated or limited to the fullest extent permitted by applicable law as so amended.

C. Any repeal or modification of this Article VI shall only be prospective and shall not affect adversely the rights or protections or increase the liability of any officer or director under this Article VI as in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) and any appellate court therefrom shall be the sole and exclusive forum for the following claims or causes of action under Delaware statutory or common law: (A) any derivative claim or cause of action brought on behalf of the Corporation; (B) any claim or cause of action for breach of a fiduciary duty owed by any current or former director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders; (C) any claim or cause of action against the Corporation or any current or former director, officer or other employee of the Corporation, arising out of or pursuant to any provision of the DGCL, this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation (as each may be amended from time to time); (D) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation (as each may be amended from time to time, including any right, obligation or remedy thereunder); (E) any claim or cause of action as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; and (F) any claim or cause of action against the Corporation or any current or former director, officer or other employee of the Corporation, governed by the internal-affairs doctrine or otherwise related to the corporation's internal affairs, in all cases to the fullest extent permitted by law and subject to the court having personal jurisdiction over the indispensable parties named as defendants. This Section A of Article VII shall not apply to claims or causes of action brought to enforce a duty or liability created by the 1933 Act or the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction.

Unless the Corporation consents in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the 1933 Act , including all causes of action asserted against any defendant named in such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by the corporation, its officers and directors, the underwriters for any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering.

Any person or entity holding, owning or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Amended and Restated Certificate of Incorporation.

VIII.

A. The Corporation reserves the right to amend, alter, change or repeal, at any time and from time to time, any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in paragraph B. of this Article VIII, and all rights, preferences and privileges of whatsoever nature conferred upon the stockholders, directors or any other persons whomsoever by and pursuant to this Amended and Restated Certificate of Incorporation in its present form or as hereafter amended herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Amended and Restated Certificate of Incorporation or any provision of applicable law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of capital stock of the Corporation required by law or by this Amended and Restated Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock, the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal (whether by merger, consolidation or otherwise) Articles V, VI, VII and VIII.

* * * *

Exhibit 3.4

AMENDED AND RESTATED BYLAWS

OF

LYELL IMMUNOPHARMA, INC.
(A DELAWARE CORPORATION)

June [●], 2021

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AMENDED AND RESTATED BYLAWS

OF

LYELL IMMUNOPHARMA, INC.
(A DELAWARE CORPORATION)

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of Lyell Immunopharma, Inc. (the "***Corporation***") in the State of Delaware and the name of its registered agent at such address shall be as set forth in the Amended and Restated Certificate of Incorporation of the Corporation, as the same may be amended or restated from time to time (the "***Certificate of Incorporation***").

Section 2. Other Offices. The Corporation may also have and maintain an office or principal place of business at such place as may be fixed by the board of directors of the Corporation (the "***Board of Directors***"), and may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE II
CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. If adopted, the corporate seal shall consist of the name of the Corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the Corporation may be held at such place, if any, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the General Corporation Law of the State of Delaware (the "***DGCL***") and Section 14 below.

Section 5. Annual Meetings.

(a) The annual meeting of the stockholders of the Corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. The corporation may postpone, reschedule or cancel any annual meeting of stockholders previously scheduled by the Board of Directors. Nominations of persons for election to the Board of Directors and proposals of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i)

pursuant to the Corporation's notice of meeting of stockholders; (ii) by or at the direction of the Board of Directors or a duly authorized committee thereof; or (iii) by any stockholder of the Corporation who was a stockholder of record (and, with respect to any beneficial owner, if different, on whose behalf such business is proposed or such nomination or nominations are made, only if such beneficial owner was the beneficial owner of shares of the Corporation) at the time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the Corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "***1934 Act***")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law, the Certificate of Incorporation and these Amended and Restated Bylaws, as the same may be amended or restated from time to time (the "***Bylaws***") and only such nominations shall be made and such business shall be conducted as shall have been properly brought before the meeting in accordance with the procedures below.

(i) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a), the stockholder must deliver written notice to the Secretary of the Corporation at the principal executive offices of the Corporation on a timely basis as set forth in Section 5(b)(iii) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee; (2) the principal occupation or employment of such nominee; (3) the class or series and number of shares of each class or series of capital stock of the Corporation that are owned of record and beneficially by such nominee; (4) the date or dates on which such shares were acquired and the investment intent of such acquisition; and (5) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved and whether or not proxies are being or will be solicited), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named in the Corporation's proxy statement and associated proxy card as a nominee of the stockholder and to serving as a director if elected); and (B) all of the information required by Section 5(b)(iv). The Corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Corporation or as an independent member of any committee of the Board of Directors (in both cases as defined any applicable stock exchange listing requirements or applicable law) or of any committees or sub-committee of the Board of Directors under any applicable stock exchange listing requirements or applicable law, or that could be material to a reasonable stockholder's understanding of the independence, *or* lack thereof, of such proposed nominee. The number of nominees a stockholder may nominate for election at the annual meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the annual meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such annual meeting.

(ii) Other than proposals sought to be included in the Corporation's proxy materials pursuant to Rule 14a-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a), the stockholder must deliver written notice to the Secretary of the Corporation at the principal executive offices of the Corporation on a timely basis as set forth in Section 5(b)(iii), and

must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend these Bylaws, the language of the proposed amendment), the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the Corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(iv).

(iii) To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) must be received by the Secretary of the Corporation at the principal executive offices of the Corporation not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's annual meeting (which date shall, for purposes of the Corporation's first annual meeting of stockholders after its Initial Public Offering be deemed to have occurred on June 11, 2021); provided, however, that, subject to the last sentence of this Section 5(b)(iii), in the event that (A) the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the tenth day following the day on which public announcement of the date of such meeting is first made by the Corporation or (B) the Corporation did not have an annual meeting in the preceding year, notice by the stockholder to be timely must be so received not later than the tenth day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above.

(iv) The written notice required by Sections 5(b)(i) or 5(b)(ii) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "***Proponent***" and collectively, the "***Proponents***"): (A) the name and address of each Proponent, including, if applicable, such name and address as they appear on the Corporation's books and records; (B) the class, series and number of shares of each class or series of the capital stock of the Corporation that are directly or indirectly owned of record or beneficially (within the meaning of Rule 13d-3 under the 1934 Act) by each Proponent (provided, that for purposes of this Section 5(b)(iv), such Proponent shall in all events be deemed to beneficially own all shares of any class or series of capital stock of the Corporation as to which such Proponent has a right to acquire beneficial ownership at any time in the future); (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal (and/or the voting of shares of any class or series of capital stock of the Corporation) between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the Corporation at the time of giving notice, will be entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(i)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii)); (E) a representation as to whether the Proponents intend or are part of a group that intends to deliver a proxy statement and form of proxy to holders of a sufficient number of the Corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(i)) or to carry such proposal (with respect to a notice under Section 5(b)(ii)) or otherwise solicit proxies or votes from stockholders in support of such nomination or proposal; (F) to the

extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous 12-month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

(c) A stockholder providing the written notice required by Section 5(b)(i) or (ii) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the determination of stockholders entitled to notice of the meeting and (ii) the date that is five business days(as defined below) prior to the meeting and, in the event of any adjournment or postponement thereof, five business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary of the Corporation at the principal executive offices of the Corporation not later than five business days after the later of the record date for the determination of stockholders entitled to notice of the meeting or the public announcement of such record date. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary of the Corporation at the principal executive offices of the Corporation not later than two business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) to the contrary, in the event that the number of directors in an Expiring Class (as defined below) to be elected to the Board of Directors at the annual meeting is increased after the time period for which nominations would otherwise be due under Section 5(b)(iii) and there is no public announcement by the Corporation naming the nominees for the additional directorships at least 100 days before the first anniversary of the preceding year's annual meeting, a stockholder's notice required by this Section 5 and that complies with the requirements in Section 5(b)(i), other than the timing requirements in Section 5(b)(iii), shall also be considered timely, but only with respect to nominees for the additional directorships in such Expiring Class, if it shall be received by the Secretary of the Corporation at the principal executive offices of the Corporation not later than the close of business on the tenth day following the day on which such public announcement is first made by the Corporation. For purposes of this section, an "***Expiring Class***" shall mean a class of directors whose term shall expire at the annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director at an annual meeting unless the person is nominated in accordance with either clause (ii) or (iii) of Section 5(a) and in accordance with the procedures set forth in Section 5(b), Section 5(c), and Section 5(d), as applicable. Only such business shall be conducted at any annual meeting of the stockholders of the Corporation as shall have been brought before the meeting in accordance with clauses (i), (ii), or (iii) of Section 5(a) and in accordance with the procedures set forth in Section 5(b) and Section 5(c), as applicable. Except as otherwise required by applicable law, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(iv)(D) and 5(b)(iv)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, or that such business shall not be transacted, notwithstanding that proxies in respect of such nomination or such business may have been solicited or received. Notwithstanding the foregoing provisions of this Section 5, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination shall be disregarded and such proposed business shall not be transacted,

notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Section 5, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of stockholders.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii). Nothing in these Bylaws shall be deemed to affect any rights of holders of any class or series of preferred stock to nominate and elect directors pursuant to and to the extent provided in any applicable provision of the Certificate of Incorporation.

(g) For purposes of Sections 5 and 6,

(i) "***affiliates***" and "***associates***" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "***1933 Act***").

(ii) "***business day***" means any day other than Saturday, Sunday or a day on which banks are closed in New York City, New York.

(iii) "***close of business***" means 5:00 p.m. local time at the principal executive offices of the Corporation on any calendar day, whether or not the day is a Business Day.

(iv) "***Derivative Transaction***" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(1) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the Corporation,

(2) that otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the Corporation,

(3) the effect or intent of which is to mitigate loss, manage risk or benefit from changes in value or price with respect to any securities of the Corporation, or

(4) that provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, directly or indirectly, with respect to any securities of the Corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation or similar right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the Corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member; and

(v) "***public announcement***" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press, Business Wire, GlobeNewswire or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act, or by such other means reasonably designed to inform the public or security holders in general of such information including, without limitation, posting on the Corporation's investor relations website.

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the Corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairperson of the Board of Directors, (ii) the Chief Executive Officer or the President, if the Chairperson of the Board of Directors is unavailable, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption). The Corporation may postpone, reschedule or cancel any special meeting of stockholders previously scheduled by the Board of Directors.

(b) The Board of Directors shall determine the date, time and place, if any, of such special meeting. Upon determination of the date, time and place, if any, of the meeting, the Secretary of the Corporation shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or a duly authorized committee thereof or (ii) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record (and with respect to any beneficial owner, if different, on whose behalf such nomination or nominations are made, only if such beneficial owner of shares of the Corporation) at the time of giving notice provided for in this paragraph, who is entitled to vote at the meeting and who delivers written notice to the Secretary of the Corporation setting forth the information required by Section 5(b)(i) and 5(b)(iv). The number of nominees a stockholder may nominate for election at the special meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the special meeting on behalf of suchb beneficial owner) shall not exceed the number of directors to be elected at such special meeting. In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(i) and 5(b)(iv) shall be received by the Secretary of the Corporation at the principal executive offices of the Corporation not earlier than 120 days prior to such special meeting and not later than the close of business on the later of the 90th day prior to such meeting, or the tenth day following the day on which the Corporation first makes a public announcement of the date of the special meeting at which directors are to be elected. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above.

(d) A person shall not be eligible for election or re-election as a director at the special meeting unless the person is nominated either in accordance with clause (i) or clause (ii) of this Section 6(c). Except as otherwise required by applicable law, the chairperson of the meeting shall have the power and duty to determine whether a nomination was made in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or if the Proponent does not act in accordance with the representations in Sections 5(b)(iv)(D) and 5(b)(iv)(E), to declare that such nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nomination may have been solicited or received. Notwithstanding the foregoing provisions of this Section 6, unless otherwise required by applicable law, if the stockholder (or a qualified representative of the stockholder (meeting the requirements specified in Section 5(e) does not appear at the special meeting of stockholders of the Corporation to present a nomination, such nomination shall be disregarded, notwithstanding that proxies in respect of such vote may have been received by the Corporation.

(e) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c).

Section 7. Notice of Meetings. Except as otherwise provided by applicable law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. Such notice shall specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, the record date for determining stockholders entitled to vote at the meeting, if such record date is different from the record date for determining stockholders entitled to notice of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation. If delivered by courier service, the notice is given on the earlier of when the notice is received or left at the stockholder's address. If sent via electronic mail, notice is given when directed to such stockholder's electronic mail address in accordance with applicable law unless (a) the stockholder has notified the Corporation in writing or by electronic transmission of an objection to receiving notice by electronic mail or (b) electronic transmission of such notice is prohibited by applicable law. . Notice of any meeting of stockholders (to the extent required) may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his or her attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum and Vote Required. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the voting power of the outstanding shares of stock entitled to vote at the meeting shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairperson of the meeting or by vote of the holders of a majority of the voting power of the shares represented thereat and entitled to vote thereon, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the holders of a majority of the voting power of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and voting affirmatively or negatively (excluding abstentions and broker non-votes) on such matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy duly authorized at the meeting and entitled to in the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by statute, or by the Certificate of Incorporation or these Bylaws or any applicable stock exchange rules, holders of a majority of the voting power of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws or any applicable stock exchange rules, the affirmative vote of holders of a majority (plurality, in the case of the election of directors) of the voting power of the shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting and voting affirmatively or negatively (excluding abstention and broker non-votes) on such matter shall be the act of such class or classes or series.

Section 9. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairperson of the meeting or by the vote of the holders of a majority of the voting power of the shares present in person, by remote communication, if applicable, or represented by proxy duly authorized at the meeting and entitled to vote thereon. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof and the means of remote communication, if any, by which stockholders and proxyholders may be deemed present in person and may vote at such meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than 30 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board of Directors shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders or adjournment thereof, except as otherwise provided by applicable law, only persons in whose names shares stand on the stock records of the Corporation on the record date shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three years from its date of creation unless the proxy provides

for a longer period. A proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by delivering to the Secretary of the Corporation a revocation of the proxy or a new proxy bearing a later date. Voting at meetings of stockholders need not be by written ballot.

Section 11. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary of the Corporation is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one votes, his or her act binds all; (b) if more than one votes, the act of the majority so voting binds all; (c) if more than one votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in Section 217(b) of the DGCL. If the instrument filed with the Secretary of the Corporation shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 12. The Corporation shall prepare, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number and class of shares registered in the name of each stockholder; provided, however, if the record date for determining the stockholders entitled to vote is less than ten days before the meeting date, the list shall reflect all of the stockholders entitled to vote as of the tenth day before the meeting date. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the Corporation. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by applicable law.

Section 13. Action without Meeting. No action shall be taken by the stockholders of the Corporation except at an annual or special meeting of stockholders duly called in accordance with these Bylaws, and no action shall be taken by the stockholders by consent.

Section 14. Remote Communication; Delivery to the Corporation.

(a) For the purposes of these Bylaws, if authorized by the Board of Directors in its sole discretion, and subject to such guidelines and procedures as the Board of Directors may adopt, stockholders and proxyholders may, by means of remote communication:

(i) participate in a meeting of stockholders; and

(ii) be deemed present in person and vote at a meeting of stockholders whether such meeting is to be held at a designated place or solely by means of remote communication, provided that (i) the corporation shall implement reasonable measures to verify that each person deemed present and permitted to vote at the meeting by means of remote communication is a stockholder or proxyholder, (ii) the corporation shall implement reasonable measures to provide such stockholders and proxyholders a reasonable opportunity to participate in the meeting and to vote on matters submitted to the stockholders, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with such proceedings, and (iii) if any stockholder or proxyholder votes or takes other action at the meeting by means of remote communication, a record of such vote or other action shall be maintained by the corporation.

Whenever this Article III requires one or more persons (including a record or beneficial owner of stock) to deliver a document or information to the corporation or any officer, employee or agent thereof (including any notice, request, questionnaire, revocation, representation or other document or agreement), such document or information shall be in writing exclusively (and not in an electronic transmission) and shall be delivered exclusively by hand (including, without limitation, overnight courier service) or by certified or registered mail, return receipt requested and the corporation shall not be required to accept delivery of any document not in such written form or so delivered. For the avoidance of doubt, with respect to any notice from any stockholder of record or beneficial owner of the corporation's capital stock under the Certificate of Incorporation, these Bylaws or the DGCL, to the fullest extent permitted by law, the corporation expressly opts out of Section 116 of the DGCL.

Section 15. Organization.

(a) At every meeting of stockholders, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed, is absent or refuses to act, the Chief Executive Officer, or if no Chief Executive Officer is then serving or the Chief Executive Officer is absent or refuses to act, the President, or, if the President is absent or refuses to act, a chairperson of the meeting designated by the Board of Directors, or, if the Board of Directors does not designate such chairperson, a chairperson of the meeting chosen by a majority of the voting power of the stockholders entitled to vote, present in person or by proxy duly authorized, shall act as chairperson of the meeting of stockholders. The Chairperson of the Board of Directors may appoint the Chief Executive Officer as chairperson of the meeting. The Secretary of the Corporation, or, in his or her absence, an Assistant Secretary of the Corporation or other officer or other person directed to do so by the chairperson of the meeting, shall act as secretary of the meeting.

(b) The Board of Directors shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairperson of the meeting shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairperson, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the Corporation and their duly authorized and constituted proxies and such other persons as the chairperson shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters that are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairperson of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 16. Number and Term of Office. The authorized number of directors of the Corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. The terms of the directors shall be as set forth in the Certificate of Incorporation.

Section 17. Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation or the DGCL.

Section 18. Vacancies; Newly Created Directorships. Vacancies and newly created directorships on the Board of Directors shall be filled as set forth in the Certificate of Incorporation.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Board of Directors or the Secretary of the Corporation. Such resignation shall take effect at the time of delivery of the notice or at any later time specified therein. Acceptance of such resignation shall not be necessary to make it effective. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his or her successor shall have been duly elected and qualified or until his or her earlier death, resignation or removal.

Section 20. Removal. Directors shall be removed from the Board of Directors as set forth in the Certificate of Incorporation.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware that has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware as designated and called by the Chairperson of the Board of Directors, the Chief Executive Officer or a majority of the authorized number of directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place, if any, of all special meetings of the Board of Directors shall be transmitted orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, or by electronic mail or other electronic means, during normal business hours, at least 24 hours before the meeting. If notice is sent by U.S. mail, it shall be sent by first class mail, postage prepaid, at least three days before the date of the meeting.

(e) Waiver of Notice. Notice of any meeting of the Board of Directors may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 45 for which a quorum shall be 1/3 of the authorized number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation, a quorum of the Board of Directors shall consist of a majority of the authorized number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation. At any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by applicable law, the Certificate of Incorporation or these Bylaws.

Section 23. Action without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission. After an action is taken, such consent or consents shall be filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees and Compensation. Directors shall be entitled to such compensation for their services on the Board of Directors or any committee thereof as may be approved by the Board of Directors, or a committee thereof to which the Board of Directors has delegated such responsibility and authority, including, if so approved, by resolution of the Board of Directors, or a committee thereof to which the Board of Directors has delegated such responsibility and authority, including, without limitation, a fixed sum and reimbursement of expenses, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors, as well as reimbursement for other reasonable expenses incurred with respect to duties as a member of the Board of Directors or any committee thereof. Nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an executive committee (the "***Executive Committee***") to consist of one or more members of the Board of Directors. The Executive Committee, to the extent permitted by applicable law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the Corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by applicable law. Such other committees appointed by the Board of Directors shall consist of one or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of preferred stock and the provisions of subsections (a) or (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his or her death, removal or resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places, if any, as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Unless the Board of Directors shall otherwise provide, special meetings of any such committee may be held at such place, if any, that has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place, if any, of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place, if any, of special meetings of the Board of Directors. Notice of any meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee..

Section 26. Duties of Chairperson of the Board of Directors and Lead Independent Director.

(a) The Chairperson of the Board of Directors, shall preside at all meetings of the stockholders and the Board of Directors. The Chairperson of the Board of Directors shall perform such other duties commonly incident to the position and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(b) The Chairperson of the Board of Directors, or if the Chairperson is not an independent director, one of the independent directors, may be designated by the Board of Directors as lead independent director to serve until replaced by the Board of Directors ("***Lead Independent Director***"). The Lead Independent Director will preside over meetings of the independent directors and perform such other duties as may be established or delegated by the Board of Directors and perform such other duties as may be established or delegated by the Chairperson of the Board of Directors.

Section 27. Organization. At every meeting of the directors, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed or is absent, the Lead Independent Director, or if the Lead Independent Director has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairperson of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary of the Corporation, or in his or her absence, any Assistant Secretary of the Corporation or other officer, director or other person directed to do so by the person presiding over the meeting, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 28. Officers Designated. The officers of the Corporation shall include, if and when designated by the Board of Directors, the Chairperson of the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem appropriate or necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the Corporation at any one time unless specifically prohibited therefrom by applicable law, the Certificate of Incorporation or these Bylaws. The salaries and other compensation of the officers of the Corporation shall be fixed by or in the manner designated by the Board of Directors or by a committee thereof to which the Board of Directors has delegated such responsibility.

Section 29. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, subject to such officer's earlier death, resignation or removal. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors or by a committee thereof to which the Board of Directors has delegated such responsibility or, if so authorized by the Board of Directors, by the Chief Executive Officer or another officer of the Corporation.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall be the chief executive officer of the Corporation and shall, subject to the supervision, direction and control of the Board of Directors, shall have the general powers and duties of supervision, direction, management, and control of the business and officers of the Corporation as are customarily associated with the position of Chief Executive Officer. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. Unless another officer has been appointed Chief Executive Officer of the Corporation, the President shall be the chief executive officer of the Corporation and shall, subject to the supervision, direction and control of the Board of Directors, shall have the general powers and duties of supervision, direction, management and control of the business and officers of the Corporation as are customarily associated with the position of President. The President shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers, as the Board of Directors (or the Chief Executive Officer, if the Chief Executive Officer and President are not the same person) shall designate from time to time.

(d) Duties of Vice Presidents. A Vice President may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant, unless the duties of the President are being filled by the Chief Executive Officer. A Vice President shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary and Assistant Secretary. The Secretary of the Corporation shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts, votes and proceedings thereof in the minute books of the Corporation. The Secretary of the Corporation shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary of the Corporation shall perform all other duties provided for in these Bylaws and other duties customarily associated with the office and shall also perform such other duties and have such other powers, as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. The Chief Executive Officer, or if no Chief Executive Officer is then serving, the President may direct any Assistant Secretary of the Corporation or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary of the Corporation shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the Corporation in a thorough and proper manner and shall render statements of the financial affairs of the Corporation in such form and as often as required by the Board of Directors, the Chief Executive Officer, or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the Corporation. The Chief Financial Officer shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer.

(g) Duties of Treasurer and Assistant Treasurer. Unless another officer has been appointed Chief Financial Officer of the Corporation, the Treasurer shall be the chief financial officer of the Corporation. The Treasurer shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. The Chief Executive Officer, or if no Chief Executive Officer is then serving, the President, may direct any Assistant Treasurer or other officer to assume and perform the duties of the Treasurer in the absence of disability of the Treasurer, and each Assistant Treasurer shall perform other duties customarily associated with the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

Section 30. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 31. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors, the Chairperson of the Board of Directors, the Chief Executive Officer, the President or the Secretary of the Corporation. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the Corporation under any contract with the resigning officer.

Section 32. Removal. Any officer may be removed from office at any time, either with or without cause, by the Board of Directors, or by any duly authorized committee thereof or any superior officer upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 33. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute, sign or endorse on behalf of the Corporation any corporate instrument or document, or to sign on behalf of the Corporation the corporate name without limitation, or to enter into contracts on behalf of the Corporation, except where otherwise provided by applicable law or these Bylaws, and such execution or signature shall be binding upon the Corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the Corporation or in special accounts of the Corporation shall be signed by such person or persons as the Board of Directors shall from time to time authorize so to do.

Unless otherwise specifically determined by the Board of Directors or otherwise required by applicable law, the execution, signing or endorsement of any corporate instrument or document by or on behalf of the Corporation may be effected manually, by facsimile or (to the extent permitted by applicable law and subject to such policies and procedures as the corporation may have in effect from time to time) by electronic signature.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 34. Voting of Securities Owned by the Corporation. All stock and other securities of or interests in other corporations or entities owned or held by the Corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairperson of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 35. Form and Execution of Certificates. The shares of the Corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock in the Corporation represented by certificates shall be entitled to have a certificate signed by or in the name of the Corporation by any two authorized officers of the Corporation (it being understood that each of the Chairperson of the Board of Directors, the Chief Executive Officer, the President, any Vice President, the Treasurer, any Assistant Treasurer, the Secretary and any Assistant Secretary shall be an authorized officer for such purposes), certifying the number, and the class or series, of shares owned by such holder in the Corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 36. Lost Certificates. A new certificate or certificates or uncertificated shares shall be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The Corporation may require, as a condition precedent to the issuance of a new certificate or certificates or uncertificated shares, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the Corporation in such manner as it shall require or to give the Corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen, or destroyed of the issuance of a new certificate or certificates.

Section 37. Transfers.

(a) Transfers of record of shares of stock of the Corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes or series of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes or series owned by such stockholders in any manner not prohibited by the DGCL.

Section 38. Fixing Record Dates.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than 60 nor less than 10 days before the date of such meeting. If the Board of Directors so fixes a record date for determining the stockholders entitled to notice of any meeting of stockholders, such date shall also be the record date for determining the stockholders entitled to vote at such meeting, unless the Board of Directors determines, at the time it fixes the record date for determining the stockholders entitled to notice of such meeting, that a later date on or before the date of the meeting shall be the record date for determining the stockholders entitled to vote at such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day immediately preceding the day on which notice is given, or if notice is waived, at the close of business on the day immediately preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 39. Registered Stockholders. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

Section 40. Additional Powers of the Board. In addition to, and without limiting, the powers set forth in these Bylaws, the Board of Directors shall have power and authority to make all such rules and regulations as it shall deem expedient concerning the issue, transfer, and registration of certificates for shares of stock of the Corporation, including the use of uncertificated shares of stock, subject to the provisions of the DGCL, other applicable law, the Certificate of Incorporation and these Bylaws. The Board of Directors may appoint and remove transfer agents and registrars of transfers, and may require all stock certificates to bear the signature of any such transfer agent and/or any such registrar of transfers.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 41. Execution of Other Securities. All bonds, debentures and other corporate securities of the Corporation, other than stock certificates (covered in Section 35), may be signed by the Chairperson of the Board of Directors, the Chief Executive Officer, the President or any Vice President, or such other person as may be authorized by the Board of Directors; *provided*, *however,* that where any

such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible electronic signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the Corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the Corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the Corporation.

ARTICLE IX

DIVIDENDS

Section 42. Declaration of Dividends. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors. Dividends may be paid in cash, in property, or in shares of capital stock or other securities of the Corporation, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 43. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, determines proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose or purposes as the Board of Directors shall determine to be conducive to the interests of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 44. Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 45. Indemnification of Directors, Executive Officers, Other Officers, Employees and Agents.

(a) Directors and Executive Officers. To the fullest extent and in any manner permitted under the DGCL and any other applicable law, the Corporation shall indemnify any person who is made or threatened to be made a party to or is otherwise involved (as a witness or otherwise) in any Proceeding by reason of the fact that such person is or was a director or executive officer, or while

serving as a director or executive officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee, or agent of Another Enterprise, against Expenses (including attorneys' fees) reasonably incurred by him or her in connection with such Proceeding; *provided, however,* that the Corporation shall not be required to indemnify any director or executive officer in connection with any Proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by applicable law, (ii) the Proceeding was authorized in the specific case by the Board of Directors of the Corporation, (iii) such indemnification is approved by the Board of Directors of the Corporation, in its sole discretion, pursuant to the powers vested in it under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d) of this Section 45 (collectively, "***Covered Indemnitee Initiated Proceedings***").

(b) Other Officers, Employees and Agents. The Corporation shall have power to indemnify (including the power to advance expenses in a manner consistent with subsection (c) of this Section 45) its other officers, employees and agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person except executive officers to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The Corporation shall, to the fullest extent and in any manner permitted under the DGCL and any other applicable law, advance to any director or executive officer who was or is a party or is threatened to be made a party to any Proceeding prior to the final disposition of the Proceeding, promptly following request therefor, all expenses (including attorneys' fees) incurred by any director or executive officer in defending any Proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or executive officer in his or her capacity as a director or executive officer (and not in any other capacity in which service was or is rendered by such person, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking (hereinafter, an "undertaking"), by or on behalf of such person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a "final adjudication") that such person is not entitled to be indemnified for such expenses under this Section 45 or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (d) of this Section 45, no advance shall be made by the Corporation to an executive officer of the Corporation (except by reason of the fact that such executive officer is or was a director of the Corporation in which event this paragraph shall not apply) in any Proceeding, if a determination is reasonably made (i) by a majority vote of directors who were not parties to the Proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the Corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and executive officers under this Section 45 shall be deemed to be contractual rights, shall vest when the person becomes a director or executive officer of the Corporation, shall continue as vested contract rights even if such person ceases to be a director or executive officer of the Corporation, and shall be effective to the same extent and as if provided for in a contract between the Corporation and the director or executive officer. Any right to indemnification or advances granted by this Section 45 to a director or executive officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within 90 days of

request therefor. To the fullest extent permitted by applicable law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the Corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the Corporation to indemnify the claimant for the amount claimed. In connection with any claim by an executive officer of the Corporation (except in any Proceeding, by reason of the fact that such executive officer is or was a director of the Corporation) for advances, the Corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the Corporation, or with respect to any criminal Proceeding that such person acted without reasonable cause to believe that his or her conduct was lawful. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he or she has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or executive officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or executive officer is not entitled to be indemnified, or to such advancement of expenses, under this Section 45 or otherwise shall be on the Corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Section 45 shall not be exclusive of any other right that such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding office. The Corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Section 45 shall continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the Corporation, upon approval by the Board of Directors, may purchase and maintain insurance on behalf of any person required or permitted to be indemnified pursuant to this Section 45.

(h) Amendments. Any repeal or modification of this Section 45 shall only be prospective and shall not affect the rights under this Section 45 in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any Proceeding against any agent of the Corporation.

(i) Saving Clause. If this Article XI or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify and advance expenses to each director and executive officer to the fullest extent not prohibited by any applicable portion of this Article XI that shall not have been invalidated, or by any other applicable law. If this Article XI shall be invalid due to the application of the indemnification and advancement provisions of another jurisdiction, then the Corporation shall indemnify and advance expenses to each director and executive officer to the fullest extent not prohibited under the applicable law of such jurisdiction.

(j) Certain Definitions and Construction of Terms. For the purposes of Article XI of the Bylaws, the following definitions and rules of construction shall apply:

(i) The term "***Another Enterprise***" shall mean any corporation, partnership, joint venture, trust or other enterprise, including any employee benefit plan.

(ii) The term the "***Corporation***" shall include, in addition to the resulting Corporation, any constituent Corporation (including any constituent of a constituent) absorbed in a consolidation or merger that, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent Corporation, or is or was serving at the request of such constituent Corporation as a director, officer, employee or agent of another Corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Section 45 with respect to the resulting or surviving Corporation as he would have with respect to such constituent Corporation if its separate existence had continued.

(iii) References to a "***director***," "***executive officer***," "***officer***," "***employee***," or "***agent***" of the Corporation shall include, without limitation, situations where such person is serving at the request of the Corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of Another Enterprise.

(iv) The term "***executive officer***" shall mean those persons designated by the Corporation as (a) executive officers for purposes of the disclosures required in the Corporation's proxy and periodic reports or (b) officers for purposes of Section 16 of the 1934 Act.

(v) The term "***expenses***" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any Proceeding.

(vi) References to "***fines***" shall include any excise taxes assessed on a person with respect to an employee benefit plan; The term "***Proceeding***" shall mean any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative, to which a person is made or threatened to be made a party to or is otherwise involved in (as a witness or otherwise) by reason of the fact that such person is or was a director or executive officer of the Corporation, or while serving as a director or executive officer of the Corporation, is or was serving at the request of the corporation as a director, officer, employee or agent of Another Enterprise. The term Proceeding shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(vii) References to "***serving at the request of the Corporation***" shall include any service as a director, officer, employee or agent of the Corporation that imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "***not opposed to the best interests of the Corporation***" as referred to in this Section 45.

ARTICLE XII

NOTICES

Section 46. Notices.

(a) Notice to Stockholders. Notice to stockholders of stockholder meetings shall be given as provided in Section 7. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by applicable law, notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by electronic mail or other electronic means in accordance with Section 232 of the DGCL.

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), or otherwise provided in these Bylaws (including by any of the means specified in Section 21(d)), or by overnight delivery services. Any notice sent by overnight delivery services or by U.S. mail shall be sent to such address as such director shall have filed in writing with the Secretary of the Corporation, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the Corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice to Person with Whom Communication is Unlawful. Whenever notice is required to be given, under applicable law or any provision of the Certificate of Incorporation or Bylaws of the Corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting that shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the Corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under the DGCL, any notice given under the provisions of the DGCL, the Certificate of Incorporation or these Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the Corporation within 60 days of having been given notice by the Corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the Corporation.

ARTICLE XIII

AMENDMENTS

Section 47. Amendments. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws. Any adoption, amendment or repeal of the Bylaws by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Corporation required by applicable law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least 66-2/3% of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS

Section 48. Loans to Officers. Except as otherwise prohibited by applicable law, the Corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the Corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the Corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

CERTIFICATION OF AMENDED AND RESTATED BYLAWS
OF
LYELL IMMUNOPHARMA, INC.

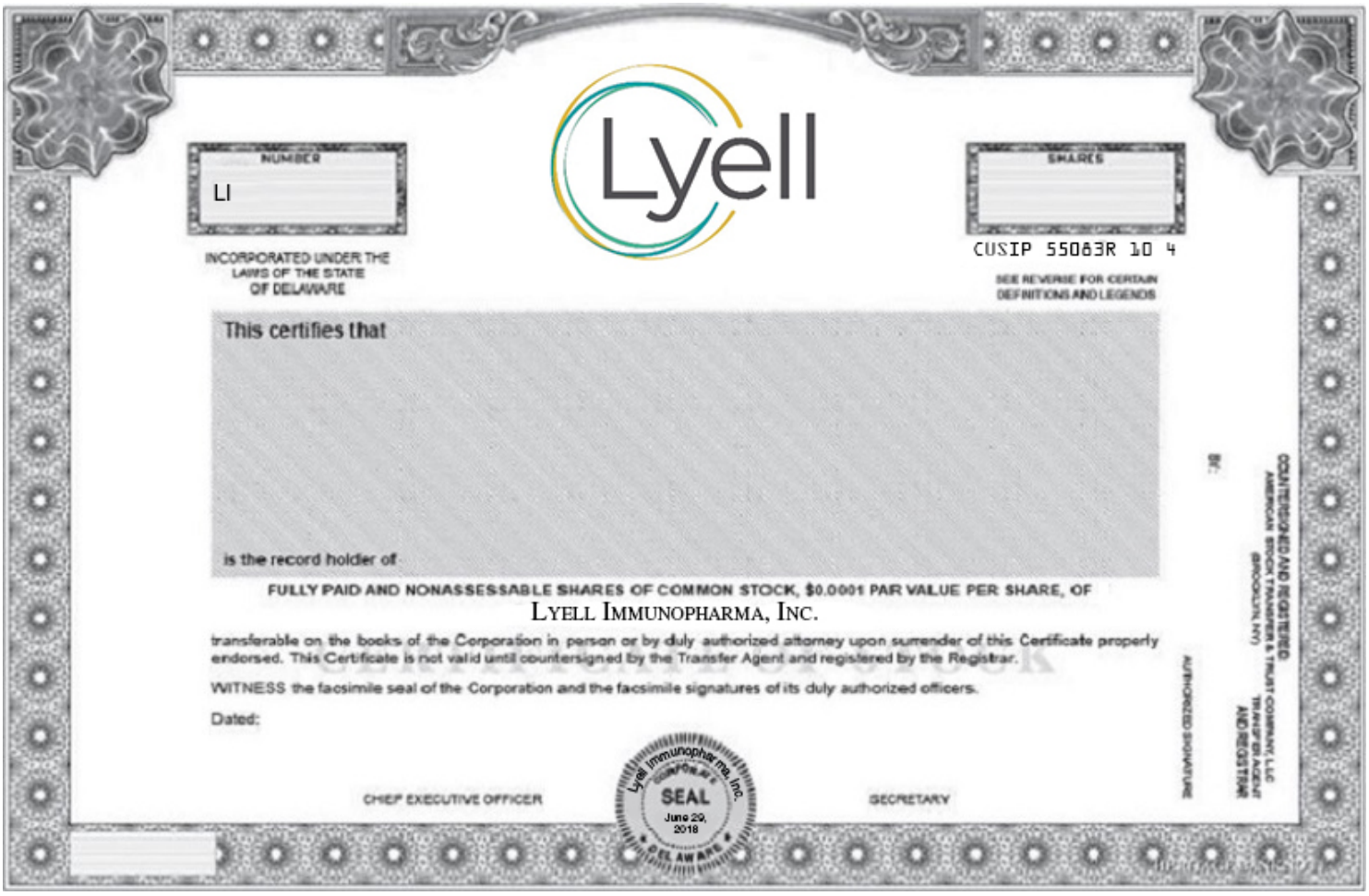
a Delaware Corporation

I, Heather Turner, certify that I am Secretary of Lyell Immunopharma, Inc., a Delaware corporation (the "**Corporation**"), that I am duly authorized to make and deliver this certification, and that the attached Amended and Restated Bylaws are a true and complete copy of the Amended and Restated Bylaws of the Corporation in effect as of the date of this certificate.

Dated: June , 2021

Heather Turner, Secretary

Exhibit 4.1


NUMBER
LI
SHARES
Lyell
CUSIP 55083R 10 4
INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE
SEE REVERSE FOR CERTAIN DEFINITIONS AND LEGENDS
This certifies that
is the record holder of
FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK, $0.0001 PAR VALUE PER SHARE, OF
LYELL IMMUNOPHARMA, INC.
transferable on the books of the Corporation in person or by duly authorized attorney upon surrender of this Certificate properly endorsed. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.
WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.
Dated:
CHIEF EXECUTIVE OFFICER
SEAL
June 29, 2018
SECRETARY
COUNTERSIGNED AND REGISTERED
AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC
TRANSFER AGENT AND REGISTRAR
AUTHORIZED SIGNATURE

The Corporation shall furnish without charge to each stockholder who so requests a statement of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock of the Corporation or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Such requests shall be made to the Corporation's Secretary at the principal office of the Corporation.

KEEP THIS CERTIFICATE IN A SAFE PLACE. IF IT IS LOST, STOLEN,OR DESTROYED THE CORPORATION WILL REQUIRE A BOND INDEMNITY AS A CONDITION TO THE ISSUANCE OF A REPLACEMENT CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	–	as tenants in common	UNIF GIFT MIN ACT –	_____ Custodian _____ (Cust) (Minor) under Uniform Gifts to Minors Act_____ _____ (State)
TEN ENT	–	as tenants by the entireties		
JT TEN	–	as joint tenants with right of survivorship and not as tenants in common		
COM PROP	–	as community property	UNIF TRF MIN ACT –	_____Custodian (until age_____) (Cust) _____under Uniform Transfers (Minor) to Minors Act_____ (State)

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, _____ hereby sell(s), assign(s) and transfer(s) unto

PLEASE INSERT SOCIAL SECURITY OR OTHER
IDENTIFYING NUMBER OF ASSIGNEE

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____

_____

_____ shares

of the capital stock represented by within Certificate, and do hereby irrevocably constitute and appoint

_____ attorney-in-fact

to transfer the said stock on the books of the within named Corporation with full power of the substitution in the premises.

Dated _____

X _____

X _____

Signature(s) Guaranteed:

Notice: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER.

By _____

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION, (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO S.E.C. RULE 17Ad-15. GUARANTEES BY A NOTARY PUBLIC ARE NOT ACCEPTABLE. SIGNATURE GUARANTEES MUST NOT BE DATED.

Cooley

David G. Peinsipp
T: +1 415 693 2177
dpeinsipp@cooley.com

June 9, 2021

Lyell Immunopharma, Inc.
400 East Jamie Court, Suite 301
South San Francisco, CA 94080

Ladies and Gentlemen:

We have acted as counsel to Lyell Immunopharma, Inc., a Delaware corporation (the "***Company***"), in connection with the filing by the Company of a Registration Statement (No. 333-256470) on Form S-1 (the "***Registration Statement***") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "***Prospectus***"), covering an underwritten public offering of up to 28,750,000 shares (the "***Shares***") of the Company's common stock, par value $0.0001, which includes up to 3,750,000 shares that may be sold pursuant to the exercise of an option to purchase additional shares.

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation, as amended, and Amended and Restated Bylaws, each as currently in effect, (c) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, filed as Exhibits 3.2 and 3.4 to the Registration Statement, respectively, each of which is to be in effect upon the closing of the offering contemplated by the Registration Statement and (d) originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below, and (ii) assumed that (a) the Shares will be sold at a price established by the Board of Directors of the Company or a duly authorized committee thereof and (b) the Amended and Restated Certificate of Incorporation referred to in clause (i)(c) is filed with the Secretary of State of the State of Delaware before issuance of the Shares. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of officers of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ David G. Peinsipp
David G. Peinsipp

LYELL IMMUNOPHARMA, INC.
2021 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: JUNE [__], 2021
APPROVED BY THE STOCKHOLDERS: JUNE [__], 2021

1. GENERAL.

(a) Successor to and Continuation of Prior Plan. The Plan is the successor to and continuation of the Prior Plan. As of the Effective Date, (i) no additional awards may be granted under the Prior Plan; (ii) the Prior Plan's Available Reserve (plus any Returning Shares) will become available for issuance pursuant to Awards granted under this Plan; and (iii) all outstanding awards granted under the Prior Plan will remain subject to the terms of the Prior Plan (except to the extent such outstanding awards result in Returning Shares that become available for issuance pursuant to Awards granted under this Plan). All Awards granted under this Plan will be subject to the terms of this Plan.

(b) Plan Purpose. The Company, by means of the Plan, seeks to secure and retain the services of Employees, Directors and Consultants, to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and to provide a means by which such persons may be given an opportunity to benefit from increases in value of the Common Stock through the granting of Awards.

(c) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options; (ii) Nonstatutory Stock Options; (iii) SARs; (iv) Restricted Stock Awards; (v) RSU Awards; (vi) Performance Awards; and (vii) Other Awards.

(d) Adoption Date; Effective Date. The Plan will come into existence on the Adoption Date, but no Award may be granted prior to the Effective Date.

2. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to adjustment in accordance with Section 2(c) and any adjustments as necessary to implement any Capitalization Adjustments, the aggregate number of shares of Common Stock that may be issued pursuant to Awards will not exceed 68,856,698 shares, which number is the sum of: (i) 24,700,000 new shares, plus (ii) a number of shares of Common Stock equal to the Prior Plan's Available Reserve, plus (iii) a number of shares of Common Stock equal to the number of Returning Shares, if any, as such shares become available from time to time. In addition, subject to any adjustments as necessary to implement any Capitalization Adjustments, such aggregate number of shares of Common Stock will automatically increase on January 1 of each year for a period of ten years commencing on January 1, 2022 and ending on (and including) January 1, 2031, in an amount equal to 5% of the total number of shares of Common Stock outstanding on December 31 of the preceding year; provided, however, that the Board may act prior to January 1st of a given year to provide that the increase for such year will be a lesser number of shares of Common Stock.

(b) Aggregate Incentive Stock Option Limit. Notwithstanding anything to the contrary in Section 2(a) and subject to any adjustments as necessary to implement any Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is 206,570,094 shares.

(c) Share Reserve Operation.

(i) Limit Applies to Common Stock Issued Pursuant to Awards. For clarity, the Share Reserve is a limit on the number of shares of Common Stock that may be issued pursuant to Awards and does not limit the granting of Awards, except that the Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy its obligations to issue shares pursuant to such Awards. Shares may be issued in connection with a merger or acquisition as permitted by, as applicable, Nasdaq Listing Rule 5635(c), NYSE Listed Company Manual Section 303A.08, NYSE American Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(ii) Actions that Do Not Constitute Issuance of Common Stock and Do Not Reduce Share Reserve. The following actions do not result in an issuance of shares under the Plan and accordingly do not reduce the number of shares subject to the Share Reserve and available for issuance under the Plan: (1) the expiration or termination of any portion of an Award without the shares covered by such portion of the Award having been issued, (2) the settlement of any portion of an Award in cash (i.e., the Participant receives cash rather than Common Stock), (3) the withholding of shares that would otherwise be issued by the Company to satisfy the exercise, strike or purchase price of an Award, or (4) the withholding of shares that would otherwise be issued by the Company to satisfy a tax withholding obligation in connection with an Award.

(iii) Reversion of Previously Issued Shares of Common Stock to Share Reserve. The following shares of Common Stock previously issued pursuant to an Award and accordingly initially deducted from the Share Reserve will be added back to the Share Reserve and again become available for issuance under the Plan: (1) any shares that are forfeited back to or repurchased by the Company because of a failure to meet a contingency or condition required for the vesting of such shares, (2) any shares that are reacquired by the Company to satisfy the exercise, strike or purchase price of an Award, and (3) any shares that are reacquired by the Company to satisfy a tax withholding obligation in connection with an Award.

3. ELIGIBILITY AND LIMITATIONS.

(a) Eligible Award Recipients. Subject to the terms of the Plan, Employees, Directors and Consultants are eligible to receive Awards.

(b) Specific Award Limitations.

(i) Limitations on Incentive Stock Option Recipients. Incentive Stock Options may be granted only to Employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and (f) of the Code).

(ii) Incentive Stock Option $100,000 Limitation. To the extent that the aggregate fair market value (determined at the time of grant) of the shares of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any "parent corporation" or "subsidiary corporation" thereof, as such terms are defined in Sections 424(e) and (f) of the Code) exceeds $100,000 (or such other limit established in the Code), or any Incentive Stock Options otherwise do not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(iii) Limitations on Incentive Stock Options Granted to Ten Percent Stockholders. A Ten Percent Stockholder may not be granted an Incentive Stock Option unless (i) the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant of such Option and (ii) the Option is not exercisable after the expiration of five years from the date of grant of such Option.

(iv) Limitations on Nonstatutory Stock Options and SARs. Nonstatutory Stock Options and SARs may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company (as such term is defined in Rule 405) unless the stock underlying such Awards is treated as "service recipient stock" under Section 409A because the Awards are granted pursuant to a corporate transaction (such as a spin off transaction) or unless such Awards otherwise comply with the distribution requirements of Section 409A.

(c) Aggregate Incentive Stock Option Limit. The aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is the number of shares specified in Section 2(b).

(d) Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid, as applicable, in each case following the IPO Date, to any individual for service as a Non-Employee Director with respect to any fiscal year, including Awards granted and cash fees paid by the Company to such Non-Employee Director for his or her service as a Non-Employee Director, will not exceed $1,000,000 in total value calculating the value of any equity awards based on the grant date fair value of such equity awards for financial reporting purposes.

4. OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option and SAR will have such terms and conditions as determined by the Board. Each Option will be designated in writing as an Incentive Stock Option or Nonstatutory Stock Option at the time of grant; provided, however, that if an Option is not so designated, then such Option will be a Nonstatutory Stock Option, and the shares purchased upon exercise of each type of Option will be separately accounted for. Each SAR will be denominated in shares of Common Stock equivalents. The terms and conditions of separate Options and SARs need not be identical; provided, however, that each Option Agreement and SAR Agreement will conform (through incorporation of provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(a) Term. Subject to Section 3(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of grant of such Award or such shorter period specified in the Award Agreement.

(b) Exercise or Strike Price. Subject to Section 3(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will not be less than 100% of the Fair Market Value on the date of grant of such Award. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value on the date of grant of such Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Sections 409A and, if applicable, 424(a) of the Code.

(c) Exercise Procedure and Payment of Exercise Price for Options. In order to exercise an Option, the Participant must provide notice of exercise to the Plan Administrator in accordance with the procedures specified in the Option Agreement or otherwise provided by the Company. The Board has the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize a particular method of payment. The exercise price of an Option may be paid, to the extent permitted by Applicable Law and as determined by the Board, by one or more of the following methods of payment to the extent set forth in the Option Agreement:

(i) by cash or check, bank draft or money order payable to the Company;

(ii) pursuant to a "cashless exercise" program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the Common Stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock that are already owned by the Participant free and clear of any liens, claims, encumbrances or security interests, with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) at the time of exercise the Common Stock is publicly traded, (2) any remaining balance of the exercise price not satisfied by such delivery is paid by the Participant in cash or other permitted form of payment, (3) such delivery would not violate any Applicable Law or agreement restricting the redemption of the Common Stock, (4) any certificated shares are endorsed or accompanied by an executed assignment separate from certificate, and (5) such shares have been held by the Participant for any minimum period necessary to avoid adverse accounting treatment as a result of such delivery;

(iv) if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) such shares used to pay the exercise price will not be exercisable thereafter and (2) any remaining balance of the exercise price not satisfied by such net exercise is paid by the Participant in cash or other permitted form of payment; or

(v) in any other form of consideration that may be acceptable to the Board and permissible under Applicable Law.

(d) Exercise Procedure and Payment of Appreciation Distribution for SARs. In order to exercise any SAR, the Participant must provide notice of exercise to the Plan Administrator in accordance with the SAR Agreement. The appreciation distribution payable to a Participant upon the exercise of a SAR will not be greater than an amount equal to the excess of (i) the aggregate Fair Market Value on the date of exercise of a number of shares of Common Stock equal to the number of Common Stock equivalents that are vested and being exercised under such SAR, over (ii) the strike price of such SAR. Such appreciation distribution may be paid to the Participant in the form of Common Stock or cash (or any combination of Common Stock and cash) or in any other form of payment, as determined by the Board and specified in the SAR Agreement.

(e) Transferability. Options and SARs may not be transferred to third party financial institutions for value. The Board may impose such additional limitations on the transferability of an Option or SAR as it determines. In the absence of any such determination by the Board, the following restrictions on the transferability of Options and SARs will apply, provided that except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration and provided, further, that if an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of being transferred:

(i) Restrictions on Transfer. An Option or SAR will not be transferable, except by will or by the laws of descent and distribution, and will be exercisable during the lifetime of the Participant only by the Participant; provided, however, that the Board may permit transfer of an Option or SAR in a manner that is not prohibited by applicable tax and securities laws upon the Participant's request, including to a trust if the Participant is considered to be the sole beneficial owner of such trust (as determined under Section 671 of the Code and applicable U.S. state law) while such Option or SAR is held in such trust, provided that the Participant and the trustee enter into a transfer and other agreements required by the Company.

(ii) Domestic Relations Orders. Notwithstanding the foregoing, subject to the execution of transfer documentation in a format acceptable to the Company and subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to a domestic relations order.

(f) Vesting. The Board may impose such restrictions on or conditions to the vesting and/or exercisability of an Option or SAR as determined by the Board. Except as otherwise provided in the applicable Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Options and SARs will cease upon termination of the Participant's Continuous Service.

(g) Termination of Continuous Service for Cause. Except as explicitly otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service is terminated for Cause, the Participant's Options and SARs will terminate and be forfeited immediately upon such termination of Continuous Service, and the Participant will be prohibited from exercising any portion (including any vested portion) of such Awards on and after the date of such termination of Continuous Service and the Participant will have no further right, title or interest in such forfeited Award, the shares of Common Stock subject to the forfeited Award, or any consideration in respect of the forfeited Award.

(h) Post-Termination Exercise Period Following Termination of Continuous Service for Reasons Other than Cause. Subject to Section 4(i), if a Participant's Continuous Service terminates for any reason other than for Cause, the Participant may exercise his or her Option or SAR to the extent vested, but only within the following period of time or, if applicable, such other period of time provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate; provided, however, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)):

(i) three months following the date of such termination if such termination is a termination without Cause (other than any termination due to the Participant's Disability or death);

(ii) 12 months following the date of such termination if such termination is due to the Participant's Disability;

(iii) 18 months following the date of such termination if such termination is due to the Participant's death; or

(iv) 18 months following the date of the Participant's death if such death occurs following the date of such termination but during the period such Award is otherwise exercisable (as provided in (i) or (ii) above).

Following the date of such termination, to the extent the Participant does not exercise such Award within the applicable Post-Termination Exercise Period (or, if earlier, prior to the expiration of the maximum term of such Award), such unexercised portion of the Award will terminate, and the Participant will have no further right, title or interest in terminated Award, the shares of Common Stock subject to the terminated Award, or any consideration in respect of the terminated Award.

(i) Restrictions on Exercise; Extension of Exercisability. A Participant may not exercise an Option or SAR at any time that the issuance of shares of Common Stock upon such exercise would violate Applicable Law. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason other than for Cause and, at any time during the last thirty days of the applicable Post-Termination Exercise Period, the exercise of the Participant's Option or SAR would be prohibited solely because the issuance of shares of Common Stock upon such exercise would violate Applicable Law, then the applicable Post-Termination Exercise Period will be extended to the last day of the calendar month that commences following the date the Award would otherwise expire, with an additional extension of the exercise period to the last day of the next calendar month to apply if the foregoing restriction applies at any time during such extended exercise period, generally without limitation as to the maximum permitted number of extensions; provided, however, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)).

(j) Non-Exempt Employees. No Option or SAR, whether or not vested, granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, will be first exercisable for any shares of Common Stock until at least six months following the date of grant of such Award. Notwithstanding the foregoing, in accordance with the provisions of the Worker Economic Opportunity Act, any vested portion of such Award may be exercised earlier than six months following the date of grant of such Award in the event of (i) such Participant's death or Disability, (ii) a Corporate Transaction in which such Award is not assumed, continued or substituted, (iii) a Change in Control, or (iv) such Participant's retirement (as such term may be defined in the Award Agreement or another applicable agreement or, in the absence of any such definition, in accordance with the Company's then current employment policies and guidelines). This Section 4(j) is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay.

(k) Whole Shares. Options and SARs may be exercised only with respect to whole shares of Common Stock or their equivalents.

5. AWARDS OTHER THAN OPTIONS AND STOCK APPRECIATION RIGHTS.

(a) Restricted Stock Awards and RSU Awards. Each Restricted Stock Award and RSU Award will have such terms and conditions as determined by the Board; provided, however, that each Restricted Stock Award Agreement and RSU Award Agreement will conform (through incorporation of the provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(i) Form of Award.

(1) RSAs: To the extent consistent with the Company's Bylaws, at the Board's election, shares of Common Stock subject to a Restricted Stock Award may be (i) held in book entry form subject to the Company's instructions until such shares become vested or any other restrictions lapse, or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. Unless otherwise determined by the Board, a Participant will have voting and other rights as a stockholder of the Company with respect to any shares subject to a Restricted Stock Award.

(2) RSUs: A RSU Award represents a Participant's right to be issued on a future date the number of shares of Common Stock that is equal to the number of restricted stock units subject to the RSU Award. As a holder of a RSU Award, a Participant is an unsecured creditor of the Company with respect to the Company's unfunded obligation, if any, to issue shares of Common Stock in settlement of such Award and nothing contained in the Plan or any RSU Agreement, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between a Participant and the Company or an Affiliate or any other person. A Participant will not have voting or any other rights as a stockholder of the Company with respect to any RSU Award (unless and until shares are actually issued in settlement of a vested RSU Award).

(ii) Consideration.

(1) RSA: A Restricted Stock Award may be granted in consideration for (A) cash or check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of consideration as the Board may determine and permissible under Applicable Law.

(2) RSU: Unless otherwise determined by the Board at the time of grant, a RSU Award will be granted in consideration for the Participant's services to the Company or an Affiliate, such that the Participant will not be required to make any payment to the Company (other than such services) with respect to the grant or vesting of the RSU Award, or the issuance of any shares of Common Stock pursuant to the RSU Award. If, at the time of grant, the Board determines that any consideration must be paid by the Participant (in a form other than the Participant's services to the Company or an Affiliate) upon the issuance of any shares of Common Stock in settlement of the RSU Award, such consideration may be paid in any form of consideration as the Board may determine and permissible under Applicable Law.

(iii) Vesting. The Board may impose such restrictions on or conditions to the vesting of a Restricted Stock Award or RSU Award as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Restricted Stock Awards and RSU Awards will cease upon termination of the Participant's Continuous Service.

(iv) Termination of Continuous Service. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason, (i) the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant under his or her Restricted Stock Award that have not vested as of the date of such termination as set forth in the Restricted Stock Award Agreement and (ii) any portion of his or her RSU Award that has not vested will be forfeited upon such termination and the Participant will have no further right, title or interest in the RSU Award, the shares of Common Stock issuable pursuant to the RSU Award, or any consideration in respect of the RSU Award.

(v) Dividends and Dividend Equivalents. Dividends or dividend equivalents may be paid or credited, as applicable, with respect to any shares of Common Stock subject to a Restricted Stock Award or RSU Award, as determined by the Board and specified in the Award Agreement.

(vi) Settlement of RSU Awards. A RSU Award may be settled by the issuance of shares of Common Stock or cash (or any combination thereof) or in any other form of payment, as determined by the Board and specified in the RSU Award Agreement. At the time of grant, the Board may determine to impose such restrictions or conditions that delay such delivery to a date following the vesting of the RSU Award.

(b) Performance Awards. With respect to any Performance Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, the other terms and conditions of such Award, and the measure of whether and to what degree such Performance Goals have been attained will be determined by the Board.

(c) Other Awards. Other Awards may be granted either alone or in addition to Awards provided for under Section 4 and the preceding provisions of this Section 5. Subject to the provisions of the Plan, the Board will have sole and complete discretion to determine the persons to whom and the time or times at which such Other Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Awards and all other terms and conditions of such Other Awards.

6. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board shall appropriately and proportionately adjust: (i) the class(es) and maximum number of shares of Common Stock subject to the Plan and the maximum number of shares by which the Share Reserve may annually increase pursuant to Section 2(a), (ii) the class(es) and maximum number of shares that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 2(b), and (iii) the class(es) and number of securities and exercise price, strike price or purchase price of Common Stock subject to outstanding Awards. The Board shall make such adjustments, and its determination shall be final, binding and conclusive. Notwithstanding the foregoing, no fractional shares or rights for fractional shares of Common Stock shall be created in order to implement any Capitalization Adjustment. The Board shall determine an appropriate equivalent benefit, if any, for any fractional shares or rights to fractional shares that might be created by the adjustments referred to in the preceding provisions of this Section.

(b) Dissolution or Liquidation. Except as otherwise provided in the Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Awards (other than Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Award is providing Continuous Service, provided, however, that the Board may determine to cause some or all Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions will apply to Awards in the event of a Corporate Transaction except as set forth in Section 11, and unless otherwise provided in the instrument evidencing the Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of an Award.

(i) Awards May Be Assumed. In the event of a Corporate Transaction, any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue any or all Awards outstanding under the Plan or may substitute similar awards for Awards outstanding under the Plan (including but not limited to, awards to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction), and any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to Awards may be assigned by the Company to the successor of the Company (or the successor's parent company, if any), in connection with such Corporate Transaction. A surviving corporation or acquiring corporation (or its parent) may choose to assume or continue only a portion of an Award or substitute a similar award for only a portion of an Award, or may choose to assume, continue, or substitute the Awards held by some, but not all Participants. The terms of any assumption, continuation or substitution will be set by the Board.

(ii) Awards Held by Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by Participants whose Continuous Service has not terminated prior to the effective time of the Corporate Transaction (referred to as the "**Current Participants**"), the vesting of such Awards (and, with respect to Options and SARs, the time when such Awards may be exercised) will be accelerated in full to a date prior to the effective time of such Corporate Transaction (contingent upon the effectiveness of the Corporate Transaction) as the Board determines (or, if the Board does not determine such a date, to the date that is five days prior to the effective time of the Corporate Transaction), and such Awards will terminate if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Awards will lapse (contingent upon the effectiveness of the Corporate Transaction). With respect to the vesting of Performance Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and that have multiple vesting levels depending on the level of performance, unless otherwise provided in the Award Agreement, the vesting of such Performance Awards will accelerate at 100% of the target level upon the occurrence of the Corporate Transaction. With respect to the vesting of Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and are settled in the form of a cash payment, such cash payment will be made no later than 30 days following the occurrence of the Corporate Transaction.

(iii) Awards Held by Persons other than Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by persons other than Current Participants, such Awards will terminate if not exercised (if applicable) prior to the occurrence of the Corporate Transaction; provided, however, that any reacquisition or repurchase rights held by the Company with respect to such Awards will not terminate and may continue to be exercised notwithstanding the Corporate Transaction.

(iv) Payment for Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event an Award will terminate if not exercised prior to the effective time of a Corporate Transaction, the Board may provide, in its sole discretion, that the holder of such Award may not exercise such Award but will receive a payment, in such form as may be determined by the Board, equal in value, at the effective time, to the excess, if any, of (1) the value of the property the Participant would have received upon the exercise of the Award (including, at the discretion of the Board, any unvested portion of such Award), over (2) any exercise price payable by such holder in connection with such exercise.

(d) Appointment of Stockholder Representative. As a condition to the receipt of an Award under this Plan, a Participant will be deemed to have agreed that the Award will be subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on the Participant's behalf with respect to any escrow, indemnities and any contingent consideration.

(e) No Restriction on Right to Undertake Transactions. The grant of any Award under the Plan and the issuance of shares pursuant to any Award does not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, rights or options to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

7. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in subsection (c) below.

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine from time to time: (1) which of the persons eligible under the Plan will be granted Awards; (2) when and how each Award will be granted; (3) what type or combination of types of Award will be granted; (4) the provisions of each Award granted (which need not be identical), including the time or times when a person will be permitted to receive an issuance of Common Stock or other payment pursuant to an Award; (5) the number of shares of Common Stock or cash equivalent with respect to which an Award will be granted to each such person; (6) the Fair Market Value applicable to an Award; and (7) the terms of any Performance Award that is not valued in whole or in part by reference to, or otherwise based on, the Common Stock, including the amount of cash payment or other property that may be earned and the timing of payment.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement, in a manner and to the extent it deems necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest, notwithstanding the provisions in the Award Agreement stating the time at which it may first be exercised or the time during which it will vest.

(v) To prohibit the exercise of any Option, SAR or other exercisable Award during a period of up to 30 days prior to the consummation of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock (including, but not limited to, any Corporate Transaction), for reasons of administrative convenience.

(vi) To suspend or terminate the Plan at any time. Suspension or termination of the Plan will not Materially Impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant.

(vii) To amend the Plan in any respect the Board deems necessary or advisable; provided, however, that stockholder approval will be required for any amendment to the extent required by Applicable Law. Except as provided above, rights under any Award granted before amendment of the Plan will not be Materially Impaired by any amendment of the Plan unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(viii) To submit any amendment to the Plan for stockholder approval.

(ix) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; provided however, that, a Participant's rights under any Award will not be Materially Impaired by any such amendment unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(x) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(xi) To adopt such procedures and sub-plans as are necessary or appropriate to permit and facilitate participation in the Plan by, or take advantage of specific tax treatment for Awards granted to, Employees, Directors or Consultants who are non-U.S. nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement to ensure or facilitate compliance with the laws of the relevant non-U.S. jurisdiction).

(xii) To effect, at any time and from time to time, subject to the consent of any Participant whose Award is Materially Impaired by such action, (1) the reduction of the exercise price (or strike price) of any outstanding Option or SAR; (2) the cancellation of any outstanding Option or SAR and the grant in substitution therefor of (A) a new Option, SAR, Restricted Stock Award, RSU Award or Other Award, under the Plan or another equity plan of the Company, covering the same or a different number of shares of Common Stock, (B) cash and/or (C) other valuable consideration (as determined by the Board); or (3) any other action that is treated as a repricing under generally accepted accounting principles.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to another Committee or a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Each Committee may retain the authority to concurrently administer the Plan with the Committee or subcommittee to which it has delegated its authority hereunder and may, at any time, revest in such Committee some or all of the powers previously delegated. The Board may retain the authority to concurrently administer the Plan with any Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. To the extent an Award is intended to qualify for the exemption from Section 16(b) of the Exchange Act that is available under Rule 16b-3 of the Exchange Act, the Award will be granted by the Board or a Committee that consists solely of two or more Non-Employee Directors, as determined under Rule 16b-3(b)(3) of the Exchange Act and thereafter any action establishing or modifying the terms of the Award will be approved by the Board or a Committee meeting such requirements to the extent necessary for such exemption to remain available.

(d) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board or any Committee in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

(e) Delegation to an Officer. The Board or any Committee may delegate to one or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by Applicable Law, other types of Awards) and, to the extent permitted by Applicable Law, the terms thereof, and (ii) determine the number of shares of Common Stock to be subject to such Awards granted to such Employees; provided, however, that the resolutions or charter adopted by the Board or any Committee evidencing such delegation will specify the total number of shares of Common Stock that may be subject to the Awards granted by such Officer and that such Officer may not grant an Award to himself or herself. Any such Awards will be granted on the applicable form of Award Agreement most recently approved for use by the Board or the Committee, unless otherwise provided in the resolutions approving the delegation authority. Notwithstanding anything to the contrary herein, neither the Board nor any Committee may delegate to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) the authority to determine the Fair Market Value.

8. TAX WITHHOLDING

(a) Withholding Authorization. As a condition to acceptance of any Award under the Plan, a Participant authorizes withholding from payroll and any other amounts payable to such Participant, and otherwise agrees to make adequate provision for, any sums required to satisfy any U.S. federal, state, local, and/or non-U.S. tax or social insurance contribution withholding obligations of the Company or an Affiliate, if any, which arise in connection with the grant, vesting, exercise, or settlement of such Award, as applicable. Accordingly, a Participant may not be able to exercise an Award even though the Award is vested, and the Company shall have no obligation to issue shares of Common Stock subject to an Award, unless and until such obligations are satisfied.

(b) Satisfaction of Withholding Obligation. To the extent permitted by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any U.S. federal, state, local and/or non-U.S. tax or social insurance withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; (v) by allowing a Participant to effectuate a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board; or (vi) by such other method as may be set forth in the Award Agreement.

(c) No Obligation to Notify or Minimize Taxes; No Liability to Claims. Except as required by Applicable Law, the Company has no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Award. Furthermore, the Company has no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award and will not be liable to any holder of an Award for any adverse tax consequences to such holder in connection with an Award. As a condition to accepting an Award under the Plan, each Participant (i) agrees to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from such Award or other Company compensation and (ii) acknowledges that such Participant was advised to consult with his or her own personal tax, financial and other legal advisors regarding the tax consequences of the Award and has either done so or knowingly and voluntarily declined to do so. Additionally, each Participant acknowledges any Option or SAR granted under the Plan is exempt from Section 409A only if the exercise or strike price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Award. Additionally, as a condition to accepting an Option or SAR granted under the Plan, each Participant agrees not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise price or strike price is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

(d) Withholding Indemnification. As a condition to accepting an Award under the Plan, in the event that the amount of the Company's and/or its Affiliate's withholding obligation in connection with such Award was greater than the amount actually withheld by the Company and/or its Affiliates, each Participant agrees to indemnify and hold the Company and/or its Affiliates harmless from any failure by the Company and/or its Affiliates to withhold the proper amount.

9. MISCELLANEOUS.

(a) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

(b) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(c) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action approving the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(d) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Award unless and until (i) such Participant has satisfied all requirements for exercise of the Award pursuant to its terms, if applicable, and (ii) the issuance of the Common Stock subject to such Award is reflected in the records of the Company.

(e) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or affect the right of the Company or an Affiliate to terminate at will and without regard to any future vesting opportunity that a Participant may have with respect to any Award (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the U.S. state or non-U.S. jurisdiction in which the Company or the Affiliate is incorporated, as the case may be. Further, nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award will constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or service or confer any right or benefit under the Award or the Plan unless such right or benefit has specifically accrued under the terms of the Award Agreement and/or Plan.

(f) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board may determine, to the extent permitted by Applicable Law, to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(g) Execution of Additional Documents. As a condition to accepting an Award under the Plan, the Participant agrees to execute any additional documents or instruments necessary or desirable, as determined in the Plan Administrator's sole discretion, to carry out the purposes or intent of the Award, or facilitate compliance with securities and/or other regulatory requirements, in each case at the Plan Administrator's request.

(h) Electronic Delivery and Participation. Any reference herein or in an Award Agreement to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access). By accepting any Award, the Participant consents to receive documents by electronic delivery and to participate in the Plan through any on-line electronic system established and maintained by the Plan Administrator or another third party selected by the Plan Administrator. The form of delivery of any Common Stock (e.g., a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

(i) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other Applicable Law and any clawback policy that the Company otherwise adopts, to the extent applicable and

permissible under Applicable Law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a Participant's right to voluntarily terminate employment upon a "resignation for good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

(j) Securities Law Compliance. A Participant will not be issued any shares in respect of an Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Each Award also must comply with other Applicable Law governing the Award, and a Participant will not receive such shares if the Company determines that such receipt would not be in material compliance with Applicable Law.

(k) Transfer or Assignment of Awards; Issued Shares. Except as expressly provided in the Plan or the form of Award Agreement, Awards granted under the Plan may not be transferred or assigned by the Participant. After the vested shares subject to an Award have been issued, or in the case of a Restricted Stock Award and similar awards, after the issued shares have vested, the holder of such shares is free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, the terms of the Trading Policy and Applicable Law.

(l) Effect on Other Employee Benefit Plans. The value of any Award granted under the Plan, as determined upon grant, vesting or settlement, shall not be included as compensation, earnings, salaries, or other similar terms used when calculating any Participant's benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

(m) Deferrals. To the extent permitted by Applicable Law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may also establish programs and procedures for deferral elections to be made by Participants. Deferrals will be made in accordance with the requirements of Section 409A.

(n) Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A, and, to the extent not so exempt, in compliance with the requirements of Section 409A. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A is a "specified employee" for purposes of Section 409A, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A without regard to alternative definitions thereunder) will be issued or paid before the date that is six months and one day following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

(o) Choice of Law. This Plan and any controversy arising out of or relating to this Plan shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to conflict of law principles that would result in any application of any law other than the law of the State of Delaware.

10. COVENANTS OF THE COMPANY.

(a) Compliance with Law. The Company will seek to obtain from each regulatory commission or agency, as may be deemed necessary, having jurisdiction over the Plan such authority as may be required to grant Awards and to issue and sell shares of Common Stock upon exercise or vesting of the Awards; provided, however, that this undertaking will not require the Company to register under the Securities Act the Plan, any Award or any Common Stock issued or issuable pursuant to any such Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary or advisable for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise or vesting of such Awards unless and until such authority is obtained. A Participant is not eligible for the grant of an Award or the subsequent issuance of Common Stock pursuant to the Award if such grant or issuance would be in violation of any Applicable Law.

11. ADDITIONAL RULES FOR AWARDS SUBJECT TO SECTION 409A.

(a) Application. Unless the provisions of this Section of the Plan are expressly superseded by the provisions in the form of Award Agreement, the provisions of this Section shall apply and shall supersede anything to the contrary set forth in the Award Agreement for a Non-Exempt Award.

(b) Non-Exempt Awards Subject to Non-Exempt Severance Arrangements. To the extent a Non-Exempt Award is subject to Section 409A due to application of a Non-Exempt Severance Arrangement, the following provisions of this subsection (b) apply.

(i) If the Non-Exempt Award vests in the ordinary course during the Participant's Continuous Service in accordance with the vesting schedule set forth in the Award Agreement, and does not accelerate vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of such Non-Exempt Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date, or (ii) the 60th day that follows the applicable vesting date.

(ii) If vesting of the Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with the Participant's Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of the Non-Exempt Award and, therefore, are part of the terms of such Non-Exempt Award as of the date of grant, then the shares will be earlier issued in settlement of such Non-Exempt Award upon the Participant's Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of the Participant's Separation from Service. However, if at the time the shares would otherwise be issued the Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of such Participant's Separation from Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iii) If vesting of a Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with a Participant's Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Non-Exempt Award and, therefore, are not a part of the terms of such Non-Exempt Award on the date of grant, then such acceleration of vesting of the Non-Exempt Award shall not accelerate the issuance date of the shares, but the shares shall instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during the Participant's Continuous Service, notwithstanding the vesting acceleration of the Non-Exempt Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).

(c) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Employees and Consultants. The provisions of this subsection (c) shall apply and shall supersede anything to the contrary set forth in the Plan with respect to the permitted treatment of any Non-Exempt Award in connection with a Corporate Transaction if the Participant was either an Employee or Consultant upon the applicable date of grant of the Non-Exempt Award.

(i) Vested Non-Exempt Awards. The following provisions shall apply to any Vested Non-Exempt Award in connection with a Corporate Transaction:

(1) If the Corporate Transaction is also a Section 409A Change in Control, then the Acquiring Entity may not assume, continue or substitute the Vested Non-Exempt Award. Upon the Section 409A Change in Control, the settlement of the Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of the Vested Non-Exempt Award. Alternatively, the Company may instead provide that the Participant will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control.

(2) If the Corporate Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute each Vested Non-Exempt Award. The shares to be issued in respect of the Vested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Corporate Transaction.

(ii) Unvested Non-Exempt Awards. The following provisions shall apply to any Unvested Non-Exempt Award unless otherwise determined by the Board pursuant to subsection (e) of this Section.

(1) In the event of a Corporate Transaction, the Acquiring Entity shall assume, continue or substitute any Unvested Non-Exempt Award. Unless otherwise determined by the Board, any Unvested Non-Exempt Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of any Unvested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate

Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value of the shares made on the date of the Corporate Transaction.

(2) If the Acquiring Entity will not assume, substitute or continue any Unvested Non-Exempt Award in connection with a Corporate Transaction, then such Award shall automatically terminate and be forfeited upon the Corporate Transaction with no consideration payable to any Participant in respect of such forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Board may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Corporate Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to the Participant, as further provided in subsection (e)(ii) below. In the absence of such discretionary election by the Board, any Unvested Non-Exempt Award shall be forfeited without payment of any consideration to the affected Participants if the Acquiring Entity will not assume, substitute or continue the Unvested Non-Exempt Awards in connection with the Corporate Transaction.

(3) The foregoing treatment shall apply with respect to all Unvested Non-Exempt Awards upon any Corporate Transaction, and regardless of whether or not such Corporate Transaction is also a Section 409A Change in Control.

(d) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Non-Employee Directors. The following provisions of this subsection (d) shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of a Non-Exempt Director Award in connection with a Corporate Transaction.

(i) If the Corporate Transaction is also a Section 409A Change in Control, then the Acquiring Entity may not assume, continue or substitute the Non-Exempt Director Award. Upon the Section 409A Change in Control, the vesting and settlement of any Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to the Participant in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that the Participant will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control pursuant to the preceding provision.

(ii) If the Corporate Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute the Non-Exempt Director Award. Unless otherwise determined by the Board, the Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of the Non-Exempt Director Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value made on the date of the Corporate Transaction.

(e) If the RSU Award is a Non-Exempt Award, then the provisions in this Section 11(e) shall apply and supersede anything to the contrary that may be set forth in the Plan or the Award Agreement with respect to the permitted treatment of such Non-Exempt Award:

(i) Any exercise by the Board of discretion to accelerate the vesting of a Non-Exempt Award shall not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

(ii) The Company explicitly reserves the right to earlier settle any Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).

(iii) To the extent the terms of any Non-Exempt Award provide that it will be settled upon a Change in Control or Corporate Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Change in Control or Corporate Transaction event triggering settlement must also constitute a Section 409A Change in Control. To the extent the terms of a Non-Exempt Award provides that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation From Service. However, if at the time the shares would otherwise be issued to a Participant in connection with a "separation from service" such Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of the Participant's Separation From Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iv) The provisions in this subsection (e) for delivery of the shares in respect of the settlement of a RSU Award that is a Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to the Participant in respect of such Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.

12. SEVERABILITY.

If all or any part of the Plan or any Award Agreement is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of the Plan or such Award Agreement not declared to be unlawful or invalid. Any Section of the Plan or any Award Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

13. TERMINATION OF THE PLAN.

The Board may suspend or terminate the Plan at any time. No Incentive Stock Options may be granted after the tenth anniversary of the earlier of: (i) the Adoption Date, or (ii) the date the Plan is approved by the Company's stockholders. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

14. DEFINITIONS.

As used in the Plan, the following definitions apply to the capitalized terms indicated below:

(a) "***Acquiring Entity***" means the surviving or acquiring corporation (or its parent company) in connection with a Corporate Transaction.

(b) "***Adoption Date***" means the date the Plan is first approved by the Board or Compensation Committee.

(c) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 promulgated under the Securities Act. The Board may determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(d) "***Applicable Law***" means the Code and any applicable U.S. or non-U.S. securities, federal, state, material local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, listing rule, regulation, judicial decision, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (including under the authority of any applicable self-regulating organization such as the Nasdaq Stock Market, New York Stock Exchange, or the Financial Industry Regulatory Authority).

(e) "***Award***" means any right to receive Common Stock, cash or other property granted under the Plan (including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a RSU Award, a SAR, a Performance Award or any Other Award).

(f) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award. The Award Agreement generally consists of the Grant Notice and the agreement containing the written summary of the general terms and conditions applicable to the Award and which is provided to a Participant along with the Grant Notice.

(g) "***Board***" means the board of directors of the Company (or its designee). Any decision or determination made by the Board shall be a decision or determination that is made in the sole discretion of the Board (or its designee), and such decision or determination shall be final and binding on all Participants.

(h) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(i) "***Cause***" means, with respect to any Participant, (i) "Cause" as defined in an agreement entered into between the Company and the Participant with respect to the Participant's employment with the Company, as such agreement may be amended or restated from time to time ("***Employment Agreement***"); or (ii) in the absence of any definition of "Cause" contained in such Employment Agreement, (A) the Participant is indicted for, convicted of, or pleads guilty or nolo contendere to, a felony or crime involving moral turpitude; (B) the Participant engages in conduct that constitutes willful gross negligence, willful misconduct, or unsatisfactory performance in carrying out the Participant's duties under the Participant's Employment Agreement, and, if curable, such breach remains uncured following fifteen (15) days prior written notice given by the Company to the Participant specifying such conduct; (C) the Participant has breached any covenant or any material provision of any agreement with the Company, including among other things, a willful and material breach of written Company policy,

and, if curable, such breach remains uncured following fifteen (15) days' prior written notice specifying such breach given by the Company to the Participant; (D) the Participant's material violation of federal law or state law that the Board reasonably determines has had or is reasonably likely to have a material detrimental effect on the Company's reputation or business; or (E) the Participant's act of fraud or dishonesty in the performance of the Participant's job duties. For purposes of this definition, the term Company shall also include any Affiliate.

(j) "***Change in Control***" or "***Change of Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events; provided, however, to the extent necessary to avoid adverse personal income tax consequences to the Participant in connection with an Award, such event or events, as the case may be, also constitute a Section 409A Change in Control:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control shall not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control shall be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(iv) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; provided, however, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member shall, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing or any other provision of this Plan, (A) the term Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant shall supersede the foregoing definition with respect to Awards subject to such agreement; provided, however, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition shall apply.

(k) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(l) "***Committee***" means the Compensation Committee and any other committee of one or more Directors to whom authority has been delegated by the Board or Compensation Committee in accordance with the Plan.

(m) "***Common Stock***" means the common stock of the Company.

(n) "***Company***" means Lyell Immunopharma, Inc., a Delaware corporation, and any successor thereto.

(o) "***Compensation Committee***" means the Compensation Committee of the Board.

(p) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(q) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Director or Consultant or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; provided, however, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in

the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(r) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(s) "***Director***" means a member of the Board.

(t) "***determine***" ***or*** "***determined***" means as determined by the Board or the Committee (or its designee) in its sole discretion.

(u) "***Disability***" means, with respect to a Participant, such Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Section 22(e)(3) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(v) "***Effective Date***" means the IPO Date, provided this Plan is approved by the Company's stockholders prior to the IPO Date.

(w) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(x) "***Employer***" means the Company or the Affiliate that employs the Participant.

(y) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(z) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(aa) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(bb) "***Fair Market Value***" means, as of any date, unless otherwise determined by the Board, the value of the Common Stock (as determined on a per share or aggregate basis, as applicable) determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) If there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, or if otherwise determined by the Board, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(cc) "***Governmental Body***" means any: (i) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (ii) U.S. federal, state, local, municipal, non-U.S. or other government; (iii) governmental or regulatory body, or quasi-governmental body of any nature (including any governmental division, department, administrative agency or bureau, commission, authority, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any Tax authority) or other body exercising similar powers or authority; or (iv) self-regulatory organization (including the Nasdaq Stock Market, New York Stock Exchange, and the Financial Industry Regulatory Authority).

(dd) "***Grant Notice***" means the notice provided to a Participant that he or she has been granted an Award under the Plan and which includes the name of the Participant, the type of Award, the date of grant of the Award, number of shares of Common Stock subject to the Award or potential cash payment right, (if any), the vesting schedule for the Award (if any) and other key terms applicable to the Award.

(ee) "***Incentive Stock Option***" means an option granted pursuant to Section 4 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(ff) "***IPO Date***" means the date of execution of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(gg) "***Materially Impair***" means any amendment to the terms of the Award that materially adversely affects the Participant's rights under the Award. A Participant's rights under an Award will not be deemed to have been Materially Impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights. For example, the following types of amendments to the terms of an Award do not Materially Impair the Participant's rights under the Award: (i) imposition of reasonable restrictions on the minimum number of shares subject to an Option that may be exercised, (ii) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iii) to change the terms of an Incentive Stock Option in a manner that disqualifies, impairs or otherwise affects the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iv) to clarify the manner of exemption from, or to bring the Award into compliance with or qualify it for an exemption from, Section 409A; or (v) to comply with other Applicable Law.

(hh) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(ii) "***Non-Exempt Award***" means any Award that is subject to, and not exempt from, Section 409A, including as the result of (i) a deferral of the issuance of the shares subject to the Award which is elected by the Participant or imposed by the Company or (ii) the terms of any Non-Exempt Severance Agreement.

(jj) "***Non-Exempt Director Award***" means a Non-Exempt Award granted to a Participant who was a Director but not an Employee on the applicable grant date.

(kk) "***Non-Exempt Severance Arrangement***" means a severance arrangement or other agreement between the Participant and the Company that provides for acceleration of vesting of an Award and issuance of the shares in respect of such Award upon the Participant's termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("***Separation from Service***")) and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4), 1.409A-1(b)(9) or otherwise.

(ll) "***Nonstatutory Stock Option***" means any option granted pursuant to Section 4 of the Plan that does not qualify as an Incentive Stock Option.

(mm) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(nn) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(oo) "***Option Agreement***" means a written agreement between the Company and the Optionholder evidencing the terms and conditions of the Option grant. The Option Agreement includes the Grant Notice for the Option and the agreement containing the written summary of the general terms and conditions applicable to the Option and which is provided to a Participant along with the Grant Notice. Each Option Agreement will be subject to the terms and conditions of the Plan.

(pp) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(qq) "***Other Award***" means an award valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value at the time of grant), that is not an Incentive Stock Option, Nonstatutory Stock Option, SAR, Restricted Stock Award, RSU Award or Performance Award.

(rr) "***Other Award Agreement***" means a written agreement between the Company and a holder of an Other Award evidencing the terms and conditions of an Other Award grant. Each Other Award Agreement will be subject to the terms and conditions of the Plan.

(ss) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means that a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(tt) "***Participant***" means an Employee, Director or Consultant to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

(uu) "***Performance Award***" means an Award that may vest or may be exercised or a cash award that may vest or become earned and paid contingent upon the attainment during a Performance Period of certain Performance Goals and which is granted under the terms and conditions of Section 5(b) pursuant to such terms as are approved by the Board. In addition, to the extent permitted by Applicable Law and set forth in the applicable Award Agreement, the Board may determine that cash or other property may be used in payment of Performance Awards. Performance Awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, the Common Stock.

(vv) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or combination of, the following as determined by the Board: earnings (including earnings per share and net earnings); earnings before interest, taxes and depreciation; earnings before interest, taxes, depreciation and amortization; total stockholder return; return on equity or average stockholder's equity; return on assets, investment, or capital employed; stock price; margin (including gross margin); income (before or after taxes); operating income; operating income after taxes; pre-tax profit; operating cash flow; sales or revenue targets; increases in revenue or product revenue; expenses and cost reduction goals; improvement in or attainment of working capital levels; economic value added (or an equivalent metric); market share; cash flow; cash flow per share; share price performance; debt reduction; customer satisfaction; stockholders' equity; capital expenditures; debt levels; operating profit or net operating profit; workforce diversity; growth of net income or operating income; billings; pre-clinical development related compound goals; financing; regulatory milestones, including approval of a product candidate; stockholder liquidity; corporate governance and compliance; product commercialization; intellectual property; personnel matters; progress of internal research or clinical programs; progress of partnered programs; partner satisfaction; budget management; clinical achievements; completing phases of a clinical study (including the treatment

phase); announcing or presenting preliminary or final data from clinical studies; in each case, whether on particular timelines or generally; timely completion of clinical trials; submission of INDs and NDAs and other regulatory achievements; partner or collaborator achievements; internal controls, including those related to the Sarbanes-Oxley Act of 2002; research progress, including the development of programs; investor relations, analysts and communication; manufacturing achievements (including obtaining particular yields from manufacturing runs and other measurable objectives related to process development activities); strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; establishing relationships with commercial entities with respect to the marketing, distribution and sale of the Company's products (including with group purchasing organizations, distributors and other vendors); supply chain achievements (including establishing relationships with manufacturers or suppliers of active pharmaceutical ingredients and other component materials and manufacturers of the Company's products); co-development, co-marketing, profit sharing, joint venture or other similar arrangements; individual performance goals; corporate development and planning goals; and other measures of performance selected by the Board or Committee.

(ww) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; and (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles. In addition, the Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for such Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Award Agreement.

(xx) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to vesting or exercise of an Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(yy) "***Plan***" means this Lyell Immunopharma, Inc. 2021 Equity Incentive Plan, as amended from time to time.

(zz) "***Plan Administrator***" means the person, persons, and/or third-party administrator designated by the Company to administer the day to day operations of the Plan and the Company's other equity incentive programs.

(aaa) "***Post-Termination Exercise Period***" means the period following termination of a Participant's Continuous Service within which an Option or SAR is exercisable, as specified in Section 4(h).

(bbb) "***Prior Plan's Available Reserve***" means the number of shares available for the grant of new awards under the Prior Plan as of immediately prior to the Effective Date.

(ccc) "***Prior Plan***" means the Company's 2018 Equity Incentive Plan, as amended.

(ddd) "***Restricted Stock Award***" or "***RSA***" means an Award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(eee) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. The Restricted Stock Award Agreement includes the Grant Notice for the Restricted Stock Award and the agreement containing the written summary of the general terms and conditions applicable to the Restricted Stock Award and which is provided to a Participant along with the Grant Notice. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(fff) "***Returning Shares***" means shares subject to outstanding stock awards granted under the Prior Plan and that following the Effective Date: (i) are not issued because such stock award or any portion thereof expires or otherwise terminates without all of the shares covered by such stock award having been issued; (ii) are not issued because such stock award or any portion thereof is settled in cash; (iii) are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required for the vesting of such shares; (iv) are withheld or reacquired to satisfy the exercise, strike or purchase price; or (v) are withheld or reacquired to satisfy a tax withholding obligation.

(ggg) "***RSU Award***" or "***RSU***" means an Award of restricted stock units representing the right to receive an issuance of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(hhh) "***RSU Award Agreement***" means a written agreement between the Company and a holder of a RSU Award evidencing the terms and conditions of a RSU Award. The RSU Award Agreement includes the Grant Notice for the RSU Award and the agreement containing the written summary of the general terms and conditions applicable to the RSU Award and which is provided to a Participant along with the Grant Notice. Each RSU Award Agreement will be subject to the terms and conditions of the Plan.

(iii) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(jjj) "***Rule 405***" means Rule 405 promulgated under the Securities Act.

(kkk) "***Section 409A***" means Section 409A of the Code and the regulations and other guidance thereunder.

(lll) "***Section 409A Change in Control***" means a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company's assets, as provided in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(mmm) "***Securities Act***" means the Securities Act of 1933, as amended.

(nnn) "***Share Reserve***" means the number of shares available for issuance under the Plan as set forth in Section 2(a).

(ooo) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 4.

(ppp) "***SAR Agreement***" means a written agreement between the Company and a holder of a SAR evidencing the terms and conditions of a SAR grant. The SAR Agreement includes the Grant Notice for the SAR and the agreement containing the written summary of the general terms and conditions applicable to the SAR and which is provided to a Participant along with the Grant Notice. Each SAR Agreement will be subject to the terms and conditions of the Plan.

(qqq) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(rrr) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

(sss) "***Trading Policy***" means the Company's policy permitting certain individuals to sell Company shares only during certain "window" periods and/or otherwise restricts the ability of certain individuals to transfer or encumber Company shares, as in effect from time to time.

(ttt) "***Unvested Non-Exempt Award***" means the portion of any Non-Exempt Award that had not vested in accordance with its terms upon or prior to the date of any Corporate Transaction.

(uuu) "***Vested Non-Exempt Award***" means the portion of any Non-Exempt Award that had vested in accordance with its terms upon or prior to the date of a Corporate Transaction.

Exhibit 10.4

LYELL IMMUNOPHARMA, INC.
GLOBAL STOCK OPTION GRANT NOTICE (2021 EQUITY INCENTIVE PLAN)

Lyell Immunopharma, Inc. (the "***Company***"), pursuant to its 2021 Equity Incentive Plan (the "***Plan***"), has granted to you ("***Optionholder")*** an option to purchase the number of shares of the Common Stock set forth below (the "***Option***"). Your Option is subject to all of the terms and conditions as set forth herein and in the Plan and the Global Stock Option Agreement, including any additional terms and conditions for your country set forth in the appendix thereto (the "***Appendix*** and, together with the Global Stock Option Agreement, the "***Agreement***"), all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Agreement shall have the meanings set forth in the Plan or the Agreement, as applicable.

Optionholder:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Shares of Common Stock Subject to Option:	_____
Exercise Price (Per Share):	_____
Total Exercise Price:	_____
Expiration Date:	_____

Type of Grant: [Incentive Stock Option] OR [Nonstatutory Stock Option]

Exercise and Vesting Schedule: Subject to the Optionholder's Continuous Service through each applicable vesting date, the Option will vest as follows:

[_____]

Optionholder Acknowledgements: By your signature below or by electronic acceptance or authentication in a form authorized by the Company, you understand and agree that:

- The Option is governed by this Global Stock Option Grant Notice, (the "***Grant Notice***") and the provisions of the Plan and the Agreement, all of which are made a part of this document. Unless otherwise provided in the Plan, this Grant Notice and the Agreement (together, the "***Option Agreement***") may not be modified, amended or revised except in a writing signed by you and a duly authorized officer of the Company.
- If the Option is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options granted to you) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calendar year. Any excess over $100,000 is a Nonstatutory Stock Option.
- You consent to receive this Grant Notice, the Agreement, the Plan, the Prospectus and any other Plan-related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.
- You have read and are familiar with the provisions of the Plan, the Agreement, and the Prospectus. In the event of any conflict between the provisions in this Grant Notice, the Agreement, or the Prospectus and the terms of the Plan, the terms of the Plan shall control.
- The Option Agreement sets forth the entire understanding between you and the Company regarding the acquisition of Common Stock and supersedes all prior oral and written agreements, promises and/or representations on that subject with the exception of other equity awards previously granted to you and any written employment agreement, offer letter, severance agreement, written severance plan or policy, or other written agreement between the Company and you in each case that specifies the terms that should govern this Option.

- Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law) or other transmission method and any counterpart so delivered will be deemed to have been duly and validly delivered and be valid and effective for all purposes.

LYELL IMMUNOPHARMA, INC.	**OPTIONHOLDER:**
By: _____	_____
Signature	Signature
Title: _____	Date: _____
Date: _____	

LYELL IMMUNOPHARMA, INC.
2021 EQUITY INCENTIVE PLAN

GLOBAL STOCK OPTION AGREEMENT

As reflected by your Global Stock Option Grant Notice ("***Grant Notice***") Lyell Immunopharma, Inc. (the "***Company***") has granted you an option under its 2021 Equity Incentive Plan (the "***Plan***") to purchase a number of shares of Common Stock at the exercise price indicated in your Grant Notice (the "***Option***"). The terms of your Option as specified in the Grant Notice and this Global Stock Option Agreement, including any additional terms and conditions for your country set forth in the appendix hereto (the "***Appendix***" and, together with the Global Stock Option Agreement, the "***Agreement***"), constitute your Option Agreement. Capitalized terms not explicitly defined in this Agreement but defined in the Grant Notice or the Plan shall have the meanings set forth in the Grant Notice or Plan, as applicable.

The general terms and conditions applicable to your Option are as follows:

1. GOVERNING PLAN DOCUMENT. Your Option is subject to all the provisions of the Plan. Your Option is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the Option Agreement and the provisions of the Plan, the provisions of the Plan shall control.

2. EXERCISE.

(a) You may generally exercise the vested portion of your Option for whole shares of Common Stock at any time during its term by delivery of payment of the exercise price and applicable withholding taxes and other required documentation to the Plan Administrator in accordance with the exercise procedures established by the Plan Administrator, which may include an electronic submission. Please review the Plan, which may restrict or prohibit your ability to exercise your Option during certain periods.

(b) To the extent permitted by Applicable Law, you may pay your Option exercise price as follows:

(i) cash, check, bank draft or money order;

(ii) subject to Applicable Law and Company and/or Committee consent at the time of exercise, pursuant to a "cashless exercise" program as further described in the Plan if at the time of exercise the Common Stock is publicly traded;

(iii) subject to Company and/or Committee consent at the time of exercise, by delivery of previously owned shares of Common Stock as further described in the Plan; or

(iv) subject to Applicable Law and Company and/or Committee consent at the time of exercise, if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement as further described in the Plan.

3. TERM. You may not exercise your Option before the commencement of its term or after its term expires. The term of your Option commences on the Date of Grant and expires upon the earliest of the following:

(a) immediately upon the termination of your Continuous Service for Cause;

(b) three months after the termination of your Continuous Service for any reason other than Cause, Disability or death;

(c) 12 months after the termination of your Continuous Service due to your Disability;

(d) 18 months after your death if you die during your Continuous Service;

(e) immediately upon a Corporate Transaction if the Board has determined that the Option will terminate in connection with a Corporate Transaction,

(f) the Expiration Date indicated in your Grant Notice; or

(g) the day before the 10th anniversary of the Date of Grant.

Notwithstanding the foregoing, if you die during the period provided in Section 3(b) or 3(c) above, the term of your Option shall not expire until the earlier of (i) eighteen months after your death, (ii) upon any termination of the Option in connection with a Corporate Transaction, (iii) the Expiration Date indicated in your Grant Notice, or (iv) the day before the tenth anniversary of the Date of Grant. Additionally, the Post-Termination Exercise Period of your Option may be extended as provided in the Plan.

To obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the date of grant of your Option and ending on the day three months before the date of your Option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. If the Company provides for the extended exercisability of your Option under certain circumstances for your benefit, your Option will not necessarily be treated as an Incentive Stock Option if you exercise your Option more than three months after the date your employment terminates.

4. RESPONSIBILITY FOR TAXES.

(a) Regardless of any action taken by the Company or, if different, the Affiliate to which you provide Continuous Service (the "***Service Recipient***") with respect to any income tax, social insurance, payroll tax, fringe benefits tax, payment on account, or other tax-related items associated with the grant, vesting or exercise of the Option or sale of the underlying Common Stock or other tax-related items related to your participation in the Plan and legally applicable or deemed applicable to you (the "***Tax Liability***"), you hereby acknowledge

and agree that the Tax Liability is your ultimate responsibility and may exceed the amount, if any, actually withheld by the Company or the Service Recipient. You further acknowledge that the Company and the Service Recipient (i) make no representations or undertakings regarding any Tax Liability in connection with any aspect of this Option, including, but not limited to, the grant, vesting or exercise of the Option, the issuance of Common Stock pursuant to such exercise, the subsequent sale of shares of Common Stock, and the payment of any dividends on the shares; and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Option to reduce or eliminate your Tax Liability or achieve a particular tax result. Further, if you are subject to Tax Liability in more than one jurisdiction, you acknowledge that the Company and/or the Service Recipient (or former service recipient, as applicable) may be required to withhold or account for Tax Liability in more than one jurisdiction.

(b) Prior to any relevant taxable or tax withholding event, as applicable, you agree to make adequate arrangements satisfactory to the Company and/or the Service Recipient to satisfy all Tax Liability. As further provided in Section 8 of the Plan, you hereby authorize the Company and any applicable Service Recipient to satisfy any applicable withholding obligations with regard to the Tax Liability by one or a combination of the following methods: (i) causing you to pay any portion of the Tax Liability in cash or cash equivalent in a form acceptable to the Company and/or the Service Recipient; (ii) withholding from any compensation otherwise payable to you by the Company or the Service Recipient; (iii) withholding from the proceeds of the sale of shares of Common Stock issued upon exercise of the Option (including by means of a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company, or by means of the Company acting as your agent to sell sufficient shares of Common Stock for the proceeds to satisfy such withholding requirements, on your behalf pursuant to this authorization without further consent); (iv) withholding shares of Common Stock otherwise issuable to you upon the exercise of the Option, provided, however, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Board or the Company's Compensation Committee; and/or (v) any other method determined by the Company to be in compliance with Applicable Law. Furthermore, you agree to pay or reimburse the Company or the Service Recipient any amount the Company or the Service Recipient may be required to withhold, collect or pay as a result of your participation in the Plan or that cannot be satisfied by the means previously described. In the event it is determined that the amount of the Tax Liability was greater than the amount withheld by the Company and/or the Service Recipient (as applicable), you agree to indemnify and hold the Company and/or the Service Recipient (as applicable) harmless from any failure by the Company or the applicable Service Recipient to withhold the proper amount.

(c) The Company and/or the Service Recipient may withhold or account for your Tax Liability by considering statutory withholding amounts or other withholding rates applicable in your jurisdiction(s), including (i) maximum applicable rates in your jurisdiction(s). In the event of over-withholding, you may receive a refund of any over-withheld amount in cash from the Company or the Service Recipient (with no entitlement to the Common Stock equivalent), or if not refunded, you may seek a refund from the local tax authorities. In the event of under-withholding, you may be required to pay any Tax Liability directly to the applicable tax

authority or to the Company and/or the Service Recipient. If the Tax Liability withholding obligation is satisfied by withholding shares of Common Stock, for tax purposes, you are deemed to have been issued the full number of shares of Common Stock subject to the exercised portion of the Option, notwithstanding that a number of the shares of Common Stock is held back solely for the purpose of paying such Tax Liability.

(d) You acknowledge that you may not be able to exercise your Option even though the Option is vested, and that the Company shall have no obligation to issue or deliver shares of Common Stock until you have fully satisfied any applicable Tax Liability, as determined by the Company. Unless any withholding obligation for the Tax Liability is satisfied, the Company shall have no obligation to issue or deliver to you any Common Stock in respect of the Option.

5. INCENTIVE STOCK OPTION DISPOSITION REQUIREMENT. If your Option is an Incentive Stock Option, you must notify the Company in writing within 15 days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your Option that occurs within two years after the date your Option is granted or within one year after such shares of Common Stock are transferred upon exercise of your Option.

6. NATURE OF GRANT. In accepting the Option, you acknowledge, understand and agree that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the Option is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of Options, or benefits in lieu of Options, even if Options have been granted in the past;

(c) all decisions with respect to future Options or other grants, if any, will be at the sole discretion of the Company;

(d) the Option and your participation in the Plan shall not create a right to employment or other service relationship with the Company;

(e) the Option and your participation in the Plan shall not be interpreted as forming or amending an employment or service contract with the Company or the Service Recipient, and shall not interfere with the ability of the Company or the Service Recipient, as applicable, to terminate your Continuous Service (if any);

(f) you are voluntarily participating in the Plan;

(g) the Option and the shares of Common Stock subject to the Option, and the income from and value of same, are not intended to replace any pension rights or compensation;

(h) the Option and the shares of Common Stock subject to the Option, and the income from and value of same, are not part of normal or expected compensation for purposes of, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, holiday pay, long-service awards, pension or retirement or welfare benefits or similar payments;

(i) unless otherwise agreed with the Company in writing, the Option and the shares of Common Stock subject to the Option, and the income from and value of same, are not granted as consideration for, or in connection with, the service you may provide as a director of an Affiliate;

(j) the future value of the underlying shares of Common Stock is unknown, indeterminable and cannot be predicted with certainty;

(k) if the underlying shares of Common Stock do not increase in value after the grant date, the Option will have no value;

(l) if you exercise the Option and acquire shares of Common Stock, the value of such shares of Common Stock may increase or decrease in value, even below the exercise price;

(m) no claim or entitlement to compensation or damages shall arise from forfeiture of the Option resulting from the termination of your Continuous Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any);

(n) for purposes of the Option, your Continuous Service will be considered terminated as of the date you are no longer actively providing services to the Company or any Affiliate (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any), and such date will not be extended by any notice period (*e.g.*, your period of Continuous Service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any); the Compensation Committee shall have the exclusive discretion to determine when you are no longer actively providing services for purposes of your Option (including whether you may still be considered to be providing services while on a leave of absence); and

(o) neither the Company nor the Service Recipient shall be liable for any foreign exchange rate fluctuation between your local currency and the United States Dollar that may affect the value of the Option or of any amounts due to you pursuant to exercise of the Option or the subsequent sale of any shares of Common Stock acquired upon exercise.

7. TRANSFERABILITY. Except as otherwise provided in the Plan, your Option is not transferable, except by will or by the applicable laws of descent and distribution, and is exercisable during your life only by you.

8. CORPORATE TRANSACTION. Your Option is subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on your behalf with respect to any escrow, indemnities and any contingent consideration.

9. NO LIABILITY FOR TAXES. As a condition to accepting the Option, you hereby (a) agree to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to any Tax Liability arising from the Option and (b) acknowledge that you were advised to consult with your own personal tax, financial and other legal advisors regarding the tax consequences of the Option and have either done so or knowingly and voluntarily declined to do so. Additionally, you acknowledge that the Option is exempt from Section 409A only if the exercise price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Option. Additionally, as a condition to accepting the Option, you agree not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

10. OBLIGATIONS; RECOUPMENT. You hereby acknowledge that the grant of your Option is additional consideration for any obligations (whether during or after employment) that you have to the Company not to compete, not to solicit its customers, clients or employees, not to disclose or misuse confidential information or similar obligations. Accordingly, if the Company reasonably determines that you breached such obligations, in addition to any other available remedy, the Company may, to the extent permitted by Applicable Law, recoup any income realized by you with respect to the exercise of your Option within two years of such breach. In addition, to the extent permitted by Applicable Law, this right to recoupment by the Company applies in the event that your employment is terminated for Cause or if the Company reasonably determines that circumstances existed that it could have terminated your employment for Cause.

11. NO ADVICE REGARDING GRANT. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding your participation in the Plan, or your acquisition or sale of the underlying shares of Common Stock. You should consult with your own personal tax, legal and financial advisors regarding your participation in the Plan before taking any action related to the Plan.

12. GOVERNING LAW AND VENUE. The Option and the provisions of this Agreement are governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to the conflict of law principles that would result in any application of any law other than the law of the State of Delaware. For purposes of any action, lawsuit or other proceedings brought to enforce this Agreement, relating to it, or arising from it, the parties hereby submit to and consent to the sole and exclusive jurisdiction of the courts of the State of Delaware, and no other courts, where this grant is made and/or to be performed.

13. SEVERABILITY. If any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

14. INDEBTEDNESS TO THE COMPANY. In the event that you have any loans, draws, advances or any other indebtedness owing to the Company at the time of exercise of all or a portion of the Option, the Company may deduct and not deliver that number of shares of Common Stock with a Fair Market Value subject to the Option equal to such indebtedness to satisfy all or a portion of such indebtedness, to the extent permitted by law and in a manner consistent with Section 409A of the Code, if applicable.

15. COMPLIANCE WITH LAW. Notwithstanding any other provision of the Plan or this Agreement, unless there is an exemption from any registration, qualification or other legal requirement applicable to the shares of Common Stock, the Company shall not be required to deliver any shares issuable upon exercise of the Option prior to the completion of any registration or qualification of the shares under any local, state, federal or foreign securities or exchange control law or under rulings or regulations of the U.S. Securities and Exchange Commission ("SEC") or of any other governmental regulatory body, or prior to obtaining any approval or other clearance from any local, state, federal or foreign governmental agency, which registration, qualification or approval the Company shall, in its absolute discretion, deem necessary or advisable. You understand that the Company is under no obligation to register or qualify the shares with the SEC or any state or foreign securities commission or to seek approval or clearance from any governmental authority for the issuance or sale of the shares. Further, you agree that the Company shall have unilateral authority to amend the Agreement without your consent to the extent necessary to comply with securities or other laws applicable to issuance of shares of Common Stock.

16. LANGUAGE. You acknowledge that you are proficient in the English language, or have consulted with an advisor who is proficient in the English language, so as to enable you to understand the provisions of this Agreement and the Plan. If you have received this Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

17. ELECTRONIC DELIVERY AND PARTICIPATION. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an online or electronic system established and maintained by the Company or a third party designated by the Company.

18. SEVERABILITY. The provisions of this Agreement are severable and if any one or more provisions are determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

19. APPENDIX. Notwithstanding any provisions in this Option Agreement, the Option shall be subject to any additional terms and conditions set forth in any Appendix for your country. Moreover, if you relocate to one of the countries included in the Appendix, the additional terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

20. IMPOSITION OF OTHER REQUIREMENT. The Company reserves the right to impose other requirements on your participation in the Plan, on the Option and on any shares of Common Stock acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require you to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

21. WAIVER. You acknowledge that a waiver by the Company of breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by you or any other participant.

22. INSIDER TRADING/MARKET ABUSE. You acknowledge that, depending on your or your broker's country or where the Company shares are listed, you may be subject to insider trading restrictions and/or market abuse laws which may affect your ability to accept, acquire, sell or otherwise dispose of shares of Common Stock, rights to shares (*e.g.*, Options) or rights linked to the value of shares (*e.g.*, phantom awards, futures) during such times you are considered to have "inside information" regarding the Company as defined in the laws or regulations in the applicable jurisdictions). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders you placed before you possessed inside information. Furthermore, you could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. Keep in mind third parties includes fellow employees. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable insider trading policy of the Company. You are responsible for complying with any restrictions and should speak to your personal advisor on this matter.

23. EXCHANGE CONTROL, FOREIGN ASSET/ACCOUNT AND/OR TAX REPORTING. Depending upon the country to which laws you are subject, you may have certain foreign asset/account and/or tax reporting requirements that may affect your ability to acquire or hold shares of Common Stock under the Plan or cash received from participating in the Plan (including from any dividends or sale proceeds arising from the sale of shares of Common Stock) in a brokerage or bank account outside your country of residence. Your country may require that you report such accounts, assets or transactions to the applicable authorities in your country. You also may be required to repatriate cash received from participating in the Plan to your country within a certain period of time after receipt. You are responsible for knowledge of and compliance with any such regulations and should speak with your personal tax, legal and financial advisors regarding same.

24. OTHER DOCUMENTS. You hereby acknowledge receipt of or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Prospectus. In addition, you acknowledge receipt of the Company's Trading Policy.

25. QUESTIONS. If you have questions regarding these or any other terms and conditions applicable to your Option, including a summary of the applicable federal income tax consequences please see the Prospectus.

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LYELL IMMUNOPHARMA, INC.
2021 EQUITY INCENTIVE PLAN

APPENDIX
TO GLOBAL STOCK OPTION AGREEMENT

Terms and Conditions

This Appendix forms part of the Agreement and includes additional terms and conditions that govern the Option granted to you under the Plan if you reside and/or work in one of the jurisdictions listed below. Capitalized terms used but not defined in this Appendix have the meanings set forth in the Plan and/or in the Global Stock Option Agreement.

If you are a citizen or resident (or are considered as such for local law purposes) of a country other than the country in which you are currently residing and/or working, or if you relocate to another country after the grant of the Option, the Company shall, in its discretion, determine to what extent the additional terms and conditions contained herein shall be applicable to you.

Notifications

This Appendix may also include information regarding exchange controls and certain other issues of which you should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, and other laws in effect in the respective countries as of January 2021. Such laws are often complex and change frequently. As a result, you should not rely on the information in this Appendix as the only source of information relating to the consequences of your participation in the Plan because the information may be out of date at the time you vest in or exercise the Option, acquire shares of Common Stock, or sell shares of Common Stock acquired under the Plan.

In addition, the information contained below is general in nature and may not apply to your particular situation. You should seek appropriate professional advice as to how the relevant laws in your country may apply to your situation.

If you are a citizen or resident (or are considered as such for local law purposes) of a country other than the country in which you are currently residing and/or working, or if you relocate to another country after the grant of the Option, the notifications herein may not apply to you in the same manner.

LYELL IMMUNOPHARMA, INC.
GLOBAL RSU AWARD GRANT NOTICE
(2021 EQUITY INCENTIVE PLAN)

Lyell Immunopharma, Inc. (the ***"Company"***) has awarded to you (the "***Participant***") the number of restricted stock units specified and on the terms set forth below (the ***"RSU Award"***). Your RSU Award is subject to all of the terms and conditions as set forth herein and in the Company's 2021 Equity Incentive Plan (the ***"Plan"***) and the Global RSU Award Agreement, including any additional terms and conditions for your country set forth in the appendix thereto (the "***Appendix***" and, together with the Global RSU Award Agreement, the "***Agreement***"), all of which are incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Agreement shall have the meanings set forth in the Plan or the Agreement, as applicable.

Participant:
Date of Grant:
Vesting Commencement Date:
Number of Restricted Stock Units:

Vesting Schedule: [_____]. Notwithstanding the foregoing, except as set forth below, vesting shall terminate upon the Participant's termination of Continuous Service, as described in Section 6(l) of the Agreement.

Issuance Schedule: One share of Common Stock will be issued for each restricted stock unit which vests at the time set forth in Section 5 of the Agreement.

Participant Acknowledgements: By your signature below or by electronic acceptance or authentication in a form authorized by the Company, you understand and agree that:

- The RSU Award is governed by this Global RSU Award Grant Notice (the "***Grant Notice***"), and the provisions of the Plan and the Agreement, all of which are made a part of this document. Unless otherwise provided in the Plan, this Grant Notice and the Agreement (together, the "***RSU Award Agreement***") may not be modified, amended or revised except in a writing signed by you and a duly authorized officer of the Company.
- You have read and are familiar with the provisions of the Plan, the RSU Award Agreement and the Prospectus. In the event of any conflict between the provisions in the RSU Award Agreement, or the Prospectus and the terms of the Plan, the terms of the Plan shall control.
- The RSU Award Agreement sets forth the entire understanding between you and the Company regarding the acquisition of Common Stock and supersedes all prior oral and written agreements, promises and/or representations on that subject with the exception of: (i) other equity awards previously granted to you, and (ii) any written employment agreement, offer letter, severance agreement, written severance plan or policy, or other written agreement between the Company and you in each case that specifies the terms that should govern this RSU Award.

LYELL IMMUNOPHARMA, INC.	PARTICIPANT:
By: _____	_____
Signature	**Signature**
Title: _____	Date: _____
Date: _____	

LYELL IMMUNOPHARMA, INC.
2021 EQUITY INCENTIVE PLAN

GLOBAL RSU AWARD AGREEMENT

As reflected by your Global RSU Award Grant Notice ("***Grant Notice***"), Lyell Immunopharma, Inc. (the "***Company***") has granted you a RSU Award under its 2021 Equity Incentive Plan (the "***Plan***") for the number of restricted stock units as indicated in your Grant Notice (the "***RSU Award***"). The terms of your RSU Award as specified in this Global RSU Award Agreement for your RSU Award, including any additional terms and conditions for your country set forth in the appendix hereto (the "***Appendix***" and, together with the Global RSU Award Agreement, the "***Agreement***") and the Grant Notice constitute your "***RSU Award Agreement***". Defined terms not explicitly defined in this Agreement but defined in the Grant Notice or the Plan shall have the same definitions as in the Grant Notice or Plan, as applicable.

The general terms applicable to your RSU Award are as follows:

1. GOVERNING PLAN DOCUMENT. Your RSU Award is subject to all the provisions of the Plan. Your RSU Award is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the RSU Award Agreement and the provisions of the Plan, the provisions of the Plan shall control.

2. GRANT OF THE RSU AWARD. This RSU Award represents your right to be issued on a future date the number of shares of the Company's Common Stock that is equal to the number of restricted stock units indicated in the Grant Notice subject to your satisfaction of the vesting conditions set forth therein (the "***Restricted Stock Units***"). Any additional Restricted Stock Units that become subject to the RSU Award pursuant to Capitalization Adjustments as set forth in the Plan and the provisions of Section 3 below, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Restricted Stock Units covered by your RSU Award.

3. DIVIDENDS. You shall receive no benefit or adjustment to your RSU Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment as provided in the Plan; provided, however, that this sentence shall not apply with respect to any shares of Common Stock that are delivered to you in connection with your RSU Award after such shares have been delivered to you.

4. RESPONSIBILITY FOR TAXES.

(a) Regardless of any action taken by the Company or, if different, the Affiliate to which you provide Continuous Service (the "***Service Recipient***") with respect to any income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items associated with the grant or vesting of the RSU Award or sale of the underlying Common Stock or other tax-related items related to your participation in the Plan and legally

applicable or deemed applicable to you (the "***Tax Liability***"), you hereby acknowledge and agree that the Tax Liability is your ultimate responsibility and may exceed the amount, if any, actually withheld by the Company or the Service Recipient. You further acknowledge that the Company and the Service Recipient (i) make no representations or undertakings regarding any Tax Liability in connection with any aspect of this RSU Award, including, but not limited to, the grant or vesting of the RSU Award, the issuance of Common Stock pursuant to such vesting, the subsequent sale of shares of Common Stock, and the payment of any dividends on the shares; and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the RSU Award to reduce or eliminate your Tax Liability or achieve a particular tax result. Further, if you are subject to Tax Liability in more than one jurisdiction, you acknowledge that the Company and/or the Service Recipient (or former service recipient, as applicable) may be required to withhold or account for Tax Liability in more than one jurisdiction.

(b) Prior to any relevant taxable or tax withholding event, as applicable, you agree to make adequate arrangements satisfactory to the Company and/or the Service Recipient to satisfy all Tax Liability. As further provided in Section 8 of the Plan, you hereby authorize the Company and any applicable Service Recipient to satisfy any applicable withholding obligations with regard to the Tax Liability by one or a combination of the following methods: (i) causing you to pay any portion of the Tax Liability in cash or cash equivalent in a form acceptable to the Company and/or the Service Recipient; (ii) withholding from any compensation otherwise payable to you by the Company or the Service Recipient; (iii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award; *provided*, however, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Board or the Company's Compensation Committee; (iv) permitting or requiring you to enter into a "same day sale" commitment, if applicable, with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a "***FINRA Dealer***"), pursuant to this authorization and without further consent, whereby you irrevocably elect to sell a portion of the shares of Common Stock to be delivered in connection with your Restricted Stock Units to satisfy the Tax Liability and whereby the FINRA Dealer irrevocably commits to forward the proceeds necessary to satisfy the Tax Liability directly to the Company or the Service Recipient; and/or (v) any other method determined by the Company to be in compliance with Applicable Law. Furthermore, you agree to pay or reimburse the Company or the Service Recipient any amount the Company or the Service Recipient may be required to withhold, collect or pay as a result of your participation in the Plan or that cannot be satisfied by the means previously described. In the event it is determined that the amount of the Tax Liability was greater than the amount withheld by the Company and/or the Service Recipient (as applicable), you agree to indemnify and hold the Company and/or the Service Recipient (as applicable) harmless from any failure by the Company or the applicable Service Recipient to withhold the proper amount.

(c) The Company and/or the Service Recipient may withhold or account for your Tax Liability by considering statutory withholding amounts or other withholding rates applicable in your jurisdiction(s), including (i) maximum applicable rates in your jurisdiction(s). In the event of over-withholding, you may receive a refund of any over-withheld amount in cash from the Company or the Service Recipient (with no entitlement to the Common Stock

equivalent), or if not refunded, you may seek a refund from the local tax authorities. In the event of under-withholding, you may be required to pay any Tax Liability directly to the applicable tax authority or to the Company and/or the Service Recipient. If the Tax Liability withholding obligation is satisfied by withholding shares of Common Stock, for tax purposes, you are deemed to have been issued the full number of shares of Common Stock subject to the vested portion of the RSU Award, notwithstanding that a number of the shares of Common Stock is held back solely for the purpose of paying such Tax Liability.

(d) You acknowledge that you may not participate in the Plan and the Company shall have no obligation to issue or deliver shares of Common Stock until you have fully satisfied any applicable Tax Liability, as determined by the Company. Unless any withholding obligation for the Tax Liability is satisfied, the Company shall have no obligation to issue or deliver to you any Common Stock in respect of the RSU Award.

5. DATE OF ISSUANCE.

(a) The issuance of shares in respect of the Restricted Stock Units is intended to comply with U.S. Treasury Regulations Section 1.409A-1(b)(4) and will be construed and administered in such a manner. Subject to the satisfaction of the Tax Liability withholding obligation, if any, in the event one or more Restricted Stock Units vests, the Company shall issue to you one (1) share of Common Stock for each vested Restricted Stock Unit on the applicable vesting date. Each issuance date determined by this paragraph is referred to as an "***Original Issuance Date***."

(b) If the Original Issuance Date falls on a date that is not a business day, delivery shall instead occur on the next following business day. In addition, if:

(i) the Original Issuance Date does not occur (1) during an "open window period" applicable to you, as determined by the Company in accordance with the Company's then-effective policy on trading in Company securities, or (2) on a date when you are otherwise permitted to sell shares of Common Stock on an established stock exchange or stock market (including but not limited to under a previously established written trading plan that meets the requirements of Rule 10b5-1 under the Exchange Act and was entered into in compliance with the Company's policies (a "***10b5-1 Arrangement***")), *and*

(ii) either (1) a Tax Liability withholding obligation does not apply, or (2) the Company decides, prior to the Original Issuance Date, (A) not to satisfy the Tax Liability withholding obligation by withholding shares of Common Stock from the shares otherwise due, on the Original Issuance Date, to you under this Award, and (B) not to permit you to enter into a "same day sale" commitment with a broker-dealer (including but not limited to a commitment under a 10b5-1 Arrangement) and (C) not to permit you to pay your Tax Liability in cash,

then the shares that would otherwise be issued to you on the Original Issuance Date will not be delivered on such Original Issuance Date and will instead be delivered on the first business day when you are not prohibited from selling shares of the Common Stock in the open public market, but in no event later than December 31 of the calendar year in which the Original Issuance Date occurs (that is, the last day of your taxable year in which the Original Issuance

Date occurs), or, if and only if permitted in a manner that complies with U.S. Treasury Regulations Section 1.409A-1(b)(4), no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the shares of Common Stock under this Award are no longer subject to a "substantial risk of forfeiture" within the meaning of U.S. Treasury Regulations Section 1.409A-1(d).

6. NATURE OF GRANT. In accepting the RSU Award, you acknowledge, understand and agree that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the RSU Award is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of Restricted Stock Units, or benefits in lieu of Restricted Stock Units, even if Restricted Stock Units have been granted in the past;

(c) all decisions with respect to future RSU Awards or other grants, if any, will be at the sole discretion of the Company;

(d) the RSU Award and your participation in the Plan shall not create a right to employment or other service relationship with the Company;

(e) the RSU Award and your participation in the Plan shall not be interpreted as forming or amending an employment or service contract with the Company or the Service Recipient, and shall not interfere with the ability of the Company or the Service Recipient, as applicable, to terminate your Continuous Service (if any);

(f) you are voluntarily participating in the Plan;

(g) the RSU Award and the shares of Common Stock subject to the RSU Award, and the income from and value of same, are not intended to replace any pension rights or compensation;

(h) the RSU Award and the shares of Common Stock subject to the RSU Award, and the income from and value of same, are not part of normal or expected compensation for purposes of, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, holiday pay, long-service awards, pension or retirement or welfare benefits or similar payments;

(i) unless otherwise agreed with the Company in writing, the RSU Award and the shares of Common Stock subject to the RSU Award, and the income from and value of same, are not granted as consideration for, or in connection with, the service you may provide as a director of an Affiliate;

(j) the future value of the underlying shares of Common Stock is unknown, indeterminable and cannot be predicted with certainty;

(k) no claim or entitlement to compensation or damages shall arise from forfeiture of the RSU Award resulting from the termination of your Continuous Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any);

(l) for purposes of the RSU Award, your Continuous Service will be considered terminated as of the date you are no longer actively providing services to the Company or any Affiliate (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any), and such date will not be extended by any notice period (*e.g.*, your period of Continuous Service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where you are providing service or the terms of your employment or other service agreement, if any); the Compensation Committee shall have the exclusive discretion to determine when you are no longer actively providing services for purposes of your RSU Award (including whether you may still be considered to be providing services while on a leave of absence); and

(m) neither the Company nor the Service Recipient shall be liable for any foreign exchange rate fluctuation between your local currency and the United States Dollar that may affect the value of the Restricted Stock Units or of any amounts due to you pursuant to the settlement of the RSU Award or the subsequent sale of any shares of Common Stock acquired upon settlement.

7. TRANSFERABILITY. Except as otherwise provided in the Plan, your RSU Award is not transferable, except by will or by the applicable laws of descent and distribution

8. CORPORATE TRANSACTION. Your RSU Award is subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on your behalf with respect to any escrow, indemnities and any contingent consideration.

9. NO LIABILITY FOR TAXES. As a condition to accepting the RSU Award, you hereby (a) agree to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to any Tax Liability arising from the RSU Award and (b) acknowledge that you were advised to consult with your own personal tax, financial and other legal advisors regarding the tax consequences of the RSU Award and have either done so or knowingly and voluntarily declined to do so.

10. NO ADVICE REGARDING GRANT. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding your participation in the Plan, or your acquisition or sale of the underlying shares of Common Stock. You should consult with your own personal tax, legal and financial advisors regarding your participation in the Plan before taking any action related to the Plan.

11. GOVERNING LAW AND VENUE. The RSU Award and the provisions of this Agreement are governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to the conflict of law principles that would result in any application of any law other than the law of the State of Delaware. For purposes of any action, lawsuit or other proceedings brought to enforce this Agreement, relating to it, or arising from it, the parties hereby submit to and consent to the sole and exclusive jurisdiction of the courts of the State of Delaware, and no other courts, where this grant is made and/or to be performed.

12. SEVERABILITY. If any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Agreement (or part of such a Section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

13. COMPLIANCE WITH LAW. Notwithstanding any other provision of the Plan or this Agreement, unless there is an exemption from any registration, qualification or other legal requirement applicable to the shares of Common Stock, the Company shall not be required to deliver any shares issuable upon settlement of the Restricted Stock Units prior to the completion of any registration or qualification of the shares under any local, state, federal or foreign securities or exchange control law or under rulings or regulations of the U.S. Securities and Exchange Commission ("SEC") or of any other governmental regulatory body, or prior to obtaining any approval or other clearance from any local, state, federal or foreign governmental agency, which registration, qualification or approval the Company shall, in its absolute discretion, deem necessary or advisable. You understand that the Company is under no obligation to register or qualify the shares with the SEC or any state or foreign securities commission or to seek approval or clearance from any governmental authority for the issuance or sale of the shares. Further, you agree that the Company shall have unilateral authority to amend the Agreement without your consent to the extent necessary to comply with securities or other laws applicable to issuance of shares of Common Stock.

14. LANGUAGE. You acknowledge that you are proficient in the English language, or have consulted with an advisor who is proficient in the English language, so as to enable you to understand the provisions of this Agreement and the Plan. If you have received this Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

15. ELECTRONIC DELIVERY AND PARTICIPATION. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an online or electronic system established and maintained by the Company or a third party designated by the Company.

16. SEVERABILITY. The provisions of this Agreement are severable and if any one or more provisions are determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

17. APPENDIX. Notwithstanding any provisions in this Global RSU Award Agreement, the RSU Award shall be subject to any additional terms and conditions set forth in any Appendix for your country. Moreover, if you relocate to one of the countries included in the Appendix, the additional terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

18. IMPOSITION OF OTHER REQUIREMENT. The Company reserves the right to impose other requirements on your participation in the Plan, on the RSU and on any shares of Common Stock acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require you to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

19. WAIVER. You acknowledge that a waiver by the Company of breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by you or any other participant.

20. INSIDER TRADING/MARKET ABUSE. You acknowledge that, depending on your or your broker's country or where the Company shares are listed, you may be subject to insider trading restrictions and/or market abuse laws which may affect your ability to accept, acquire, sell or otherwise dispose of shares of Common Stock, rights to shares (*e.g.*, Restricted Stock Units) or rights linked to the value of shares (*e.g.*, phantom awards, futures) during such times you are considered to have "inside information" regarding the Company as defined in the laws or regulations in the applicable jurisdictions). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders you placed before you possessed inside information. Furthermore, you could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. Keep in mind third parties includes fellow employees. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable insider trading policy of the Company. You are responsible for complying with any restrictions and should speak to your personal advisor on this matter.

21. EXCHANGE CONTROL, FOREIGN ASSET/ACCOUNT AND/OR TAX REPORTING. Depending upon the country to which laws you are subject, you may have certain foreign asset/account and/or tax reporting requirements that may affect your ability to acquire or hold shares of Common Stock under the Plan or cash received from participating in the Plan (including from any dividends or sale proceeds arising from the sale of shares of Common Stock) in a brokerage or bank account outside your country of residence. Your country may require that you report such accounts, assets or transactions to the applicable authorities in your country. You also may be required to repatriate cash received from participating in the Plan to your country within a certain period of time after receipt. You are responsible for knowledge of and compliance with any such regulations and should speak with your personal tax, legal and financial advisors regarding same.

22. OTHER DOCUMENTS. You hereby acknowledge receipt of or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Prospectus. In addition, you acknowledge receipt of the Company's Trading Policy.

23. QUESTIONS. If you have questions regarding these or any other terms and conditions applicable to your RSU Award, including a summary of the applicable federal income tax consequences please see the Prospectus.

LYELL IMMUNOPHARMA, INC.
2021 EQUITY INCENTIVE PLAN

APPENDIX
TO GLOBAL RSU AWARD AGREEMENT

TERMS AND CONDITIONS

This Appendix forms part of the Agreement and includes additional terms and conditions that govern the RSU Award granted to you under the Plan if you reside and/or work in one of the jurisdictions listed below. Capitalized terms used but not defined in this Appendix have the meanings set forth in the Plan and/or in the Global RSU Award Agreement.

If you are a citizen or resident (or are considered as such for local law purposes) of a country other than the country in which you are currently residing and/or working, or if you relocate to another country after the grant of the RSU Award, the Company shall, in its discretion, determine to what extent the additional terms and conditions contained herein shall be applicable to you.

NOTIFICATIONS

This Appendix may also include information regarding exchange controls and certain other issues of which you should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, and other laws in effect in the respective countries as of January 2021. Such laws are often complex and change frequently. As a result, you should not rely on the information in this Appendix as the only source of information relating to the consequences of your participation in the Plan because the information may be out of date at the time you vest in the Restricted Stock Units, acquire shares of Common Stock, or sell shares of Common Stock acquired under the Plan.

In addition, the information contained below is general in nature and may not apply to your particular situation. You should seek appropriate professional advice as to how the relevant laws in your country may apply to your situation.

If you are a citizen or resident (or are considered as such for local law purposes) of a country other than the country in which you are currently residing and/or working, or if you relocate to another country after the grant of the RSU Award, the notifications herein may not apply to you in the same manner.

Exhibit 10.6

LYELL IMMUNOPHARMA, INC.

2021 EMPLOYEE STOCK PURCHASE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: JUNE [__], 2021
APPROVED BY THE STOCKHOLDERS: JUNE [__], 2021
IPO DATE: JUNE [__], 2021

1. GENERAL; PURPOSE.

(a) The Plan provides a means by which Eligible Employees of the Company and Designated Companies may be given an opportunity to purchase shares of Common Stock. The Plan permits the Company to grant a series of Purchase Rights to Eligible Employees under an Employee Stock Purchase Plan. In addition, the Plan permits the Company to grant a series of Purchase Rights to Eligible Employees that do not meet the requirements of an Employee Stock Purchase Plan.

(b) The Plan includes two components: a 423 Component and a Non-423 Component. The Company intends (but makes no undertaking or representation to maintain) the 423 Component to qualify as an Employee Stock Purchase Plan. The provisions of the 423 Component, accordingly, will be construed in a manner that is consistent with the requirements of Section 423 of the Code. Except as otherwise provided in the Plan or determined by the Board, the Non-423 Component will operate and be administered in the same manner as the 423 Component.

(c) The Company, by means of the Plan, seeks to retain the services of Eligible Employees, to secure and retain the services of new Employees and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Related Corporations.

2. ADMINISTRATION.

(a) The Board or the Committee will administer the Plan. References herein to the Board shall be deemed to refer to the Committee except where context dictates otherwise.

(b) The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine how and when Purchase Rights will be granted and the provisions of each Offering (which need not be identical).

(ii) To designate from time to time (A) which Related Corporations will be eligible to participate in the Plan as Designated 423 Corporations, (B) which Related Corporations or Affiliates will be eligible to participate in the Plan as Designated Non-423 Corporations, and (C) which Designated Companies will participate in each separate Offering (to the extent that the Company makes separate Offerings).

(iii) To construe and interpret the Plan and Purchase Rights, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it deems necessary or expedient to make the Plan fully effective.

(iv) To settle all controversies regarding the Plan and Purchase Rights granted under the Plan.

(v) To suspend or terminate the Plan at any time as provided in Section 12.

(vi) To amend the Plan at any time as provided in Section 12.

(vii) Generally, to exercise such powers and to perform such acts as it deems necessary or expedient to promote the best interests of the Company and its Related Corporations and to carry out the intent that the Plan be treated as an Employee Stock Purchase Plan with respect to the 423 Component.

(viii) To adopt such rules, procedures and sub-plans as are necessary or appropriate to permit or facilitate participation in the Plan by Employees who are foreign nationals or employed or located outside the United States. Without limiting the generality of, and consistent with, the foregoing, the Board specifically is authorized to adopt rules, procedures, and sub-plans regarding, without limitation, eligibility to participate in the Plan, the definition of eligible "earnings," handling and making of Contributions, establishment of bank or trust accounts to hold Contributions, payment of interest, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures and handling of share issuances, any of which may vary according to applicable requirements, and which, if applicable to a Designated Non-423 Corporation, do not have to comply with the requirements of Section 423 of the Code.

(c) The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in this Plan and any Offering Document to the Board will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Further, to the extent not prohibited by Applicable Law, the Board or Committee may, from time to time, delegate some or all of its authority under the Plan to one or more officers of the Company or other persons or groups of persons as it deems necessary, appropriate or advisable under conditions or limitations that it may set at or after the time of the delegation. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated. Whether or not the Board has delegated administration of the Plan to a Committee, the Board will have the final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

(d) All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES OF COMMON STOCK SUBJECT TO THE PLAN.

(a) Subject to the provisions of Section 11(a) relating to Capitalization Adjustments, the maximum number of shares of Common Stock that may be issued under the Plan will not exceed 2,470,000 shares of Common Stock, plus the number of shares of Common Stock that are automatically added on January 1st of each year for a period of up to ten years, commencing on January 1, 2022 and ending on (and including) January 1, 2031, in an amount equal to the lesser of (i) 1% of the total number of shares of Common Stock outstanding on December 31stof the preceding calendar year, and (ii) 4,940,000 shares of Common Stock. Notwithstanding the foregoing, the Board may act prior to the first

day of any calendar year to provide that there will be no January 1st increase in the share reserve for such calendar year or that the increase in the share reserve for such calendar year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence. For the avoidance of doubt, up to the maximum number of shares of Common Stock reserved under this Section 3(a) may be used to satisfy purchases of Common Stock under the 423 Component and any remaining portion of such maximum number of shares may be used to satisfy purchases of Common Stock under the Non-423 Component.

(b) If any Purchase Right granted under the Plan terminates without having been exercised in full, the shares of Common Stock not purchased under such Purchase Right will again become available for issuance under the Plan.

(c) The stock purchasable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market.

4. GRANT OF PURCHASE RIGHTS; OFFERING.

(a) The Board may from time to time grant or provide for the grant of Purchase Rights to Eligible Employees under an Offering (consisting of one or more Purchase Periods) on an Offering Date or Offering Dates selected by the Board. Each Offering will be in such form and will contain such terms and conditions as the Board will deem appropriate, and, with respect to the 423 Component, will comply with the requirement of Section 423(b)(5) of the Code that all Employees granted Purchase Rights will have the same rights and privileges. The terms and conditions of an Offering shall be incorporated by reference into the Plan and treated as part of the Plan. The provisions of separate Offerings need not be identical, but each Offering will include (through incorporation of the provisions of this Plan by reference in the document comprising the Offering or otherwise) the period during which the Offering will be effective, which period will not exceed 27 months beginning with the Offering Date, and the substance of the provisions contained in Sections 5 through 8, inclusive.

(b) If a Participant has more than one Purchase Right outstanding under the Plan, unless he or she otherwise indicates in forms delivered to the Company or a third party designated by the Company (each, a "***Company Designee***"): (i) each form will apply to all of his or her Purchase Rights under the Plan, and (ii) a Purchase Right with a lower exercise price (or an earlier-granted Purchase Right, if different Purchase Rights have identical exercise prices) will be exercised to the fullest possible extent before a Purchase Right with a higher exercise price (or a later-granted Purchase Right if different Purchase Rights have identical exercise prices) will be exercised.

(c) The Board will have the discretion to structure an Offering so that if the Fair Market Value of a share of Common Stock on the first Trading Day of a new Purchase Period within that Offering is less than or equal to the Fair Market Value of a share of Common Stock on the Offering Date for that Offering, then (i) that Offering will terminate immediately as of that first Trading Day, and (ii) the Participants in such terminated Offering will be automatically enrolled in a new Offering beginning on the first Trading Day of such new Purchase Period.

5. ELIGIBILITY.

(a) Purchase Rights may be granted only to Employees of the Company or, as the Board may designate in accordance with Section 2(b), to Employees of a Related Corporation or an Affiliate. Except as provided in Section 5(b) or as required by Applicable Law, an Employee will not be eligible to be granted Purchase Rights unless, on the Offering Date, the Employee has been in the employ of the Company or the Related Corporation or an Affiliate, as the case may be, for such continuous period

preceding such Offering Date as the Board may require, but in no event will the required period of continuous employment be equal to or greater than two years. In addition, the Board may (unless prohibited by Applicable Law) provide that no Employee will be eligible to be granted Purchase Rights under the Plan unless, on the Offering Date, such Employee's customary employment with the Company, the Related Corporation, or the Affiliate is more than 20 hours per week and more than five months per calendar year or such other criteria as the Board may determine consistent with Section 423 of the Code with respect to the 423 Component. The Board may also exclude from participation in the Plan or any Offering Employees who are "highly compensated employees" (within the meaning of Section 423(b)(4)(D) of the Code) of the Company or a Related Corporation or a subset of such highly compensated employees.

(b) The Board may provide that each person who, during the course of an Offering, first becomes an Eligible Employee will, on a date or dates specified in the Offering which coincides with the day on which such person becomes an Eligible Employee or which occurs thereafter, receive a Purchase Right under that Offering, which Purchase Right will thereafter be deemed to be a part of that Offering. Such Purchase Right will have the same characteristics as any Purchase Rights originally granted under that Offering, as described herein, except that:

(i) the date on which such Purchase Right is granted will be the "Offering Date" of such Purchase Right for all purposes, including determination of the exercise price of such Purchase Right;

(ii) the period of the Offering with respect to such Purchase Right will begin on its Offering Date and end coincident with the end of such Offering; and

(iii) the Board may provide that if such person first becomes an Eligible Employee within a specified period of time before the end of the Offering, he or she will not receive any Purchase Right under that Offering.

(c) No Employee will be eligible for the grant of any Purchase Rights under the 423 Component if, immediately after any such Purchase Rights are granted, such Employee owns stock possessing five percent or more of the total combined voting power or value of all classes of stock of the Company or of any Related Corporation. For purposes of this Section 5(c), the rules of Section 424(d) of the Code will apply in determining the stock ownership of any Employee, and stock which such Employee may purchase under all outstanding Purchase Rights and options will be treated as stock owned by such Employee.

(d) As specified by Section 423(b)(8) of the Code, an Eligible Employee may be granted Purchase Rights under the 423 Component only if such Purchase Rights, together with any other rights granted under all Employee Stock Purchase Plans of the Company and any Related Corporations, do not permit such Eligible Employee's rights to purchase stock of the Company or any Related Corporation to accrue at a rate which, when aggregated, exceeds U.S. $25,000 of Fair Market Value of such stock (determined at the time such rights are granted, and which, with respect to the Plan, will be determined as of their respective Offering Dates) for each calendar year in which such rights are outstanding at any time.

(e) Officers of the Company and any Designated Company, if they are otherwise Eligible Employees, will be eligible to participate in Offerings under the Plan. Notwithstanding the foregoing, the Board may (unless prohibited by Applicable Law) provide in an Offering that Employees who are highly compensated Employees within the meaning of Section 423(b)(4)(D) of the Code will not be eligible to participate.

(f) Notwithstanding anything in this Section 5 to the contrary, in the case of an Offering under the Non-423 Component, an Eligible Employee (or group of Eligible Employees) may be excluded from participation in the Plan or an Offering if the Board has determined, in its sole discretion, that participation of such Eligible Employee(s) is not advisable or practical for any reason.

6. PURCHASE RIGHTS; PURCHASE PRICE.

(a) On each Offering Date, each Eligible Employee, pursuant to an Offering made under the Plan, will be granted a Purchase Right to purchase up to that number of shares of Common Stock purchasable either with a percentage of earnings (as defined by the Board in each Offering) or with a maximum dollar amount, as designated by the Board, during the period that begins on the Offering Date (or such later date as the Board determines for a particular Offering) and ends on the date stated in the Offering, which date will be no later than the end of the Offering.

(b) The Board will establish one or more Purchase Dates during an Offering on which Purchase Rights granted for that Offering will be exercised and shares of Common Stock will be purchased in accordance with such Offering.

(c) In connection with each Offering made under the Plan, the Board may specify (i) a maximum number of shares of Common Stock that may be purchased by any Participant on any Purchase Date during such Offering, (ii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants pursuant to such Offering and/or (iii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants on any Purchase Date under the Offering. If the aggregate purchase of shares of Common Stock issuable upon exercise of Purchase Rights granted under the Offering would exceed any such maximum aggregate number, then, in the absence of any Board action otherwise, a pro rata (based on each Participant's accumulated Contributions) allocation of the shares of Common Stock (rounded down to the nearest whole share) available will be made in as nearly a uniform manner as will be practicable and equitable.

(d) The purchase price of shares of Common Stock acquired pursuant to Purchase Rights will be not less than the lesser of:

(i) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the Offering Date; or

(ii) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the applicable Purchase Date.

7. PARTICIPATION; WITHDRAWAL; TERMINATION.

(a) An Eligible Employee may elect to participate in an Offering and authorize payroll deductions as the means of making Contributions by completing and delivering to the Company or a Company Designee, within the time specified for the Offering, an enrollment form provided by the Company or Company Designee. The enrollment form will specify the amount of Contributions not to exceed the maximum amount specified by the Board. Each Participant's Contributions will be credited to a bookkeeping account for such Participant under the Plan and will be deposited with the general funds of the Company except where Applicable Law requires that Contributions be deposited with a third party. If permitted in the Offering, a Participant may begin such Contributions with the first payroll occurring on or after the Offering Date (or, in the case of a payroll date that occurs after the end of the prior Offering but before the Offering Date of the next new Offering, Contributions from such payroll will be included in the new Offering). If permitted in the Offering, a Participant may thereafter reduce (including to zero) or increase his or her Contributions. If required under Applicable Law or if specifically provided in the Offering, in addition to or instead of making Contributions by payroll deductions, a Participant may make Contributions through payment by cash, check or wire transfer prior to a Purchase Date.

(b) During an Offering, a Participant may cease making Contributions and withdraw from the Offering by delivering to the Company or a Company Designee a withdrawal form provided by the Company. The Company may impose a deadline before a Purchase Date for withdrawing. Upon such withdrawal, such Participant's Purchase Right in that Offering will immediately terminate and the Company will distribute as soon as practicable to such Participant all of his or her accumulated but unused Contributions and such Participant's Purchase Right in that Offering shall thereupon terminate. A Participant's withdrawal from that Offering will have no effect upon his or her eligibility to participate in any other Offerings under the Plan, but such Participant will be required to deliver a new enrollment form to participate in subsequent Offerings.

(c) Unless otherwise required by Applicable Law, Purchase Rights granted pursuant to any Offering under the Plan will terminate immediately if the Participant either (i) is no longer an Employee for any reason or for no reason (subject to any post-employment participation period required by Applicable Law) or (ii) is otherwise no longer eligible to participate. The Company will distribute as soon as practicable to such individual all of his or her accumulated but unused Contributions.

(d) Unless otherwise determined by the Board, a Participant whose employment transfers or whose employment terminates with an immediate rehire (with no break in service) by or between the Company and a Designated Company or between Designated Companies will not be treated as having terminated employment for purposes of participating in the Plan or an Offering; however, if a Participant transfers from an Offering under the 423 Component to an Offering under the Non-423 Component, the exercise of the Participant's Purchase Right will be qualified under the 423 Component only to the extent such exercise complies with Section 423 of the Code. If a Participant transfers from an Offering under the Non-423 Component to an Offering under the 423 Component, the exercise of the Purchase Right will remain non-qualified under the Non-423 Component. The Board may establish different and additional rules governing transfers between separate Offerings within the 423 Component and between Offerings under the 423 Component and Offerings under the Non-423 Component.

(e) During a Participant's lifetime, Purchase Rights will be exercisable only by such Participant. Purchase Rights are not transferable by a Participant, except by will, by the laws of descent and distribution, or, if permitted by the Company, by a beneficiary designation as described in Section 10.

(f) Unless otherwise specified in the Offering or as required by Applicable Law, the Company will have no obligation to pay interest on Contributions.

8. EXERCISE OF PURCHASE RIGHTS.

(a) On each Purchase Date, each Participant's accumulated Contributions will be applied to the purchase of shares of Common Stock, up to the maximum number of shares of Common Stock permitted by the Plan and the applicable Offering, at the purchase price specified in the Offering. No fractional shares will be issued unless specifically provided for in the Offering.

(b) Unless otherwise provided in the Offering, if any amount of accumulated Contributions remains in a Participant's account after the purchase of shares of Common Stock on the final Purchase Date of an Offering, then such remaining amount will not roll over to the next Offering and will instead be distributed in full to such Participant after the final Purchase Date of such Offering without interest (unless otherwise required by Applicable Law).

(c) No Purchase Rights may be exercised to any extent unless the shares of Common Stock to be issued upon such exercise under the Plan are covered by an effective registration statement pursuant to the Securities Act and the Plan is in material compliance with all applicable U.S. federal and state, foreign and other securities, exchange control and other laws applicable to the Plan. If on a Purchase Date the shares of Common Stock are not so registered or the Plan is not in such compliance, no Purchase Rights will be exercised on such Purchase Date, and the Purchase Date will be delayed until the shares of Common Stock are subject to such an effective registration statement and the Plan is in material compliance, except that the Purchase Date will in no event be more than 27 months from the Offering Date. If, on the Purchase Date, as delayed to the maximum extent permissible, the shares of Common Stock are not registered and the Plan is not in material compliance with all Applicable Law, as determined by the Company in its sole discretion, no Purchase Rights will be exercised and all accumulated but unused Contributions will be distributed to the Participants without interest (unless the payment of interest is otherwise required by Applicable Law).

9. COVENANTS OF THE COMPANY.

The Company will seek to obtain from each U.S. federal or state, non-U.S. or other regulatory commission, agency or other Governmental Body having jurisdiction over the Plan such authority as may be required to grant Purchase Rights and issue and sell shares of Common Stock thereunder unless the Company determines, in its sole discretion, that doing so is not practical or would cause the Company to incur costs that are unreasonable. If, after commercially reasonable efforts, the Company is unable to obtain the authority that counsel for the Company deems necessary for the grant of Purchase Rights or the lawful issuance and sale of Common Stock under the Plan, and at a commercially reasonable cost, the Company will be relieved from any liability for failure to grant Purchase Rights and/or to issue and sell Common Stock upon exercise of such Purchase Rights.

10. DESIGNATION OF BENEFICIARY.

(a) The Company may, but is not obligated to, permit a Participant to submit a form designating a beneficiary who will receive any shares of Common Stock and/or Contributions from the Participant's account under the Plan if the Participant dies before such shares and/or Contributions are delivered to the Participant. The Company may, but is not obligated to, permit the Participant to change such designation of beneficiary. Any such designation and/or change must be on a form approved by the Company.

(b) If a Participant dies, and in the absence of a valid beneficiary designation, the Company will deliver any shares of Common Stock and/or Contributions to the executor or administrator of the estate of the Participant. If no executor or administrator has been appointed (to the knowledge of the Company), the Company, in its sole discretion, may deliver such shares of Common Stock and/or Contributions, without interest (unless the payment of interest is otherwise required by Applicable Law), to the Participant's spouse, dependents or relatives, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

11. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; CORPORATE TRANSACTIONS.

(a) In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities by which the share reserve is to increase automatically each year pursuant to Section 3(a), (iii) the class(es) and number of securities subject to, and the purchase price applicable to outstanding Offerings and Purchase Rights, and (iv) the class(es) and number of securities that are the subject of the purchase limits under each ongoing Offering. The Board will make these adjustments, and its determination will be final, binding and conclusive.

(b) In the event of a Corporate Transaction, then: (i) any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue outstanding Purchase Rights or may substitute similar rights (including a right to acquire the same consideration paid to the stockholders in the Corporate Transaction) for outstanding Purchase Rights, or (ii) if any surviving or acquiring corporation (or its parent company) does not assume or continue such Purchase Rights or does not substitute similar rights for such Purchase Rights, then the Participants' accumulated Contributions will be used to purchase shares of Common Stock (rounded down to the nearest whole share) within ten business days (or such other period specified by the Board) prior to the Corporate Transaction under the outstanding Purchase Rights, and the Purchase Rights will terminate immediately after such purchase.

12. AMENDMENT, TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may amend the Plan at any time in any respect the Board deems necessary or advisable. However, except as provided in Section 11(a) relating to Capitalization Adjustments, stockholder approval will be required for any amendment of the Plan for which stockholder approval is required by Applicable Law.

(b) The Board may suspend or terminate the Plan at any time. No Purchase Rights may be granted under the Plan while the Plan is suspended or after it is terminated.

Any benefits, privileges, entitlements and obligations under any outstanding Purchase Rights granted before an amendment, suspension or termination of the Plan will not be materially impaired by any such amendment, suspension or termination except (i) with the consent of the person to whom such Purchase Rights were granted, (ii) as necessary to facilitate compliance with Applicable Law, listing requirements, or governmental regulations (including, without limitation, the provisions of Section 423 of the Code and the regulations and other interpretive guidance issued thereunder relating to Employee Stock Purchase Plans) including without limitation any such regulations or other guidance that may be issued or amended after the date the Plan is adopted by the Board, or (iii) as necessary to obtain or maintain favorable tax, listing, or regulatory treatment. To be clear, the Board may amend outstanding Purchase Rights without a Participant's consent if such amendment is necessary to ensure that the Purchase Right and/or the Plan complies with the requirements of Section 423 of the Code with respect to the 423 Component or with respect to other Applicable Law. Notwithstanding anything in the Plan or any Offering Document to the contrary, the Board will be entitled to: (i) establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars; (ii) permit Contributions in excess of the amount designated by a Participant in order to adjust for mistakes in the Company's processing of properly completed Contribution elections; (iii) establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with amounts withheld from the Participant's Contributions; (iv) amend any outstanding Purchase Rights or clarify any ambiguities regarding the terms of any Offering to enable the Purchase Rights to qualify under and/or comply with Section 423 of the Code with respect to the 423 Component; and (v) establish other limitations or procedures as the Board determines in its sole discretion advisable that are consistent with the Plan. The actions of the Board pursuant to this paragraph will not be considered to alter or impair any Purchase Rights granted under an Offering as they are part of the initial terms of each Offering and the Purchase Rights granted under each Offering.

13. TAX QUALIFICATION; TAX WITHHOLDING.

(a) Although the Company may endeavor to (i) qualify a Purchase Right for special tax treatment under the laws of the United States or jurisdictions outside of the United States or (ii) avoid adverse tax treatment, the Company makes no representation to that effect and expressly disavows any covenant to maintain special or to avoid unfavorable tax treatment, notwithstanding anything to the contrary in this Plan. The Company will be unconstrained in its corporate activities without regard to the potential negative tax impact on Participants.

(b) Each Participant will make arrangements, satisfactory to the Company and any applicable Related Corporation, to enable the Company or the Related Corporation to fulfill any withholding obligation for Tax-Related Items. Without limitation to the foregoing, in the Company's sole discretion and subject to Applicable Law, such withholding obligation may be satisfied in whole or in part by (i) withholding from the Participant's salary or any other cash payment due to the Participant from the Company or a Related Corporation; (ii) withholding from the proceeds of the sale of shares of Common Stock acquired under the Plan, either through a voluntary sale or a mandatory sale arranged by the Company; or (iii) any other method deemed acceptable by the Board. The Company shall not be required to issue any shares of Common Stock under the Plan until such obligations are satisfied.

14. EFFECTIVE DATE OF PLAN.

The Plan will become effective immediately prior to and contingent upon the IPO Date. No Purchase Rights will be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval must be within 12 months before or after the date the Plan is adopted (or if required under Section 12(a) above, materially amended) by the Board.

15. MISCELLANEOUS PROVISIONS.

(a) Proceeds from the sale of shares of Common Stock pursuant to Purchase Rights will constitute general funds of the Company.

(b) A Participant will not be deemed to be the holder of, or to have any of the rights of a holder with respect to, shares of Common Stock subject to Purchase Rights unless and until the Participant's shares of Common Stock acquired upon exercise of Purchase Rights are recorded in the books of the Company (or its transfer agent).

(c) The Plan and Offering do not constitute an employment contract. Nothing in the Plan or in the Offering will in any way alter the at will nature of a Participant's employment or amend a Participant's employment contract, if applicable, or be deemed to create in any way whatsoever any obligation on the part of any Participant to continue in the employ of the Company or a Related Corporation or an Affiliate, or on the part of the Company, a Related Corporation or an Affiliate to continue the employment of a Participant.

(d) The provisions of the Plan will be governed by the laws of the State of Delaware without resort to that state's conflicts of laws rules.

(e) If any particular provision of the Plan is found to be invalid or otherwise unenforceable, such provision will not affect the other provisions of the Plan, but the Plan will be construed in all respects as if such invalid provision were omitted.

(f) If any provision of the Plan does not comply with Applicable Law, such provision shall be construed in such a manner as to comply with Applicable Law.

16. DEFINITIONS.

As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***423 Component***" means the part of the Plan, which excludes the Non-423 Component, pursuant to which Purchase Rights that satisfy the requirements for an Employee Stock Purchase Plan may be granted to Eligible Employees.

(b) "***Affiliate***" means any entity, other than a Related Corporation, whether now or subsequently established, which is at the time of determination, a "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 promulgated under the Securities Act. The Board may determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(c) "***Applicable Law***" means the Code and any applicable securities, federal, state, foreign, material local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, listing rule, regulation, judicial decision, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (or under the authority of the Nasdaq Stock Market or the Financial Industry Regulatory Authority).

(d) "***Board***" means the board of directors of the Company.

(e) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Purchase Right after the date the Plan is adopted by the Board without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(f) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(g) "***Committee***" means a committee of one or more members of the Board to whom authority has been delegated by the Board in accordance with Section 2(c).

(h) "***Common Stock***" means the common stock of the Company.

(i) "***Company***" means Lyell Immunopharma, Inc., a Delaware corporation, and any successor thereto.

(j) "***Contributions***" means the payroll deductions and other additional payments specifically provided for in the Offering that a Participant contributes to fund the exercise of a Purchase Right. A Participant may make additional payments into his or her account if specifically provided for in the Offering, and then only if the Participant has not already had the maximum permitted amount withheld during the Offering through payroll deductions.

(k) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board in its sole discretion, of the consolidated assets of the Company and its subsidiaries;

(ii) a sale or other disposition of at least 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(l) "***Designated 423 Corporation***" means any Related Corporation selected by the Board to participate in the 423 Component.

(m) "***Designated Company***" means any Designated Non-423 Corporation or Designated 423 Corporation, provided, however, that at any given time, a Related Corporation participating in the 423 Component shall not be a Related Corporation participating in the Non-423 Component.

(n) "***Designated Non-423 Corporation***" means any Related Corporation or Affiliate selected by the Board to participate in the Non-423 Component.

(o) "***Director***" means a member of the Board.

(p) "***Eligible Employee***" means an Employee who meets the requirements set forth in the document(s) governing the Offering for eligibility to participate in the Offering, provided that such Employee also meets the requirements for eligibility to participate set forth in the Plan.

(q) "***Employee***" means any person, including an Officer or Director, who is "employed" for purposes of Section 423(b)(4) of the Code by the Company or a Related Corporation, or solely with respect to the Non-423 Component, an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(r) "***Employee Stock Purchase Plan***" means a plan that grants Purchase Rights intended to be options issued under an "employee stock purchase plan," as that term is defined in Section 423(b) of the Code.

(s) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended and the rules and regulations promulgated thereunder.

(t) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in such source as the Board deems reliable. Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(ii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith in compliance with Applicable Law and, to the extent applicable as determined in the sole discretion of the Board, in a manner that complies with Section 409A of the Code.

(iii) Notwithstanding the foregoing, for any Offering that commences on the IPO Date, the Fair Market Value of the shares of Common Stock on the Offering Date will be the price per share at which shares are first sold to the public in the Company's initial public offering as specified in the final prospectus for that initial public offering.

(u) "***Governmental Body***" means any: (i) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (ii) federal, state, local, municipal, foreign or other government; (iii) governmental or regulatory body, or quasi-governmental body of any nature (including any governmental division, department, administrative agency or bureau, commission, authority, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or entity and any court or other tribunal, and for the avoidance of doubt, any tax authority) or other body exercising similar powers or authority; or (iv) self-regulatory organization (including the Nasdaq Stock Market and the Financial Industry Regulatory Authority).

(v) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriters managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(w) "Non-423 Component" means the part of the Plan, which excludes the 423 Component, pursuant to which Purchase Rights that are not intended to satisfy the requirements for an Employee Stock Purchase Plan may be granted to Eligible Employees.

(x) "***Offering***" means the grant to Eligible Employees of Purchase Rights, with the exercise of those Purchase Rights automatically occurring at the end of one or more Purchase Periods. The terms and conditions of an Offering will generally be set forth in the "***Offering Document***" approved by the Board for that Offering.

(y) "***Offering Date***" means a date selected by the Board for an Offering to commence.

(z) "***Officer***" means a person who is an officer of the Company or a Related Corporation within the meaning of Section 16 of the Exchange Act.

(aa) "***Participant***" means an Eligible Employee who holds an outstanding Purchase Right.

(bb) "***Plan***" means this Lyell Immunopharma, Inc. 2021 Employee Stock Purchase Plan, as amended from time to time, including both the 423 Component and the Non-423 Component.

(cc) "***Purchase Date***" means one or more dates during an Offering selected by the Board on which Purchase Rights will be exercised and on which purchases of shares of Common Stock will be carried out in accordance with such Offering.

(dd) "***Purchase Period***" means a period of time specified within an Offering, generally beginning on the Offering Date or on the first Trading Day following a Purchase Date, and ending on a Purchase Date. An Offering may consist of one or more Purchase Periods.

(ee) "***Purchase Right***" means an option to purchase shares of Common Stock granted pursuant to the Plan.

(ff) "***Related Corporation***" means any "parent corporation" or "subsidiary corporation" of the Company whether now or subsequently established, as those terms are defined in Sections 424(e) and (f), respectively, of the Code.

(gg) "***Securities Act***" means the Securities Act of 1933, as amended.

(hh) "***Tax-Related Items***" means any income tax, social insurance, payroll tax, fringe benefit tax, payment on account or other tax-related items arising out of or in relation to a Participant's participation in the Plan, including, but not limited to, the exercise of a Purchase Right and the receipt of shares of Common Stock or the sale or other disposition of shares of Common Stock acquired under the Plan.

(ii) "***Trading Day***" means any day on which the exchange(s) or market(s) on which shares of Common Stock are listed, including but not limited to the NYSE, Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or any successors thereto, is open for trading.

Lyell Immunopharma, Inc.

Non-Employee Director Compensation Policy
Adopted and Effective: November 11, 2019
Amended and Restated Effective: [_____], 2021

Each member of the Board of Directors (the "***Board***") of Lyell Immunopharma, Inc. (the "***Company***") who is a non-employee director of the Company (each such member, an "***Eligible Director***") will receive the compensation described in this Non-Employee Director Compensation Policy (this "***Policy***") for his or her Board service. Unless otherwise defined herein, capitalized terms used in this Policy will have the meaning given to such terms in the Company's 2021 Equity Incentive Plan or if such plan is no longer in use, the meaning given to such terms or any similar terms in the primary successor to such plan (in either case, the "***Plan***").

This Policy is amended and restated effective upon the execution of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering (the date of such execution being referred to as the "***Restatement Effective Date***").

Annual Cash Compensation

Commencing on the Restatement Effective Date, each Eligible Director will receive the cash compensation described below. The annual cash compensation amount set forth below is payable in equal quarterly installments, payable in arrears on the last day of each fiscal quarter in which the service occurred. If an Eligible Director joins the Board at a time other than effective as of the first day of a fiscal quarter, each annual retainer set forth below will be pro-rated based on days served in the applicable fiscal year, with the pro-rated amount paid for the first fiscal quarter in which the Eligible Director provides the service, and regular full quarterly payments thereafter. All annual cash retainer fees are vested upon payment.

1. Annual Board Service Retainer:

    a. All Eligible Directors other than Lead Director/Chair: $50,000
    b. Lead Director/Chair: $80,000

2. Annual Committee Service Retainer (Chair):

    a. Chair of the Audit Committee: $15,000
    b. Chair of the Compensation Committee: $12,000
    c. Chair of the Nominating and Corporate Governance Committee: $10,000

3. Annual Committee Service Retainer (Non-Chair):

    a. Audit Committee: $7,500
    b. Compensation Committee: $6,000
    c. Nominating and Corporate Governance Committee: $5,000

Equity Compensation

Commencing on the Restatement Effective Date, each Eligible Director will be eligible to receive the equity compensation set forth below. The equity compensation below will be granted under the Plan and the Company's standard form of Option Agreement most recently approved by the Board or the Compensation Committee. All Options granted under this Policy will be Nonstatutory Stock Options, with a maximum term of ten years from the date of grant and an exercise price per share equal to 100% of the Fair Market Value of the underlying Common Stock on the date of grant.

1. Appointment Grant. Without any further action of the Board, each person who, after the Restatement Effective Date, is elected or appointed for the first time to be an Eligible Director will automatically, upon the date of his or her initial election or appointment to be an Eligible Director, be granted a Nonstatutory Stock Option to purchase 100,000 shares of Common Stock (an "***Appointment Grant"***). Each Appointment Grant will vest as to one thirty-sixth (1/36th) of

the shares of Common Stock subject to the Appointment Grant on a monthly basis following the Appointment Grant's grant date on the same day of the month as such grant date (or on the last day of the month, if there is no corresponding day in such month), subject to the Eligible Director remaining in Continuous Service through the applicable vesting date.

2. Annual Grant. Without any further action of the Board, at the close of business on the date of each annual meeting of stockholders of the Company following the Restatement Effective Date (each, an "***Annual Meeting***"), each person who is then an Eligible Director will automatically be granted a Nonstatutory Stock Option to purchase 50,000 shares of Common Stock (an "***Annual Grant***"). Each Annual Grant will vest as to all of the shares of Common Stock subject to the Annual Grant on the earlier of (a) the date of the next Annual Meeting that occurs following the grant date of the Annual Grant (or the date immediately prior to such date if the Eligible Director's service as a director ends at such Annual Meeting due to the director's failure to be re-elected or the director not standing for re-election); or (b) the first anniversary of the grant date of the Annual Grant, subject to the Eligible Director remaining in Continuous Service through the vesting date.

Change in Control

Notwithstanding anything to the contrary in this Policy, in the event of a Change in Control, each Eligible Director will fully vest in his or her then-outstanding Company equity awards as of immediately prior to the Change in Control, including, without limitation, any equity awards granted under this Policy, provided that the Eligible Director continues to be an Eligible Director through immediately prior to the date of such Change in Control.

Eligible Director Compensation Limit

Notwithstanding anything to the contrary in this Policy, the cash compensation and equity compensation that each Eligible Director is eligible to receive under this Policy shall be subject to the limits set forth in Section 3(d) of the Plan.

Ability to Decline Compensation

An Eligible Director may decline all or any portion of his or her compensation under this Policy by giving notice to the Company prior to the date cash is to be paid or equity awards are to be granted, as the case may be.

Expenses

The Company will reimburse Eligible Directors for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board and committee meetings; *provided*, that the Eligible Director timely submits to the Company appropriate documentation substantiating such expenses in accordance with the Company's travel and expense policy, as in effect from time to time.

Amendment

This Policy may be amended at any time in the sole discretion of the Board or the Compensation Committee.

Exhibit 10.15

CERTAIN INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [*], HAS BEEN OMITTED BECAUSE IT IS BOTH NOT MATERIAL AND IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

COLLABORATION AND LICENSE AGREEMENT

BETWEEN

Lyell Immunopharma, Inc.

AND

GlaxoSmithKline Intellectual Property (No. 5) Limited

[*]

May 23, 2019

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COLLABORATION AND LICENSE AGREEMENT

This COLLABORATION AND LICENSE AGREEMENT (this "**Agreement**") is entered into as of May 23, 2019 (the "**Execution Date**") and with effect (subject to Section 17.16) as of the Effective Date (as defined below), by and between LYELL IMMUNOPHARMA, INC., a corporation organized under the laws of Delaware, having its principal place of business at 400 E. Jamie Ct., Suite 301, South San Francisco, CA 94080 ("**Lyell**"), and GLAXOSMITHKLINE INTELLECTUAL PROPERTY (NO. 5) LIMITED, a company registered in England and Wales (registered number 11959399) with a registered office at 980 Great West Road, Brentford, Middlesex TW8 9GS, United Kingdom ("**GSK**") and, **[*]**. Lyell and GSK are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**".

RECITALS

WHEREAS, GSK is a pharmaceutical company engaged, among other things, in the research, development, manufacture and commercialization of human therapeutic products on a worldwide basis;

WHEREAS, Lyell is a biopharmaceutical company focused on discovery, development and commercialization of T-Cell therapies; and

WHEREAS, Lyell and GSK desire for Lyell to conduct preclinical and certain clinical development of Products directed to Collaboration Targets suitable for development for human therapeutic uses, with the objective of identifying one or more Anti-Exhaustion Components to incorporate into Products for GSK to advance in human clinical trials and eventually commercialize, in accordance with the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this Agreement, the Parties agree as follows.

1. DEFINITIONS

As used in this Agreement, the terms with initial letters capitalized, whether used in the singular or plural form, shall have the meanings set forth in this Article 1 or, if not listed below, the meaning designated in places throughout this Agreement.

1.1 "**Academic PoC**" means (a) with respect to Collaboration Programs other than the **[*]** Collaboration Program, Cancer Academic PoC or (b) with respect to the **[*]** Collaboration Program, **[*]** Academic PoC. If the Substitution Target is substituted for the **[*]** Initial Collaboration Target pursuant to Section 3.1(a)(i)(1), Academic PoC for the Collaboration Program for the Substitution Target shall mean Cancer Academic PoC.

1.2 "**Academic PoC Data Package**" means, with respect to a Lyell PoC Development Program, a notice containing the Information set forth in **Exhibit 1.2** for the Academic PoC Clinical Trial (i.e., for the number of patients described in Section 1.11 and Section 1.33, as applicable, and for any other patients in such Clinical Trial for whom such Information has been received as of the date Academic PoC is completed).

1.3 "**Advancement of Program**" means either (a) initiating a new Clinical Trial for a Product on the same tumor type for which a Clinical Trial was conducted under the applicable Collaboration Program or (b) expanding a Clinical Trial for a Product to gather further information on a patient population studied in that Clinical Trial; in each case to confirm or further evaluate a positive signal or trend observed in such Clinical Trial.

1.4 "**Affiliate**" means, with respect to a particular Party, a Person that controls, is controlled by or is under common control with such Party. For the purposes of this definition, the word "control" (including, with correlative meaning, the terms "controlled by" or "under the common control with") means the actual power, either directly or indirectly through one or more intermediaries, to direct or cause the direction of the management and policies of such entity, whether by the ownership of more than fifty percent (50%) of the voting stock of such entity, or by contract or otherwise.

1.5 "**Anti-Exhaustion Components**" means those elements or aspects of a T-Cell Therapy, or the methods of production thereof, that mediate or contribute to the prevention, reversal, reduction, controlling or other inhibitory effect on T-Cell Exhaustion.

1.6 "**Applicable Law**" means any applicable federal, state, local or foreign law, statute, ordinance, principle of common law, or any rule, regulation, standard, judgment, order, writ, injunction, decree, arbitration award, agency requirement, license or permit of any Governmental Authority.

1.7 "**Biosimilar Product**" means in a particular country with respect to a Product, any pharmaceutical product that: (a) has received all necessary approvals by the applicable Regulatory Authorities in such country to market and sell such product as a pharmaceutical product; (b) is marketed or sold by a Third Party that has not obtained the rights to market or sell such product as a licensee, sublicensee or distributor of GSK or any of its Affiliates, licensees or sublicensees with respect to such product; and (c) is approved as a (i) "biosimilar" (in the United States) of such Product, (ii) as a "similar biological medicinal product" (in the EU) with respect to which such Product is the "reference medicinal product" or (iii) if not the US or EU, as the foreign equivalent of a "biosimilar" or "similar biological medicinal product" of such Product; in each case for use in such country pursuant to a regulatory approval process governing approval of generic biologics based on the then-current standards for regulatory approval in such country (*e.g.*, the Biologics Price Competition and Innovation Act of 2009 in the United States, or an equivalent under foreign law).

1.8 "**BLA**" means a Biologicals License Application (as more fully defined in 21 U.S.C. §262(a)(2)(C), 21 C.F.R. 601.2(a), or their successor provisions) seeking Regulatory Approval of a Product and all amendments and supplements thereto filed with the FDA.

1.9 "**Business Day**" means a day that is not (a) a Saturday, Sunday or a day on which banking institutions in New York, New York or London, UK are required by Applicable Law to remain closed, or (b) the nine (9) consecutive calendar days beginning on December 24 through and including January 1 of each Calendar Year to the extent those days are not included in (a) in this Section 1.9.

1.10 "**Calendar Year**" means the one (1) year period beginning on January 1 and ending on December 31.

1.11 "**Cancer Academic PoC**" means (a) receipt of patient data from Evaluable Patients only, for (i) **[*]** patients with a Prevalent Solid Tumor (or other such indication the JSC agrees should be pursued or, in connection with a Lyell Component Development Program, GSK elects to pursue) in a Clinical Trial of a Product, or, (ii) if earlier, receipt of such data for **[*]** patients in such a Clinical Trial administered the same dose of such Product (*e.g.*, **[*]** patients in an expansion cohort administered a dose selected from the dose escalation portion of such Clinical Trial, together with **[*]** patients from the dose escalation cohort at the same dose), and (b) in the event such Clinical Trial is being conducted by or on behalf of Lyell, delivery of such patient data to GSK as part of the Academic PoC Data Package. For such purposes, "patient data" shall mean the data identified in the protocol for the Clinical Trial to be collected at the **[*]**. It is understood that such Clinical Trial may be conducted either by Lyell as the sponsor, or by an academic collaborator (as sponsor) in collaboration with Lyell.

1.12 "**Cancer Proof of Clinical Concept**" means receipt of patient data from Evaluable Patients only in a Clinical Trial of a T-Cell Therapy incorporating or made using one or more Anti-Exhaustion Components in a Prevalent Solid Tumor (or other such indication the JSC agrees should be pursued) showing an increase of overall response rate (ORR) per the response criteria specified in the protocol for such Clinical Trial of at least **[*]** relative to a T-Cell Therapy comprising a Comparator T-Cell, but in any case showing at least a **[*]** overall response rate (ORR) (*e.g.*, an increase from **[*]** ORR to **[*]** ORR) in one or more cohorts comprising at least **[*]** Evaluable Patients combined. For such purposes, "patient data" shall mean the data identified in the protocol for the Clinical Trial to be collected on or before the **[*]**. Notwithstanding the foregoing, Cancer Proof of Clinical Concept shall be deemed achieved for a Product upon the earlier of (a) **[*]** for such Product by or under the authority of GSK (which shall not be required to be for a Prevalent Solid Tumor) or (b) filing of a MAA for such Product by or under the authority of GSK.

1.13 "**CAR**" means a chimeric antigen receptor comprised of one or more antigen binding domains (derived from an antibody, synthetic molecule, or native receptor or ligand) linked to one or more signaling domains (derived from components of the native TCR or other immune receptors) expressed from a single chain amino acid sequence or as multiple separate domains, that can activate the T-Cell on which such CAR is expressed following engagement of the target antigen whether such target antigen is naturally expressed on the cell surface or intracellularly.

1.14 "**CAR-T**" means a T-Cell incorporating a CAR.

1.15 "**CAR-T Collaboration Target**" means the Initial Collaboration Target **[*]** (or, as applicable, the Substitution Target or Monospecific Target) and a Collaboration Target added as an Additional Target in accordance with Section 3.3(b) below, in each case for which a CAR T-Cell Therapy will be developed hereunder.

1.16 "**CAR-T Program**" means a Lyell Development Program and the associated GSK Program for a CAR-T Collaboration Target.

1.17 "**CAR T-Cell Therapy**" means a therapy comprising a T-Cell, whether or not autologous, that has been genetically modified ex vivo to express a CAR directed to an antigen.

1.18 "**Change of Control Transaction**" means, with respect to Lyell:

(a) the acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended) (a "**Specified Person**") of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Securities Exchange Act of 1934, as amended) of **[*]** or more of either (i) the then outstanding shares of common stock of Lyell (the "**Outstanding Common Stock**") or (ii) the combined voting power of the then outstanding voting securities of Lyell entitled to vote generally in the election of directors of Lyell (the "**Outstanding Voting Securities**"); *provided*, *however*, that for the purposes of this sub-Section (a), the following acquisitions of securities of Lyell shall not constitute a Change of Control Transaction of such Party: (x) any acquisition by Lyell, (y) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by Lyell or any corporation controlled by Lyell or (z) any acquisition by any corporation pursuant to a transaction which complies with clauses (i) and (ii) of subsection (b) of this definition;

(b) the consummation of any acquisition, merger or consolidation involving any Third Party (a "**Business Combination Transaction**"), unless immediately following such Business Combination Transaction, (i) the individuals and entities who were the beneficial owners, respectively, of the Outstanding Common Stock and Outstanding Voting Securities immediately prior to such Business Combination Transaction beneficially own, directly or indirectly, **[*]** or more of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the corporation or other entity resulting from such Business Combination Transaction (including a corporation which as a result of such transaction owns the then-outstanding securities of Lyell or all or substantially all of Lyell's assets either directly or through one or more subsidiaries) in substantially the same proportions as their ownership, immediately prior to such Business Combination Transaction, of the Outstanding Common Stock and Outstanding Voting Securities, as the case may be and (ii) more than **[*]** of the members of the board of directors of the corporation resulting from such Business Combination Transaction were members of the Board of Directors of Lyell at the time of the execution of the initial agreement, or of the action of the Board of Directors of Lyell, providing for such Business Combination Transaction; or

(c) a Party or any of its Affiliates sells or transfers to any Specified Person(s) (other than the other Party or its Affiliates) in one or more related transactions properties or assets representing all or substantially all of such Party's business or assets at the time of such sale or transfer.

1.19 "**China**" means mainland China, Hong Kong and Macau.

1.20 "**Clinical Trial**" means any human clinical trial of a Product generally consistent with 21 CFR §312.21 or equivalent trial outside of the United States.

1.21 "**Collaboration Component Data Package**" means, with respect to a Lyell Component Development Program, a notice containing the Information described in **Exhibit 1.21** pertaining to the Collaboration Deliverable for such Lyell Component Development Program.

1.22 "**Collaboration Program**" means a TCR Program or a CAR-T Program.

1.23 "**Collaboration Target**" means the Initial Collaboration Targets and any Additional Target that is added in accordance with Section 3.3 of this Agreement.

1.24 "**Combination Product**" means a Product that includes at least one additional standalone pharmaceutically active ingredient (whether co-formulated, co-packaged or sold as a combination) (*e.g.*, a stand-alone anti-PD-1 antibody therapeutic) which is (a) not a Compound, (b) neither incorporated into nor a modification of the T-Cell (including in any CAR or TCR expressed by such T-Cell) used or contained in such Product, and (c) not an instrumental component of the T-Cell Therapy developed under a Collaboration Program comprising such T-Cell. Pharmaceutical dosage form vehicles, adjuvants and excipients shall not be deemed to be "pharmaceutically active ingredients."

1.25 "**Commercialize**" or "**Commercialization**" means the marketing, promotion, sale (and offer for sale or contract to sell), distribution, importation or other commercial exploitation (including pricing and reimbursement activities) for a Product in the Territory. Commercialization shall include commercial activities conducted in preparation for Product launch.

1.26 "**Commercially Reasonable Efforts**" means, with respect to GSK's obligations under this Agreement to Develop or obtain First Commercial Sale of a Product in the Oncology Field, such efforts as are consistent with the efforts and resources normally used by **[*]**, with similar product characteristics, which is of similar market potential at a similar stage in its development or product life, taking into account issues of scientific risk, patent coverage, safety and efficacy, product profile, potential profitability of the product, the competitiveness of the marketplace, the proprietary position of the compound or product, the regulatory structure involved and other relevant technical, legal, scientific or medical factors; *provided* that Commercially Reasonable Efforts will be determined on a market-by-market and indication-by-indication basis for a particular Product, and it is anticipated that the level of effort may be different for different markets and may change over time, reflecting changes in the status of the Product and the market(s) involved. "Commercially Reasonable Efforts" means, with respect to Lyell's obligations under this Agreement, the carrying out of such obligations or tasks with a level of effort and resources consistent with **[*]**, subject to and in accordance with the terms and conditions of this Agreement.

1.27 "**Comparator T-Cells**" means, with respect to T-Cells incorporating or made using one or more Anti-Exhaustion Components administered in a Clinical Trial ("**Engineered T-Cells**"), (a) T-Cells that incorporate the same CAR or TCR as the Engineered T-Cell without incorporating or being made using such Anti-Exhaustion Component(s), and which are administered to a patient in the same or another Clinical Trial (whether previously or concurrently conducted) or (b) other T-Cells as decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3).

1.28 "**Compound**" means, with respect to a Collaboration Program, any vectors, plasmids, packaging cells or other materials comprising or used to express, deliver, perform or produce the Collaboration Anti-Exhaustion Components for the Product(s) developed under such Collaboration Program.

1.29 "**Confidential Information**" means, subject to the exceptions set forth in Section 12.1, the terms and conditions of this Agreement (but not its existence), all non-public Information of a Party that is disclosed to the other Party under this Agreement, which may include specifications, know-how, trade secrets, technical information, models, business information, inventions, discoveries, methods, procedures, formulae, algorithms, patient information, financial and strategic information, protocols, techniques, data, databases, clinical trial endpoints, candidate selection criteria and unpublished patent applications, whether disclosed in oral, written, graphic, photographic, electronic, magnetic or other form.

1.30 "**Control**" means, with respect to any material, Information, or intellectual property right, that a Party or its Affiliate(s) (a) owns such material, Information, or intellectual property right, or (b) has a license or right to use such material, Information, or intellectual property right, in each case (a) or (b) with the ability to grant to the other Party access, a right to use, or a license, or a sublicense (as applicable) to such material, Information, or intellectual property right on the terms and conditions set forth herein, without violating the terms of any agreement or other arrangement with any Third Party in existence as of the time such Party or its Affiliates would first be required hereunder to grant the other Party such access, right to use or (sub)license. In the case of Information or tangible materials, "Control" requires possession thereof by a Party or its Affiliate or, if such Information or Materials are in the possession of a Third Party, the ability of a Party or its Affiliate to reasonably access and obtain such Information or Materials from such Third Party.

1.31 "**Cover**", "**Covered**" or "**Covering**" means, with respect to a Product (or Compound), that, in absence of a (sub)license under, or ownership of, a Patent, the making, using, offering for sale, selling, importing or other exploitation of such Product (or Compound) would infringe, contributorily infringe or induce infringement of, a Valid Claim of such Patent as issued or in the case of a Patent that has not yet issued, would infringe, contributorily infringe or induce infringement of, a Valid Claim of such Patent if it were to issue.

1.32 "**Develop**" or "**Development**" means all development activities with respect to a Product, including those in support of obtaining, maintaining or expanding Regulatory Approval of a Product, for one or more indications in the Field. This includes: (a) preclinical/nonclinical research and testing, toxicology and Clinical Trials; and (b) preparation, submission, review and development of data or information and Regulatory Materials for the purpose of submission to a Governmental Authority to obtain, maintain or expand Regulatory Approval of a Product (including contacts with Regulatory Authorities).

1.33 "**[*] Academic PoC**" means (a) receipt of patient data from Evaluable Patients only, for (i) **[*]** (or such other indication the JSC agrees should be pursued under the **[*]** Collaboration Program) in a Clinical Trial of a Product, or, (ii) if earlier, receipt of such data for **[*]** patients in a Clinical Trial administered the same dose of such Product, and (b) in the event such Clinical Trial is being conducted by or on behalf of Lyell, delivery of such patient data to

GSK as part of the Academic PoC Data Package. For such purposes, "patient data" shall mean the data identified in the protocol for the Clinical Trial to be collected at the **[*]**. It is understood that such Clinical Trial may be conducted either by Lyell as the sponsor, or by an academic collaborator (as sponsor) in collaboration with Lyell.

1.34 "**[*] Proof of Clinical Concept**" means receipt of patient data from Evaluable Patients only, in a Clinical Trial of a T-Cell Therapy incorporating or made using one or more Anti-Exhaustion Components in **[*]** (or such other indication the JSC agrees should be pursued under the **[*]** Collaboration Program) showing an absolute increase of at least **[*]** in overall response rate (ORR) per the response criteria specified in the protocol for such Clinical Trial relative to a T-Cell Therapy comprising a Comparator T-Cell but in any case a CR rate of at least **[*]**, in one or more cohorts comprising at least **[*]** Evaluable Patients, combined, with **[*]** (or such other indication the JSC agrees should be pursued under the **[*]** Collaboration Program). For such purposes, "patient data" shall mean the data identified in the protocol for the Clinical Trial to be collected on or before the **[*]**. Notwithstanding the foregoing, **[*]** Proof of Clinical Concept shall be deemed achieved for a Product upon the earlier of (a) **[*]** for such Product by or under the authority of GSK (which shall not be required to be for **[*]**) or (b) filing of a MAA for such Product by or under the authority of GSK.

1.35 "**Dollar**" or "**$**" means the lawful currency of the United States.

1.36 "**Effective Date**" means, except with respect to Sections 17.9 and 17.16 which are effective as of the Execution Date, the date that is the later of the HSR Clearance Date and date of the "Closing" under that certain Series AA Preferred Stock Purchase Agreement between Lyell and **[*]** dated concurrent with the Execution Date of this Agreement.

1.37 "**EMA**" means the European Medicines Agency and any successor agency thereto.

1.38 "**EU**" or "**European Union**" means the United Kingdom (regardless of whether it is or remains a member of the European Union) and European Union, as its membership may be constituted from time to time, and any successor thereto, and which, as of the Execution Date, consists of Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom, and that certain portion of Cyprus included in such organization.

1.39 "**Evaluable Patient**" means (a) a patient who met all clinical trial inclusion/exclusion criteria, received the correct dose and is considered evaluable pursuant to the most recent protocol for the applicable Clinical Trial that was included in the IND (or amendment thereof) for such Clinical Trial that has been submitted to a Regulatory Authority and has been cleared (*e.g.*, elapse of **[*]** after submission of the IND to the FDA without response from the FDA), and (b) for each such patient described in clause (a), all reported clinical responses are confirmed under the then-current Response Evaluation Criteria in Solid Tumors (such criteria commonly referred to as RECIST) or other generally accepted clinical response criteria for the applicable specific clinical setting, as specified in the applicable protocol (as described above) for such Clinical Trial.

1.40 "**Existing License Agreements**" means each license agreement between Lyell and a Third Party set forth on **Exhibit 1.40**.

1.41 "**Existing Third Party Licensor**" means a Third Party that is a party to an Existing License Agreement.

1.42 "**Expired Program**" means a Collaboration Program for which all applicable Royalty Terms have expired.

1.43 "**FD&C Act**" or "**Act**" means the United States Federal Food, Drug and Cosmetic Act, as amended.

1.44 "**FDA**" means the United States Food and Drug Administration and any successor agency thereto.

1.45 "**Field**" means all diagnostic and therapeutic uses in humans, including the Oncology Field.

1.46 "**First Commercial Sale**" means, with respect to a Product and country, the first sale to a Third Party of such Product in such country after Regulatory Approval and any pricing and reimbursement approvals required to sell such Product in such country have been obtained in such country (or with respect to the EU if Regulatory Approval from the EMA is not obtained, such approval (including pricing and reimbursement approvals as required) in at least one (1) of the following countries: **[*]**). Sales or other dispositions under compulsory sublicenses, for Clinical Trial or other scientific testing purposes, as free samples, under named patient use, patient assistance, charitable purposes, early access or compassionate use programs, or similar uses, programs or studies, shall not constitute a First Commercial Sale.

1.47 "**General Tools**" means any Patents, Information, materials or other intellectual property right covering or comprising methods, processes, materials and tools to the extent generally applicable to the discovery, generation or Development of CARs, TCRs or Anti-Exhaustion Components (but not necessary, unique or specific to the Development, production or Commercialization of the Collaboration Anti-Exhaustion Components incorporated into a Compound or Product), or assays, software and algorithms relating to such discovery, generation, or Development including those relating to the measurement of T-Cell Exhaustion, processing of data, patient scheduling and other generally applicable methods.

1.48 "**Government Official**" means (a) any officer or employee of a government or any department, agency or instrumentality of a government (which includes public enterprises, and entities owned or controlled by the state); (b) any officer or employee of a public international organization such as the World Bank or United Nations; (c) any officer or employee of a political party, or any candidate for public office; (d) any individual defined as a government or public official under Applicable Laws (including anti-bribery and corruption laws) and not already covered by any of the above; or (e) any individual acting in an official capacity for or on behalf of any of the above. "Government Official" includes any individual with close family members who are Government Officials (as defined above) with the capacity, actual or perceived, to influence or take official decisions affecting Lyell or GSK business.

1.49 "**Governmental Authority**" means any court, agency, authority, department, regulatory body or other instrumentality of any government or country or of any national, federal, state, provincial, regional, county, city or other political subdivision of any such government or any supranational organization of which any such country is a member, which has competent and binding authority to decide, mandate, regulate, enforce or otherwise control the activities of the Parties or their Affiliates contemplated by this Agreement.

1.50 "**GSK Competitor**" means a pharmaceutical company that has **[*]**.

1.51 "**GSK Data Sharing Initiative**" means the policy initiative(s) of GSK and its Affiliates (as may be amended from time to time), known as of the Execution Date as the "SHaring Anonymised REsearch data (SHARE) Initiative", to provide researchers with access to Clinical Trial information, including coded or anonymized patient level data.

1.52 "**GSK Patent**" means any Patent that claims a Sole Invention owned by GSK.

1.53 "**GSK Program**" means a GSK Development Program for a Collaboration Target and all activities of GSK, its Affiliates and any Sublicensees with respect to the manufacture, Development, Commercialization or other exploitation of a Compound or Product directed to such Collaboration Target.

1.54 "**Human Biological Samples**" means any human biological material (including any derivative or progeny thereof), including any portion of an organ, any tissue, skin, bone, muscle, connective tissue, blood, cerebrospinal fluid, cells, gametes, or sub-cellular structures such as DNA, or any derivative of such biological material such as stem cells or cell lines, and any human biological product, including hair, nail clippings, teeth, urine, feces, breast milk and sweat.

1.55 "**ICH**" means International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use.

1.56 "**IND**" means (a) an Investigational New Drug Application (including any amendments thereto) as defined in the FD&C Act and applicable regulations promulgated thereunder by the FDA, or (b) the equivalent application to the applicable Regulatory Authority in any other regulatory jurisdiction, the filing of which is necessary to initiate or conduct clinical testing of a pharmaceutical product in humans in such jurisdiction.

1.57 "**IND Enabling Studies**" means, with respect to Products, toxicology studies evaluating such Products that are conducted in accordance with then-current good laboratory practices, as set forth in 21 C.F.R. Part 58 and as interpreted by relevant ICH guidelines, in each case, as amended from time to time, for purposes of including such results in an IND.

1.58 "**Information**" means any data, results and information of any type whatsoever, in any tangible or intangible form, including know-how, trade secrets, practices, techniques, methods, processes, inventions, developments, specifications, formulations, formulae, of any type or kind (patentable or otherwise), software, algorithms, marketing reports, expertise, stability, technology, test data including pharmacological, biological, chemical, biochemical, toxicological, and clinical test data, analytical and quality control data, stability data, studies and procedures.

1.59 "**License Upfront/Maintenance Fees**" means payments made under a Lyell License Agreement on an upfront basis, or on a recurring basis becoming due principally on the basis of the passage of time from the date such Lyell License Agreement was entered into.

1.60 "**Lyell Anti-Exhaustion Technology**" means Lyell Technology, including Anti-Exhaustion Components, directed to preventing, reducing, reversing, controlling and/or mediating other effect on T-Cell Exhaustion as applicable, and any Lyell Technology directed to improve control, safety and specificity of T-Cell Exhaustion resistant CARs or TCRs.

1.61 "**Lyell Know-How**" means, subject to Sections 3.9(c) and 8.7(c), all Information Controlled by Lyell as of the Execution Date or thereafter until the later of the expiration of the **[*]** (or such longer term during which Lyell is conducting Additional Development Activities with respect to any Collaboration Program) and, with respect to a particular Collaboration Program, the completion of such Lyell Development Program, that is necessary or reasonably useful for the Development, manufacture, use or Commercialization of Compounds or Products (including the Collaboration Anti-Exhaustion Components thereof), but excluding any rights under Patents. Lyell Know-How shall not include: (a) any General Tools, (b) any Information to the extent pertaining to the composition of matter or formulation of, or any method of making or using, any Anti-Exhaustion Component that is not a Collaboration Anti-Exhaustion Component, any product that is not a Product or any compound that is not a Compound, and (c) any Information regarding General Tools.

1.62 "**Lyell License Agreement(s)**" means, individually and collectively, the Existing License Agreements and, subject to Sections 3.9(c) and 8.7(c), the New Third Party Technology Agreements.

1.63 "**Lyell Manufacturing Technology**" means all Lyell Know-How and Lyell Materials that are necessary or reasonably useful for GSK (or its Third Party manufacturer) to manufacture the Compounds or Products (including the Collaboration Anti-Exhaustion Components thereof), including Lyell Manufacturing Improvements and (to the extent applicable and Controlled by Lyell) Information with respect to the production, manufacture, processing, filling, finishing, packaging, inspection, receiving, holding and shipping of Compounds or Products (including the Collaboration Anti-Exhaustion Components thereof), or any raw materials or packaging materials with respect thereto, or any intermediate of any of the foregoing, including in all respects any of the foregoing that is developed or improved prior to the Execution Date or thereafter during the Term until the later of the expiration of the **[*]** (or such longer term during which Lyell is conducting Additional Development Activities with respect to any Collaboration Program) and the completion of all Lyell Development Programs, that relates to T-Cell Therapies.

1.64 "**Lyell Materials**" means, subject to Sections 3.9(c) and 8.7(c), all tangible materials provided by Lyell to GSK in connection with this Agreement.

1.65 "**Lyell Patent Rights**" means, subject to Sections 3.9(c) and 8.7(c), all Patents within the Territory that are Controlled by Lyell as of the Execution Date or thereafter during the Term until the later of the expiration of the **[*]** (or such longer term during which Lyell is conducting Additional Development Activities with respect to any Collaboration Program) and, with respect to a particular Collaboration Program, the completion of such Lyell Development

Program, that Cover any Compound or Product (including in each case its or any Collaboration Anti-Exhaustion Component's composition, formulation, product by process, or method of use, manufacture, preparation or administration). The Lyell Patent Rights may include, but will not be limited to, those Patents which are Controlled by Lyell as of the Execution Date listed in **Exhibit 1.65**, which may be amended from time to time as Lyell acquires Control of additional Patents (for clarity, GSK does not obtain a license under any such listed Patent until it exercises an Option that includes such Patent in the license granted thereunder with respect to such Collaboration Program).

1.66 "**Lyell Technology**" means the Lyell Patent Rights, Lyell Know-How and Lyell Materials (which Lyell Know-How and Lyell Materials includes Lyell Manufacturing Technology).

1.67 "**MAA**" means an application for Regulatory Approval for a Product in a country or region of the Territory, including a BLA in the United States.

1.68 "**Major European Countries**" means **[*]**.

1.69 "**Major Market**" means the **[*]**.

1.70 "**MHLW**" means the Japanese Ministry of Health, Labour and Welfare, and any successor agency thereto.

1.71 "**Net Sales**" means, with respect to a Product or Compound, the net sales of a Related Party of such Product or Compound calculated using International Financial Reporting Standards ("**IFRS**") and the gross to net accounting used for publicly reporting its financials in each case consistently applied by the Related Party. Adjustments may be made to the calculation of net sales as required by changes in IFRS, or the Related Party's accounting rules, as applicable, brought about by merger, take-over or Applicable Law. As of the Execution Date, the deductions from gross sales to arrive at net sales are consistent with the deductions described in **Exhibit 1.71**. For the avoidance of doubt, no royalties shall be due upon sales of Products or Compounds to and between the Related Parties for further sale, unless the respective Related Party is last in the distribution chain of the Product or Compound, and further *provided*, *however*, that royalties shall be payable upon the final sale by a Related Party to an independent Third Party; any sale to an independent Third Party distributor will be deemed as end-user sale and such sales will be used for the calculation of royalties. In the event a Product or Compound is sold, assigned or transferred for consideration other than cash, the value of such non-cash consideration shall be deemed to be equal to the fair market value of the non-cash consideration as determined by the Related Party's auditors from time to time.

Net Sales of any Combination Product for the purpose of calculating milestones or royalties due under this Agreement shall be determined on a country-by-country basis for a given accounting period as follows: first, the Related Party(ies) shall determine the actual Net Sales of such Combination Product (using the above provisions), and then: such Net Sales amount for the Combination Product shall be multiplied by the fraction A/(A+B), where A is the net selling price in such country of a Product not containing any other pharmaceutically active ingredients (as such term is used in the definition of Combination Products), if sold separately for the same dosage as

contained in the Combination Product, and B is the net selling price in such country of any other pharmaceutically active ingredients in the combination if sold separately for the same dosage as contained in the Combination Product. All net selling prices of the elements of such end-user product or service shall be calculated as the average net selling price of the said elements during the applicable accounting period for which the Net Sales are being calculated. In the event that, in any country, no separate sale of either such above-designated Product (containing no other pharmaceutically active ingredients) or any one or more of the pharmaceutically active ingredients included in such Combination Product are made during the accounting period in which the sale was made or if net selling price for a pharmaceutically active ingredient cannot be determined for an accounting period, Net Sales allocable to the Product in each such country shall be determined by **[*]** that takes into account, on a country-by-country basis, all relevant factors (including variations in **[*]**).

1.72 "**New Third Party Technology**" means Patents and Information in-licensed or acquired by Lyell between the Execution Date and the Effective Date, and after the Effective Date and within the **[*]** (or such longer term during which Lyell is conducting: (a) Additional Development Activities with respect to any Collaboration Program, or (b) any Lyell Development Program), that is not included in the rights licensed under the Existing License Agreements. For clarity, "rights licensed under the Existing License Agreements" includes such rights as they exist on the Execution Date as well as rights that may be added to the scope of the Existing License Agreements (*e.g.*, rights in improvements or rights arising under sponsored research agreements entered into in connection with the Existing License Agreements) during the term described above to the extent such added rights are on the same terms (including financial terms) as the rights existing on the Execution Date.

1.73 "**New Third Party Technology Agreement**" means an agreement between Lyell or its Affiliates and a Third Party, pursuant to which Lyell or its Affiliates are granted rights to New Third Party Technology.

1.74 "**Oncology Field**" means all uses for oncology diseases, disorders or conditions in humans, including prophylactic or therapeutic treatment, delay or prevention of any oncology diseases, disorders or conditions in humans.

1.75 "**Patent**" means (a) all patents and patent applications, including provisional patent applications and applications for certificates of invention, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from any of these, including divisionals, continuations, continuations-in-part, converted provisionals, and continued prosecution applications, (c) any and all patents that have issued or in the future issue from the foregoing patent applications in (a) and (b), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including adjustments, revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications in (a), (b) and (c) above, and (e) any foreign equivalents of any of the foregoing.

1.76 "**Person**" means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, Governmental Authority or other entity not specifically listed herein.

1.77 "**Phase 3 Clinical Trial**" means a Clinical Trial satisfying the requirements of 21 C.F.R. 312.21(c) in the United States or the corresponding regulation in jurisdictions other than the United States.

1.78 "**Prevalent Solid Tumor**" means either: (a) one of the following cancers such as prostate, breast, lung, colorectal, bladder, renal cell, head and neck, pancreatic, stomach, ovary, esophagus, malignant melanoma or hepatocellular carcinoma, (b) any other solid cancer that has a comparable prevalence to the cancers listed in clause (a), or (c) with respect to the **[*]** Initial Collaboration Target, includes **[*]**.

1.79 "**Prior CDA**" means the Confidentiality Agreement entered into by GlaxoSmithKline LLC and Lyell effective July 10, 2018.

1.80 "**Product**" means with respect to a Collaboration Program, a CAR T-Cell Therapy or TCR T-Cell Therapy directed to the Collaboration Target for such Collaboration Program, as applicable, comprising, incorporating or made using one or more Collaboration Anti-Exhaustion Components.

1.81 "**Product Specific Patent**" means, with respect to a Collaboration Program, any Patent (including all claims and the entire scope of claims therein) within the Lyell Patent Rights that (a) Covers only the composition of matter or formulation of, or method of making or using, one or more Collaboration Anti-Exhaustion Components as incorporated into one or more Products, and (b) does not Cover subject matter other than that described in (a).

1.82 "**Proof of Biology**" means receipt of patient data from Evaluable Patients only, generated in a Clinical Trial of a T-Cell Therapy, indicating in at least **[*]** subjects dosed with Engineered T-Cells a decrease in exhaustion or dysfunction of the Engineered T-Cells relative to a patient dosed with Comparator T-Cells. Such a proof of biology can be shown by demonstrating that, at a follow-up visit for patients **[*]** after dosing, there are at least **[*]** more functional Engineered T-Cells detected in patients' blood samples in at least **[*]** Evaluable Patients than the mean amount of the functional Comparator T-Cells detected in patients' blood samples that were dosed with such Comparator T-Cells (*e.g.*, at such **[*]** follow-up visit, **[*]** patients from **[*]** dosed with Engineered T-Cells have **[*]** more detected functional Engineered T-Cells than the mean detected functional Comparator T-Cells at the **[*]** follow-up visit for patients dosed with the Comparator T-Cells). Such differences in amount of functional T-Cells may be demonstrated by a killing assay or cytokine release assay, or another method decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3). Alternatively, such proof of biology can be shown by demonstrating **[*]** of the following: (a) at the **[*]** Follow Up Visit, there are at least **[*]** more naïve or stem cell memory cells (TScm) derived from Engineered T-Cells detected in Evaluable Patients' blood samples than the mean amount of the memory Comparator T-Cells detected in patients' blood samples that were dosed with such Comparator T-Cells; (b) the mean cell-adjusted dose area under the curve (AUC) assessed over **[*]** following dosing with Engineered T-Cells is at least **[*]** times higher for Engineered T-Cells detected in Evaluable Patients' blood samples than

the mean AUC for the Comparator T-Cells detected in patients' blood samples that were dosed with such Comparator T-Cells; or (c) the dose of Engineered T-Cells is at least **[*]** times lower relative to a patient dosed with Comparator T-Cells; *provided* that (i) the ORR is equal to or higher for Evaluable Patients treated with Engineered T-Cells relative to patients dosed with Comparator T-Cells and (ii) there is at least a **[*]** ORR in Evaluable Patients treated with Engineered T-Cells. Notwithstanding the foregoing, Proof of Biology shall in any case be deemed achieved upon the achievement of Academic PoC in accordance with Section 3.1(b)(ii) for any Collaboration Target, whether for a Lyell PoC Development Program or a Lyell Component Development Program.

1.83 "**Proof of Clinical Concept**" means (a) with respect to Collaboration Programs other than the **[*]** Collaboration Program, Cancer Proof of Clinical Concept or (b) with respect to the **[*]** Collaboration Program, **[*]**. If the Substitution Target is substituted for the **[*]** Initial Collaboration Target pursuant to Section 3.1(a)(i)(1), Proof of Clinical Concept for the Collaboration Program for the Substitution Target shall mean Cancer Proof of Clinical Concept.

1.84 "**Registration Trial**" means, with respect to a Product, a Clinical Trial that is expected to provide data necessary for the preparation and submission of a MAA or BLA to obtain Regulatory Approval of such Product in a country in the Territory as evidenced by (a) GSK's or its Affiliate's designation of such Clinical Trial as a Phase 3 Clinical Trial in the protocol or otherwise as a Clinical Trial on which an MAA or BLA will be based or (b) an agreement or other statement or guidance from the Regulatory Authority in such country that such Clinical Trial is designed to provide data on which an MAA or BLA will be based. For purposes of Article 8, if a Clinical Trial becomes a Registration Trial after the initiation thereof, the applicable milestone event shall be deemed to occur on the first date that GSK receives evidence described in the prior sentence, and in any case, no later than the filing of a MAA or BLA with respect to such Product.

1.85 "**Regulatory Approval**" means any and all approvals, licenses, registrations, permits, certificates, consents, clearances, exemptions, authorizations or pricing and reimbursement approvals from any Regulatory Authority in the indicated jurisdiction required for the Commercialization (which includes manufacturing) of a Product in such jurisdiction for use in the Field.

1.86 "**Regulatory Authority**" means any applicable Governmental Authority involved in granting Regulatory Approval of, or otherwise regulating any aspects of the Development, manufacture or Commercialization of the Product in the Field, including the FDA, the EMA, the European Commission and the MHLW, and in each case including any successor thereto.

1.87 "**Regulatory Materials**" means regulatory applications, submissions, dossiers, notifications, registrations, Regulatory Approvals or other filings made to or with, or other approvals granted by, a Regulatory Authority that are necessary or reasonably useful to Develop, manufacture or Commercialize a Product in the Field in a particular country or regulatory jurisdiction. Regulatory Materials include INDs, MAAs, and BLAs.

1.88 "**Related Party**" shall mean GSK and its Affiliates and their respective Sublicensees (and such Sublicensees' Affiliates) of one or more Products.

1.89 "**Right of Reference**" shall have the meaning set forth in 21 C.F.R. §314.3(b) or equivalents thereto under Applicable Law in countries or jurisdictions outside the U.S.

1.90 "**SEC**" means the U.S. Securities and Exchange Commission.

1.91 "**[*]**" means the period beginning on the Effective Date and ending upon **[*]** after the Effective Date or termination of this Agreement. For clarity, it is understood that GSK will have the right to nominate CAR-T Targets under Section 3.3(b) only during the first **[*]** after the Effective Date, subject to extension pursuant to Section 3.3(b).

1.92 "**Senior Executives**" means, in the case of GSK, **[*]**, and in the case of Lyell, **[*]**.

1.93 "**[*]**" means the patient follow-up visit targeted to occur between **[*]** and **[*]** after dosing of a patient. For any Clinical Trial with a Product conducted by GSK or a Related Party that may lead to achievement of Academic PoC, Proof of Biology or Proof of Clinical Concept, GSK or the Related Party shall include in the protocol for such Clinical Trial such a **[*]**.

1.94 "**Sublicensee**" means any Third Party to whom GSK or its Affiliates have granted a license or sublicense to Develop, manufacture or Commercialize the Product(s).

1.95 "**Surviving Program**" means a Collaboration Program for which GSK retains the license set forth in Section 7.1, as described in Section 13.6(b)(i)(1) or Section 13.6(b)(i)(2).

1.96 "**T-Cell**" means a T-lymphocyte that expresses an endogenous αb or gd TCR or exhibits the functional characteristics of an αb or gd T-cell.

1.97 "**T-Cell Exhaustion**" means dysfunction of a T-Cell characterized by changes in metabolic function, transcriptional programming, loss or reduction of effector function (such as killing capacity or cytokine secretion), co-expression of one or more inhibiting receptors, reduced expression of activator elements or other changes from its normal activated state. Such dysfunction may include diminished killing capacity, proliferation, differentiation, persistence or other adverse effects on the normal function or activity of T-Cells of any type.

1.98 "**T-Cell Therapy**" means a CAR T-Cell Therapy or a TCR T-Cell Therapy.

1.99 "**Target**" means (a) in the case of a CAR, all epitopes encoded by a single gene, presented as part of a cell surface-expressed protein or expressed intracellularly and subsequently presented as part of a MHC-peptide complex on the cell surface, identified in GenBank by an NCBI reference sequence accession number, including any fragments thereof that preserve the utility of the full length protein as a target ("**Fragments**"), and any isoforms, mutants, polymorphisms and post translational modifications thereof, in each case expressed by such gene; and (b) in the case of a TCR (i) all peptides **[*]** that can be recognized and bound by a TCR, and are derived from a protein encoded by a single gene identified in GenBank by an NCBI reference sequence accession number, including any Fragments, isoforms, mutants, polymorphisms and post translational modifications thereof, in each case expressed by such gene or (ii) all peptides **[*]** that can be recognized and bound by a TCR, and are derived from a polypeptide expressed by a defined open reading frame. In the case of a TCR, the Target shall not be specific to a designated human leukocyte antigen (HLA) allele. In the case of a CAR or TCR, **[*]**, any Lyell TCR or Lyell CAR

shall not bind a peptide with the same sequence as any peptide also present in a protein or Fragments thereof encoded by a gene described in clause (a) or (b) above that is a Collaboration Target; *provided* such TCR or CAR shall nonetheless not be deemed directed to such Collaboration Target (and the above restriction shall not apply) if Lyell demonstrates in an established functional T-Cell assay that such TCR or CAR does not have meaningful specific activity against proteins encoded by a gene described in clause (a) and (b) above that is significantly greater than negative control against such peptide. Any dispute as to whether a particular TCR or CAR is directed to a Collaboration Target shall be resolved by the JSC (i.e., shall be decided by the JSC, subject to resolution pursuant to Section 2.1(d) and Section 16.3).

1.100 "**TCR**" means a T-Cell receptor, with α, b, g, and/or d domains, that binds a peptide or lipid ligand on the surface of a tumor cell, an antigen-presenting cell or other cell, and is not a CAR. A TCR may be naturally-occurring, recombinant or otherwise modified.

1.101 "**TCR Collaboration Target**" means the **[*]** Initial Collaboration Target and any Collaboration Target added as an Additional Target in accordance with Section 3.3(c), in each case for which a TCR T-Cell Therapy will be developed hereunder.

1.102 "**TCR T-Cell Therapy**" means a therapy comprising a T-Cell, whether or not autologous, that has been genetically modified ex vivo to express a modified TCR directed to an antigen.

1.103 "**TCR Program**" means a Lyell Development Program and associated GSK Program for a TCR Collaboration Target.

1.104 "**Territory**" means (a) with respect to Active GSK Programs, all countries of the world and (b) with respect to Collaboration Programs that are not Active GSK Programs, all countries of the world excluding China.

1.105 "**Third Party**" means any Person other than Lyell or GSK or an Affiliate of either of Lyell or GSK.

1.106 "**U.S**." means the United States of America and its territories, districts and possessions.

1.107 "**Valid Claim**" means, with respect to a particular country, either: (a) a claim in an issued and unexpired Patent in such country that has not (i) expired, lapsed, been cancelled or abandoned, (ii) been disclaimed, revoked, held unenforceable, unpatentable or invalid by a decision of a court or other Governmental Authority of competent jurisdiction in an order or decision which is unappealable or unappealed within the time allowed for appeal, (iii) been finally rejected by an administrative agency in an action that is unappealable or unappealed within the time allowed for appeal, or (iv) been admitted to be invalid or unenforceable through re-examination, re-issue, disclaimer or otherwise, or lost in an interference proceeding; or (b) a bona fide claim of a pending Patent application, and, which has not been (A) cancelled, withdrawn or abandoned without being refiled in another application in the applicable jurisdiction or (B) finally rejected by an administrative agency action from which no appeal can be taken or that has not been appealed within the time allowed for appeal; *provided*, that any claim in any Patent application pending for more than **[*]** from the earliest date on which such Patent application claims priority shall not be considered a Valid Claim for purposes of the Agreement from and after such **[*]** date unless and until a Patent containing such claim issues from such Patent application.

1.108 Additional Definitions. Each of the following definitions shall have the meanings defined in the corresponding sections of this Agreement indicated below:

Definitions	Section
[*]	8.3(a)
Acquired Party	17.8(f)
Acquirer	17.8(f)
Acquirer Technology	17.8(a)
Active GSK Program	3.3(e)
Active GSK Program Criteria	3.3(e)
Active Lyell Program Notice	3.3(e)
Additional Construct	3.9
Additional Construct Data Package	3.9(b)
Additional Construct Opt In	3.9(c)
Additional Construct Opt-In Period	3.9(c)
Additional Development Activities	3.9
Additional Target	3.3(b)(i)
	3.3(c)
Agreement	Preamble
Alliance Manager	2.4
Annual Net Sales	8.4(a)
Approved Clinical Trial	3.1(e)
Bankrupt Party	17.3(a)
Base Royalty Rate	8.5(a)
Breach Termination	13.6(b)(i)
Business Combination Transaction	1.18(b)
Capture Period	6.3
[*]	8.3(a)
Claim	15.3
Collaboration Anti-Exhaustion Components	3.1(a)(v)
Collaboration Deliverables	3.1(a)(v)
Competitor Acquisition Termination	13.6(b)(i)
Component Transfer Point	3.1(a)(ii)
Disclosing Party	12.1
DOJ	17.16(a)

Definitions	Section
Engineered T-Cells	1.27
Excluded Targets	3.3(d)
[*]	11.2
Execution Date	Preamble
Exercise Period	3.1(b)(i)
Expert	16.2(a)
force majeure	17.4
Fragments	1.99
FTC	17.16(a)
[*]	Preamble
GSK	Preamble
GSK Claims	15.1
GSK Damages	15.1
GSK Development Program	3.1(c)
GSK Indemnitees	15.1
GSK Manufacturing Improvements	7.4(b)(iv)
[*]	6.2(b)
[*]	17.10(b)
HSR Act	17.16(a)
HSR Clearance Date	17.16(a)
IFRS	1.71
Improved Anti-Exhaustion Components	7.4(b)(iii)
Improved Construct	3.9
Indemnified Party	15.3
Indemnifying Party	15.3
Infringement	9.4(a)
Infringement Action	9.4(b)

Definitions	Section
Initial Collaboration Targets	3.3(a)
Initiate	8.3(c)
Initiation	8.3(c)
Insolvency Event	13.4
Internal Revenue Code	8.6
JAMS	16.2
Joint Inventions	9.1
Joint Steering Committee	2.1(a)
JSC	2.1(a)
Lyell	Preamble
Lyell Advanced CAR-T Target	3.3(b)(ii)
Lyell Claims	15.2
Lyell Component Development Program	3.1(a)(ii)
Lyell Damages	15.2
Lyell Development Program	3.1(a)(ii)
Lyell Indemnitees	15.2
Lyell License Milestone Cap	8.5(b)
Lyell Licensor	7.7(a)
Lyell Manufacturing Improvements	6.3
Lyell PoC Development Program	3.1(a)(i)
market	8.5(c)
Materials	3.6
Maximum Cost Amount	3.4
Milestone Offset Amount	8.5(b)
Modified [*] CAR T-Cell Therapy	3.1(a)(i)(2)
Modified TCR	7.4(a)(iii)
Monospecific Notice	3.1(a)(i)(3)
Monospecific Target	3.1(a)(i)(3)
[*]	3.1(a)(i)(1)
New Construct	3.9
New Construct License Agreement	3.9(b)
New Construct Third Party Technology	3.9(b)

Definitions	Section
[*]	8.3(a)
Option	3.1(b)(i)
Option Exercise	3.1(b)(i)
Other Lyell Patents	9.3(b)
Outstanding Common Stock	1.18(a)
Outstanding Voting Securities	1.18(a)
Parties	Preamble
Party	Preamble
Patent Challenge	9.6(a)
Patent Contact	9.8
Patent Exclusivity Term	8.5(e)
Pharmacovigilance Agreement	4.1(d)
Product	3.9(c)(i)
Product Marks	10.1
Product Specific Infringement Action	9.4(b)
Program Diligence Information	3.1(b)(i)
Program Option Trigger	3.1(b)(i)
Proposed Additional Construct	3.9(b)
Prosecute	9.2(b)
Prosecution	9.2(b)
Publication	12.4(a)
Receiving Party	12.1
Regulatory Exclusivity Term	8.5(e)
[*]	8.3(a)
Royalty Term	8.5(e)
Rules	16.2
Segregated Technology	17.8(b)
Sole Inventions	9.1
Specified Person	1.18(a)
Stacking Percentage	8.5(b)
Subcontract	3.8
Subcontractor	3.8
Substitution Notice	3.1(a)(i)(1)
Substitution Target	3.1(a)(i)(1)
Success Criteria	3.9(a)
Target Nomination Notice	3.3(b)(i)
Target Nomination Response Notice	3.3(b)(i)

Definitions	Section
Target Nomination Response Period	3.3(b)(i)
Target Rejection Prohibition	3.3(b)(i)
Target Selection Notice	3.3(c)
Technology Transfer Requirements	3.1(d)
Term	13.1
Terminated Compounds	13.6(a)(i)
Terminated Products	13.6(a)(i)
Terminated Program	13.6(a)(i)
Terminated Target	13.6(a)(i)
Termination Notice	13.3(a)
Title 11	17.3(a)
Transfer Record	3.6
Unmodified [*] CAR T-Cell Therapy	3.1(a)(i)(2)
Waiver Terms	8.7(b)

2. GOVERNANCE

2.1 Joint Steering Committee.

(a) **Establishment and Membership of JSC**. Within **[*]** following the Effective Date, the Parties will establish a joint steering committee with the roles set forth in Section 2.1(c) (the "**Joint Steering Committee**" or "**JSC**"). Each Party will appoint **[*]**, with one (1) representative of each Party serving as co-chairs (who shall be **[*]**). Each Party shall ensure that the JSC representatives appointed by it have the appropriate level of seniority and decision-making authority corresponding with the responsibilities of the JSC and the appropriate expertise and practical experience corresponding with the responsibilities of the JSC. The JSC may change its size from time to time by mutual consent of its members, *provided* that the JSC will consist at all times of an equal number of representatives of each of Lyell and GSK. The JSC membership and procedures are further described in this Section 2.1. Each Party may at any time appoint different JSC representatives by written notice to the other Party. Additional representatives from each Party may attend the JSC as *ad hoc* attendees, upon, with respect to non-employees only, written request to, and approval from, the other Party, such approval not to be unreasonably withheld, conditioned or delayed.

(b) **Membership of JSC**. Each of Lyell and GSK and will designate representatives with appropriate expertise to serve as members of the JSC. Each of Lyell and GSK will select from their representatives a co-chairperson for the JSC, and each Party may change its designated co-chairperson from time to time upon written notice to the other Party. The co-chairpersons of the JSC, with assistance and guidance from the Alliance Managers, will be responsible for calling meetings and preparing and circulating an agenda in advance of each meeting, *provided* that the co-chairpersons will call a meeting of the JSC promptly upon the reasonable written request of either co-chairperson to convene such a meeting.

(c) **Role of JSC**. The JSC will (i) be a forum for the exchange and discussion of, and the Parties agree that through the JSC (or its designees) they shall exchange and discuss, information related to the progress under and plans for the conduct of each Party's activities under this Agreement, including which Anti-Exhaustion Components within the Lyell Anti-Exhaustion Technology will be generated in connection with each Lyell Development Program and transparency into the innovations and data resulting from Clinical Trials and other scientific testing related to any Lyell Anti-Exhaustion Technology or other related intellectual property rights developed by or on behalf of a Party or its Affiliates under this Agreement or licensed under any of the Lyell License Agreements, (ii) decide the Success Criteria for Additional Constructs for Additional Development Activities and decide whether such Success Criteria have been met as described in Section 3.9, (iii) decide whether an actual or potential Collaboration Program is or would be an Active GSK Program as described in Section 3.3(e), (iv) regularly review and discuss (including concerns a Party may have about) Targets to potentially be added as Collaboration Targets, (v) be a forum for the Parties to discuss, and the Parties agree that through the JSC (or its designees) they shall discuss, opportunities for the Parties to collaborate with respect to CAR T-Cell Therapies beyond the activities under this Agreement, including, during the **[*]** (or such longer term during which Lyell is conducting: (x) Additional Development Activities with respect to any Collaboration Program, or (y) any Lyell Development Program), with respect to the current progress of development and application of Lyell Technology and technology Controlled by GSK

(or its Affiliates) related to **[*]** that may benefit the Collaboration Programs and the Parties' activities **[*]**, (vi) evaluate, and the Parties agree that through the JSC (or its designees) they shall disclose, any general progress of Lyell Anti-Exhaustion Technology and, insofar as it is related to a Collaboration Program, GSK's or its Affiliates' TCR and CAR technology and improvements of either of the foregoing, (vii) agree on any changes to **Exhibit 1.2** for the information to be provided in an Academic PoC Data Package for a particular Lyell PoC Development Program (which shall not be subject to resolution pursuant to Section 16.3), and (viii) make such other decisions and perform such other duties as are specifically assigned to the JSC in this Agreement.

(d) **Decisions**. Unless otherwise stated in this Agreement, decisions of the JSC shall be by consensus, with each Party having a single vote on the matter to be decided regardless of the number of JSC members for each Party. A quorum for decision-making is agreed to be a minimum of one member from each Party. If the JSC is unable to reach the applicable consensus with respect to any such matter for which it is to make a decision under Sections 2.1(c)(ii) or (iii) (or other JSC decisions indicated to be subject to resolution pursuant to Section 2.1(d)), then either Party may, by providing written notice to the other Party, have such matter referred to the Senior Executives who shall meet promptly and negotiate in good faith to resolve the deadlock. If, despite such good faith efforts, the Senior Executives are unable to resolve such deadlock within **[*]** of such matter having been referred to them, then such matter (and other JSC decisions indicated to be subject to resolution pursuant to Section 16.3) will be determined in accordance with Section 16.3 and such determination shall become the decision of the JSC. Unless otherwise expressly indicated, a matter for which the JSC must "agree" (as opposed to decide) shall not be subject to resolution by the Senior Executive discussions or by baseball arbitration pursuant to Section 16.3.

(e) **JSC Meetings**. The JSC will meet as frequently as both Parties agree is appropriate, but not less than **[*]** until **[*]** and thereafter at least **[*]** unless the Parties agree otherwise. The meetings of the JSC need not be in person and may be by telephone or any other method reasonably determined by the JSC. Each Party will bear its own costs associated with attending such meetings. Minutes will be kept of all JSC meetings and will reflect material decisions made at such meetings. Meeting minutes will be prepared by the Alliance Managers of the Parties on a rotating basis and sent to each member of the JSC for review and approval promptly following each meeting. Minutes will be deemed approved unless a member of the JSC objects to the accuracy of such minutes within **[*]** of receipt.

2.2 Discontinuation of JSC. With respect to each Collaboration Program, the JSC shall continue to exist until the first to occur of: (a) the Parties mutually agreeing to disband the JSC; (b) Lyell providing to GSK written notice of its intention to disband and no longer participate in such JSC, *provided* that Lyell shall not give such notice prior to the end of the applicable Lyell Development Program for such Collaboration Program, or if later, prior to or during any Additional Development Activities for such Collaboration Program; and (c) filing for Regulatory Approval of the first Product or Compound arising under the applicable Collaboration Program. Notwithstanding anything herein to the contrary, once the JSC has been disbanded for a Collaboration Program, the JSC shall be terminated with respect to such Collaboration Program and thereafter (i) any requirement of a Party to provide Information or other materials to the JSC with respect to such Collaboration Program shall be deemed a requirement to provide such Information or other materials to the other Party via the Alliance Managers, and (ii) any matters

previously delegated to the JSC for such Collaboration Program shall be resolved by mutual agreement of the Parties, or, if the Parties do not reach mutual agreement, in accordance with the decision making provisions of Sections 2.1(d). Without limiting the foregoing, upon reasonable request by Lyell after the disbanding of the JSC for a Collaboration Program **[*]** under such Collaboration Program, but not more often than **[*]** or as otherwise mutually agreed by the Parties, the Parties shall meet to discuss such ongoing Development efforts by GSK or its Affiliates with respect to such Collaboration Program, so that Lyell remains reasonably informed as to the status, progress and plans for Development of the Compounds and Products under this Agreement.

2.3 Limitations on Authority of the JSC. Except as otherwise provided in this Agreement, the JSC will have solely the roles and responsibilities assigned to it in this Article 2. The JSC will have no authority to amend, modify or waive compliance with this Agreement or make any decision other that those specifically assigned under this Agreement to be made by the JSC. The JSC shall not have the authority to alter, or waive compliance by a Party with, a Party's obligations under this Agreement. For clarity, the JSC shall not have decision-making authority with respect to the conduct of GSK Programs or Lyell Development Programs.

2.4 Alliance Managers. Each of the Parties will appoint one representative who possesses a general understanding of Development issues to act as its alliance manager (each, an "**Alliance Manager**"). The role of the Alliance Manager is to act as a primary point of contact between the Parties to assure a successful relationship between the Parties. The Alliance Managers will attend all meetings of the JSC and support the co-chairpersons of the JSC in the discharge of their responsibilities. Each Party may change its designated Alliance Manager from time to time upon written notice to the other Party. Any Alliance Manager may designate a substitute to temporarily perform the functions of such Alliance Manager upon written notice to the other Party's Alliance Manager. Each Alliance Manager also will:

(a) be the point of first notice and contact in all matters of conflict resolution and assisting with any escalation of disputes in accordance with Section 2.1(d);

(b) provide a single point of communication both internally within the Parties' respective organizations and between the Parties, including during such time as the JSC is no longer constituted;

(c) plan and coordinate any cooperative efforts under this Agreement, if any, and internal and external communications; and

(d) take responsibility for ensuring that JSC activities, such as the conduct of required JSC meetings, occur as set forth in this Agreement and that relevant action items, if any, resulting from such meetings are appropriately carried out or otherwise addressed.

3. RESEARCH AND DEVELOPMENT PROGRAMS

3.1 Development Programs.

(a) **Lyell Development Programs**.

(i) **Lyell PoC Development Programs**. For each Collaboration Target (other than for Targets developed under a Lyell Component Development Program), Lyell will use Commercially Reasonable Efforts to (A) carry out a research program to generate a T-Cell Therapy for such Collaboration Target incorporating one or more Anti-Exhaustion Components comprising Lyell Anti-Exhaustion Technology and (B) conduct preclinical and clinical Development for such T-Cell Therapy through completion of Academic PoC (each, a "**Lyell PoC Development Program**"). After completion of Academic PoC for a Lyell PoC Development Program, Lyell shall deliver to GSK the Academic PoC Data Package for such Lyell PoC Development Program, which Academic PoC Data Package GSK will evaluate in good faith as part of its determination whether to exercise the Option pursuant to Section 3.1(b)(i).

(1) **[*] Product**. The Parties agree that, subject to Sections 3.1(a)(i)(2) and 3.1(a)(i)(3), **[*]**will continue as an Initial Collaboration Target and the subject of a Lyell PoC Development Program only in the event all of the following criteria are met (or waived by GSK in its sole discretion): (A) Lyell obtains an exclusive (subject to customary retention of rights), sublicensable license from **[*]** to the **[*]** for the **[*]**; (B) Lyell secures rights from **[*]** for GSK to use, access or reference, as necessary, any clinical data collected from the Clinical Trial titled **[*]** conducted by **[*]**, Regulatory Materials submitted to the FDA with respect to such Clinical Trial, written correspondence between **[*]** and the FDA with respect to such Clinical Trial and proprietary reagents **[*]** created for production of the CAR T-Cell Therapy directed to **[*]** Initial Collaboration Target use in such Clinical Trial; and (C) with respect to any licenses required to meet the criteria in (A) and (B), such licenses shall include terms and conditions customary to the parties (including Lyell) to such licenses for the intellectual property or materials being provided. At such time as all of the foregoing criteria are met (and any dispute as to whether such criteria have been met shall be decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3)), or waived by GSK in its sole discretion, **[*]** will continue as an Initial Collaboration Target and the subject of a Lyell PoC Development Program. Subject to Sections 3.1(a)(i)(2) and 3.1(a)(i)(3), in the event (I) Lyell has not received, on or before **[*]** following the Effective Date, approval from the **[*]** to proceed with negotiations of the license described in clause (A) after the **[*]** has published the applicable notice in the Federal Register (which approval shall be deemed received if **[*]** proceeds to negotiate the specific terms of such license after such notice is published in the Federal Register), or (II) the criteria in clause (A) and (B) above are not met on or before achievement of Academic PoC for the **[*]** Product, then GSK is entitled to elect (and any dispute as to whether such criteria in clause (II) have been met shall be decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3)), effective immediately upon notice from GSK to Lyell ("**Substitution Notice**"), that the Substitution Target shall replace **[*]** as an Initial Collaboration Target, immediately following which, Lyell's right to replace **[*]** as an Initial Collaboration Target with the Monospecific Target under Section 3.1(a)(i)(3) shall terminate and all references in this Agreement to **[*]** (other than references thereto as set forth in Section 3.1(a)(i)(2) with respect to the Unmodified **[*]** CAR T-Cell Therapy and the Modified **[*]** CAR T-Cell Therapy, references

in the Academic PoC and Proof of Clinical Concept definitions, Section 3.1 (a)(i)(3), and Section 3.3(g) with respect to bispecifics and multispecifics) are hereby amended to refer to the Substitution Target. In the event GSK provides the Substitution Notice as a result of clause (I) above, such notice must be provided within **[*]** after expiration of the **[*]** period referenced in clause (I). For clarity, Lyell would not be obligated to provide GSK with any freedom to operate licenses for the **[*]** beyond what is provided in the first sentence of this Section 3.1(a)(i)(1). "**Substitution Target**" means the **[*]** Target (or another Target selected by GSK and approved by Lyell) which, notwithstanding that the **[*]** Target is an Excluded Target as of the Execution Date, Lyell will reserve for GSK and not grant any Third Party any rights in the **[*]** Target prior to the earlier of (w) the criteria provided in the first sentence of this Section 3.1(a)(i) becoming met (or waived by GSK in its sole discretion) such that **[*]** will continue as an Initial Collaboration Target, (x) GSK's right to replace the **[*]** Initial Collaboration Target with the Substitution Target ceasing as described in Sections 3.1(a)(i)(2) and 3.1(a)(i)(3), (y) an alternative to the **[*]** Target is selected as the Substitution Target, or (z) expiration of **[*]** after the Effective Date. Lyell shall have the right to add an additional Target to the Excluded Target list to replace the Substitution Target after GSK's delivery of the Substitution Notice.

(2) **Unmodified [*] Product**. Unless and until GSK elects to replace the **[*]** Initial Collaboration Target with the Substitution Target under Section 3.1(a)(i)(1), Lyell will use Commercially Reasonable Efforts to advance through completion of Academic PoC a CAR T-Cell Therapy directed to the **[*]** Initial Collaboration Target that has not been modified to incorporate an Anti-Exhaustion Component comprising any Lyell Anti-Exhaustion Technology (the "**Unmodified [*] CAR T-Cell Therapy**"). Lyell shall include the same type of clinical results with respect to such Unmodified **[*]** CAR T-Cell Therapy in its Academic PoC Data Package as it provides for the CAR T-Cell Therapy containing one or more Anti-Exhaustion Components for such same Collaboration Target. For clarity, GSK shall not be obligated to continue the Development of such Unmodified **[*]** CAR T-Cell Therapy as part of the GSK Development Program. In the event GSK exercises its Option with respect to **[*]**, any CAR T-Cell Therapy directed to the **[*]** Initial Collaboration Target hereunder shall be treated as one Collaboration Program (*e.g.*, such a CAR T-Cell Therapy shall be a Product) for purposes of payment obligations under Article 8, regardless of whether such CAR T-Cell Therapy is an Unmodified **[*]** CAR T-Cell Therapy or is a CAR T-Cell Therapy that is directed to the **[*]** Initial Collaboration Target that has been modified to incorporate an Anti-Exhaustion Component comprising any Lyell Anti-Exhaustion Technology (the "**Modified [*] CAR T-Cell Therapy**"). If GSK exercises its Option with respect to the Unmodified **[*]** CAR T-Cell Therapy, then: (A)(I) **[*]** will continue as an Initial Collaboration Target and the subject of a Lyell PoC Development Program and (II) GSK's right to replace the **[*]** Initial Collaboration Target with the Substitution Target in accordance with Section 3.1(a)(i)(1) shall cease; in each case as of the date of such Option Exercise, and (B) the Parties shall review the Academic PoC Data Package for the Unmodified **[*]** CAR T-Cell Therapy together with related information and data for the Modified **[*]** CAR-T Cell Therapy provided by Lyell. GSK shall review such data in good faith, and, if Lyell has not already Initiated a Clinical Trial with respect to the Modified **[*]** CAR T-Cell Therapy, shall notify Lyell in writing specifically referencing this Section 3.1(a)(i)(2) within **[*]** after receipt of such combined data if Lyell should Initiate a Clinical Trial with respect to the Modified **[*]** CAR T-Cell Therapy (which Initiation of such Clinical Trial would result in **[*]**). If GSK does not provide such written notice to Lyell within such **[*]** period, then thereafter Lyell shall have no obligation under this Agreement to carry out a research program to generate the Modified **[*]** CAR-T Cell Therapy, conduct

preclinical or clinical development for the Modified **[*]** CAR-T Cell Therapy (including through Initiation of a Clinical Trial therefor) or deliver to GSK any Collaboration Anti-Exhaustion Components or Collaboration Deliverables with respect to the Modified **[*]** CAR-T Cell Therapy.

(3) **[*] Monospecific Target Election**. Unless and until GSK elects to replace the **[*]** Initial Collaboration Target with the Substitution Target in accordance with Section 3.1(a)(i)(1), upon written notice to GSK (the "**Monospecific Notice**"), Lyell may elect to convert the **[*]** Initial Collaboration Target into an Initial Collaboration Target comprised solely of **[*]** (i.e., the Collaboration Program for such Initial Collaboration Target would be directed solely to **[*]** as a monospecific Collaboration Program and not directed to **[*]** in combination as a bispecific Collaboration Program); *provided* that prior to such conversion, the JSC will review and discuss in good faith the relevant data Controlled by Lyell that Lyell reasonably believes support such conversion described under this Section 3.1(a)(i)(3); and *provided further* that such election to convert to a monospecific Collaboration Program following such review and discussion is subject to the final determination of Lyell (without a requirement to escalate to Senior Executives under Section 16.1(b)). Effective upon the date of the Monospecific Notice: (A) the Monospecific Target shall replace **[*]** as an Initial Collaboration Target, (B) Lyell's obligations with respect to the Unmodified **[*]** CAR-T Cell Therapy and the Modified **[*]** CAR-T Cell Therapy are terminated, (C) GSK's right to replace the **[*]** Initial Collaboration Target with the Substitution Target in accordance with Section 3.1(a)(i)(1) is terminated, (D) Sections 3.1(a)(i)(1), 3.1(a)(i)(2) and 3.1(b)(ii)(1) and the final sentence of 3.1(b)(iii), shall be of no further force or effect (other than with respect to the definitions set forth therein), and (E) all references in this Agreement to **[*]** (other than the references thereto in the Unmodified **[*]** CAR T-Cell Therapy and Modified **[*]** CAR-T Cell Therapy definitions, in this Section 3.1(a)(i)(3), in Section 3.3(g) with respect to bispecifics and multispecifics, and in the description of **[*]**) are hereby amended to refer solely to the Monospecific Target. "**Monospecific Target**" means **[*]**, as selected by Lyell in the Monospecific Notice to replace **[*]** as an Initial Collaboration Target under this Section 3.1(a)(i)(3).

(ii) **Lyell Component Development Program**. For each Collaboration Target for an Active GSK Program, or any Collaboration Target that is the subject of a Lyell Component Development Program pursuant to Section 3.1(a)(iii), Lyell will use Commercially Reasonable Efforts to carry out a research program to generate one or more Anti-Exhaustion Components comprising Lyell Anti-Exhaustion Technology for use in a T-Cell Therapy for the applicable Collaboration Target and conduct preclinical Development on such Anti-Exhaustion Components until such time as the JSC decides (subject to resolution pursuant to Section 2.1(d) and Section 16.3) such Anti-Exhaustion Components are ready for transfer to GSK (such time the "**Component Transfer Point**"); *provided* that such transfer shall in any event occur prior to initiation of IND Enabling Studies of a T-Cell Therapy incorporating such Anti-Exhaustion Component for such Collaboration Target (each, a "**Lyell Component Development Program**," and each Lyell Component Development Program and Lyell PoC Development Program, a "**Lyell Development Program**"). Promptly following the Component Transfer Point, Lyell shall deliver to GSK the Collaboration Component Data Package.

(iii) **TCR Programs that are not Active GSK Programs**. For any TCR Program that is not an Active GSK Program, Lyell and GSK shall have the right to approach the JSC to propose selection by GSK of a TCR Target within Lyell's pipeline. If the JSC agrees to

include such TCR Target as a Collaboration Program, it will also determine whether such Collaboration Program will be a Lyell Component Development Program or a Lyell PoC Development Program; *provided* that any dispute with respect to the foregoing shall be decided in accordance with Section 2.1(d), except that a failure by the Senior Executives to reach agreement hereunder shall not be eligible for escalation to arbitration if the Senior Executives are unable to reach an agreement. In the event no agreement is reached with respect to any such TCR Program, such TCR Program will not be included as a Collaboration Program hereunder.

(iv) **Cessation for Safety or Infeasibility**. Lyell has the right to terminate activities with respect to a Lyell Development Program if it determines in good faith that, despite having used Commercially Reasonable Efforts to do so, it is unable to Develop any safe and effective Anti-Exhaustion Components, or with respect to a Lyell PoC Development Program, that the initiation or continuation of a Clinical Trial under such Collaboration Program would impose unacceptable risk for patient safety, in each case by providing GSK written notice thereof. If GSK disagrees with Lyell's determination, it shall provide Lyell written notice thereof within **[*]** of receipt of Lyell's notice and thereafter the JSC shall decide (subject to resolution pursuant to Section 2.1(d) and Section 16.1) whether such Lyell Development Program shall be terminated (and the conduct of such Collaboration Program will be suspended pending such determination); *provided* that a failure by the Senior Executives to reach agreement hereunder shall not be eligible for escalation to arbitration if the Senior Executives are unable to reach an agreement. Subject to Section 3.3(b), if (A) GSK agrees (or does not provide notice of disagreement as described above), (B) the JSC so determines or (C) the Senior Executives are unable to reach an agreement on whether the Collaboration Program should terminate, then the Collaboration Program shall be deemed terminated, and upon such termination, the Collaboration Target for such terminated Lyell Development Program shall be deemed a Terminated Target but subject further to the **[*]** Target Rejection Prohibition described under Section 3.3(b).

(v) **Delivery of Collaboration Deliverable**. Within **[*]** after completion of each Lyell Development Program (i.e., delivery of the Academic PoC Data Package for a Lyell PoC Development Program or the Component Transfer Point for a Lyell Component Development Program) Lyell shall deliver to GSK the Anti-Exhaustion Components incorporated into or used for the T-Cell Therapy for which Academic PoC was completed or, for Lyell Component Development Programs, the Anti-Exhaustion Components the JSC decides (subject to resolution pursuant to Section 2.1(d) and Section 16.3) are ready to be transferred to GSK as of the Component Transfer Point (such Anti-Exhaustion Components for a Lyell Development Program, the "**Collaboration Anti-Exhaustion Components**"). For each Lyell Development Program, delivery of a Collaboration Anti-Exhaustion Component shall mean: (A) in the case of a Collaboration Anti-Exhaustion Component that is an intrinsic component of a T-Cell, CAR or TCR for the applicable T-Cell Therapy, delivery of a plasmid containing DNA coding for such Collaboration Anti-Exhaustion Component or (B) in the case of other Collaboration Anti-Exhaustion Components, delivery of a protocol describing both the Collaboration Anti-Exhaustion Component and the materials used therein (such deliverables, collectively, the "**Collaboration Deliverables**"). For clarity, beyond providing the Collaboration Deliverables, the assistance described in Sections 3.1(c) and 3.1(d), and in the case of a Lyell PoC Development Program, the applicable Lyell Manufacturing Technology pursuant to Section 6.2(a), unless otherwise mutually agreed by the Parties, Lyell shall not be responsible for providing further support for the related GSK Development Programs, for example by developing a master cell bank or a GMP manufacturing process for Compounds or Products, providing GSK with ongoing supply of Anti-Exhaustion Components or Compounds or other ongoing support for the related GSK Development Program.

(b) **Collaboration Program Option**.

(i) **Option Trigger and Exercise**. For each Collaboration Program, upon (A) for a Lyell PoC Development Program, delivery by Lyell to GSK of the Academic PoC Data Package and the corresponding Collaboration Deliverable, or (B) for a Lyell Component Development Program, delivery by Lyell to GSK of the Collaboration Component Data Package and corresponding Collaboration Deliverable (in each instance, the "**Program Option Trigger**"), GSK shall have the exclusive option during the Exercise Period to obtain the license provided in Section 7.1(a) for such Collaboration Program in accordance with and subject to this Agreement (the "**Option**"). To exercise such Option (the "**Option Exercise**") for a Collaboration Program, GSK shall provide written notice indicating such exercise (which notice date also shall be the effective date of such Option Exercise, unless deferred until the HSR Clearance Date, if applicable, under Section 17.16(b)) to Lyell during the period commencing on the Program Option Trigger for such Collaboration Program and ending (A) **[*]** thereafter for Lyell Component Development Programs and (B) **[*]** thereafter for Lyell PoC Development Programs (for each such Lyell Development Program, the "**Exercise Period**"); *provided*, *however*, that prior to GSK's Option Exercise for the applicable Collaboration Program, during the Exercise Period Lyell shall (x) use Commercially Reasonable Efforts to disclose to GSK, or make available to GSK by granting to GSK designated personnel access to a virtual data room, the further Information (in addition to that required under the Academic PoC Data Package) described in **Exhibit 3.1(b)** (the "**Program Diligence Information**") within **[*]** after the effective date of the Program Option Trigger, and (y) as reasonably requested by GSK, provide GSK with reasonable consultation and assistance to the extent necessary or reasonably useful for GSK to understand and conduct diligence on the Academic PoC Data Package, Collaboration Component Data Package, Collaboration Deliverable and other Program Diligence Information, each as applicable and in a manner and on such timelines to enable GSK to make an informed decision in respect of each Option hereunder. If GSK reasonably determines it needs additional time to make an informed decision as a result of the timing of Lyell providing the Program Diligence Information, GSK may extend the Exercise Period for a Lyell Development Program **[*]** by up to **[*]** upon written notice to Lyell prior to the expiration of the Exercise Period (i.e., in no event will the Exercise Period extend beyond **[*]** after the Program Option Trigger for Lyell Component Development Programs and **[*]** after the Program Option Trigger for Lyell PoC Development Programs).

(ii) **[*] Milestone Payment**. In the event GSK has exercised its Option pursuant to Section 3.1(b)(i) with respect to a Lyell PoC Development Program, **[*]** for such Lyell PoC Development Program will be deemed to have been achieved. In the event GSK has exercised its Option pursuant to Section 3.1(b)(i) with respect to a Lyell Component Development Program, **[*]** for such Lyell Component Development Program will be deemed to have been achieved upon Advancement of Program by or under the authority of GSK for a Product (which shall not be required to be for a Prevalent Solid Tumor) under such Collaboration Program. Upon achievement of **[*]**, Lyell will submit an invoice to GSK for the **[*]** Milestone Payment, which milestone will be payable in accordance with Section 8.3 (but subject to deferral until the HSR Clearance Date, if applicable, under Section 17.16(b)).

(1) **Unmodified [*] Product**. For clarity, in the event GSK exercises its Option with respect to the Unmodified **[*]** CAR T-Cell Therapy, (A) any achievement of a milestone under Section 8.3 by the Modified CAR T-Cell Therapy shall not require payment of the corresponding milestone payment if such milestone payment was previously paid to Lyell as a result of achievement with respect to the Unmodified **[*]** CAR T-Cell Therapy, and (B) the Anti-Exhaustion Component(s) used by Lyell in the CAR T-Cell Therapy for a Clinical Trial for which GSK has **[*]** (i.e., the Clinical Trial GSK informed Lyell it should Initiate pursuant to Section 3.1(a)(i)(2) or other Clinical Trial Initiated by Lyell under the **[*]** Collaboration Program prior to such exercise) shall be considered a Collaboration Anti Exhaustion Component without the need for subsequent achievement of **[*]** for the Modified **[*]** CAR T-Cell Therapy or exercise by GSK of an Option therefor (i.e., there is not a new Program Option Trigger, Option or **[*]** Milestone Payment obligation (to the extent previously paid for the Unmodified **[*]** CAR T-Cell Therapy) for the Modified **[*]** CAR T-Cell Therapy and such Modified **[*]** CAR T-Cell Therapy would not be considered an Additional Target under Section 3.3(b)(i)).

(iii) **Effect of Failure to Exercise Option**. If the Exercise Period for a particular Collaboration Program expires without GSK having exercised the Option for such Collaboration Program in accordance with this Section 3.1(b), then, effective upon such expiration, (A) the Option for such Collaboration Program shall automatically terminate and be of no further force or effect, (B) Lyell shall have no further obligations to GSK with respect to such Collaboration Program, (C) unless otherwise provided in this Agreement, the Collaboration Target for such Collaboration Program shall be deemed a Terminated Target and Section 13.6(a) shall apply with respect thereto and the Collaboration Program, Compounds and Products therefor and (D) GSK shall return to Lyell (or destroy if so requested by Lyell) and make no further use of the Collaboration Anti-Exhaustion Components, Collaboration Deliverables or the Information contained in the Collaboration Component Data Package or **[*]** Data Package, as applicable, with respect to such Collaboration Program. For clarity, in the event GSK does not exercise its Option with respect to Unmodified **[*]** CAR T-Cell Therapy, it will not lose its right to exercise its Option for the Modified **[*]** CAR T-Cell Therapy.

(c) **GSK Development Program**. Subject to Section 3.9, following the Option Exercise for a Collaboration Program, GSK shall have the sole right and responsibility for the Development of Compounds and Products in the Field in the Territory during the Term for the Collaboration Target for such Lyell Development Program at GSK's own cost and expense (each, a "**GSK Development Program**"). GSK shall use Commercially Reasonable Efforts to Develop **[*]** in a prompt and expeditious manner. If GSK (or other Related Party) desires to modify a Collaboration Anti-Exhaustion Component provided by Lyell or to Develop or incorporate additional or different Anti-Exhaustion Components within the Lyell Anti-Exhaustion Technology into a Compound or Product (or the production thereof) for the Collaboration Target, GSK shall discuss the same with Lyell, and the Parties shall mutually agree on a plan therefor prior to such modification or incorporation, which plan shall allocate responsibility between the Parties to make such modifications or incorporation based on the particular circumstances of the situation. Any (i) modification to a Collaboration Anti-Exhaustion Component generated or (ii) additional or different Anti-Exhaustion Components incorporated into or used to make a T-Cell Therapy for such Collaboration Program, in each case in accordance with the foregoing, shall be deemed a Collaboration Anti-Exhaustion Component for purposes of Article 8 for such Collaboration Program. If GSK requests Lyell to modify a Collaboration Deliverable to make it applicable for

an additional HLA allele of a TCR Collaboration Target other than the HLA allele that is the subject of the applicable Collaboration Program, then each such additional HLA allele for which Lyell provides such a modified Collaboration Deliverable shall count as a separate TCR Target for purposes of determining how many TCR Targets GSK may elect to add as Collaboration Targets pursuant to Section 3.3(c), *provided* the Products for such different HLA alleles shall be considered as part of the same Collaboration Program as the Product for the original HLA allele and the milestone payments set forth in Sections 8.3 and 8.4 shall be due only one time with respect to such TCR Target regardless of whether achieved by Products within the same Collaboration Program for different HLA alleles. For the avoidance of doubt, GSK has the right, without Lyell's assistance, to use the Collaboration Deliverable for the original HLA allele of a TCR Collaboration Target with as many HLA alleles as it wishes within such Collaboration Target, all of which shall count as the same TCR Target for purposes of determining how many TCR Targets GSK may elect to add as Collaboration Targets pursuant to Section 3.3(c).

(d) **Transfer**. For each Lyell Development Program, promptly after the Option Exercise for such Lyell Development Program, Lyell will disclose to GSK all material data, results and Information within the Lyell Know-How as of such time, to enable the continued Development and Commercialization of Products incorporating or made using the applicable Collaboration Anti-Exhaustion Component(s) to the extent not previously disclosed to GSK prior to Option Exercise, all in accordance with and to the extent set forth in the requirements for technology transfer set forth in **Exhibit 3.1(d)** ("**Technology Transfer Requirements**"). In addition, promptly after the Option Exercise for the applicable Collaboration Program, Lyell shall provide GSK with reasonable consultation and assistance for the purpose of enabling GSK to understand, incorporate and utilize such Collaboration Deliverables in the Development of Products containing or made using such Collaboration Deliverables in the Field, all pursuant to a plan to be mutually agreed on by the Parties (or absent agreement, as decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3)).

(e) **Ongoing Studies at Option Exercise**. Notwithstanding Section 3.1(c), Lyell shall continue to conduct (or have conducted) any Clinical Trials of a Compound or Product for a Collaboration Program that are ongoing as of the Option Exercise for such Collaboration Program at Lyell's cost; *provided* that if such Clinical Trial was designed to accomplish more than achievement of **[*]** and such broader scope was agreed to by GSK or the JSC (an "**Approved Clinical Trial**"), GSK shall reimburse Lyell for its direct costs incurred after the Option Exercise to complete the portion of such Clinical Trial remaining after such Option Exercise, within **[*]** after receipt of a valid invoice therefore from Lyell. All clinical Information and Clinical Trial reports generated in the conduct of such Clinical Trials will be disclosed to GSK as soon as reasonably practicable, and in no event later than **[*]** following completion of such Clinical Trials.

3.2 Initiation and Conduct of Lyell Development Programs. Lyell shall use Commercially Reasonable Efforts to initiate work on Lyell Development Programs, which are selected by GSK during the **[*]**, as soon as reasonably practical, but in any event no later than **[*]** after the corresponding Target has become a Collaboration Target; *provided*, that (a) Lyell shall not be obligated to initiate work on any Lyell Development Program until after the **[*]**, (b) Lyell shall not be obligated to have more than **[*]**, and (c) Lyell shall provide GSK, through the JSC, with an outline of activities expected to be undertaken under such Lyell Development Program, the **[*]** requires GSK approval, and which, if provided, shall be considered agreement by the JSC

that such **[*]** should be pursued) and an estimated timeline for completion of such activities and the Lyell Development Program as a whole, which timeline must be mutually agreed by the Parties (or absent such agreement, decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3)). Prior to initiation of a Lyell Development Program for a Collaboration Target, GSK shall provide to Lyell the Materials, Information and other items described in **Exhibit 3.2** with respect to such Collaboration Program.

3.3 Collaboration Target Selections.

(a) **Designation of Collaboration Targets**. **Exhibit 3.3(a)** identifies the Collaboration Targets as of the Effective Date, including, as applicable, the Substitution Target and Monospecific Target (the "**Initial Collaboration Targets**").

(b) **Additional CAR-T Target Option**.

(i) The Parties, by mutual written agreement as to the selected Target, shall add **[*]** additional CAR-T Target believed to be useful in the Oncology Field as a Collaboration Target during the **[*]** after the Effective Date. Subject to the remainder of this Section 3.3(b), during the **[*]** after the Effective Date until such a CAR-T Target is added as a Collaboration Target, GSK may nominate **[*]** Target (other than any Excluded Target or any Lyell Advanced CAR-T Target) to be added as a CAR-T Collaboration Target by providing written notice thereof to Lyell specifically referencing this Section 3.3(b), together with a written description of such proposed CAR-T Target, its NCBI reference sequence accession number and other items described in **Exhibit 3.3(b)** (a "**Target Nomination Notice**"), which proposed CAR-T Target may be from Lyell's existing pipeline or GSK's existing pipeline of CAR-T Targets of interest or a new CAR-T Target for which a new research program would need to be initiated. Each Target Nomination Notice shall not include more than **[*]** proposed CAR-T Target and GSK shall not have the right to issue a subsequent Target Nomination Notice until Lyell provides a Target Nomination Response Notice for an outstanding Target Nomination Notice. Within **[*]** following Lyell's receipt of the Target Nomination Notice ("**Target Nomination Response Period**"), Lyell shall notify GSK in writing of its agreement to add such nominated CAR-T Target or rejection of such nominated CAR-T Target as a Collaboration Target ("**Target Nomination Response Notice**"), and if rejecting, shall provide the reasons for such rejection. If Lyell agrees to add such CAR-T Target as a Collaboration Target, then such CAR-T Target shall be deemed an "**Additional Target**," and GSK shall pay to Lyell **[*]** with respect to such Additional Target, within **[*]** of receipt of a valid invoice therefor from Lyell. Notwithstanding any JSC review pursuant to Section 2.1(c), if Lyell rejects a certain CAR-T Target so nominated by GSK, then for the period beginning on the date of the Target Nomination Response Notice and ending **[*]** thereafter, Lyell shall not Develop itself, or collaborate with a Third Party on the Development of, a CAR T-Cell Therapy directed to such rejected CAR-T Target for the Territory (such prohibition, a "**Target Rejection Prohibition**"). If a nominated CAR-T Target is rejected in the final **[*]** of the **[*]**, then the **[*]** as it applies to CAR-T Targets shall be extended **[*]**, and GSK shall have the right to nominate another CAR-T Target to be added as a Collaboration Target pursuant to the same process described in this Section 3.3(b), and such nomination process shall continue to repeat during such extended **[*]** period until **[*]** CAR-T Target is added as an Additional Target; *provided*, *however*, that if Lyell rejects the **[*]** CAR-T Targets nominated during such extended period of the **[*]**, then GSK shall have the right to nominate a **[*]** CAR-T Target (other than an Excluded Target and a Lyell Advanced CAR-T Target), which **[*]** CAR-T Target may not be rejected by Lyell and will be added as an Additional Target.

(ii) Lyell shall provide written notice to GSK if it has initiated IND Enabling Studies for a CAR T-Cell Therapy directed to a CAR-T Target (other than an Excluded Target) in Lyell's then-existing pipeline during the period prior to the earlier of **[*]** after the Effective Date and the addition pursuant to this Section 3.3(b) of GSK's **[*]** CAR-T Target as a Collaboration Target, together with a written description of Information described in **Exhibit 3.3(b)(ii)**, to the extent such Information is in Lyell's Control as of the delivery of such notice to GSK. GSK's right to nominate such CAR-T Target must be made prior to **[*]** after Lyell provides such notice to GSK. If GSK has not nominated such CAR-T Target by such time, such CAR-T Target shall be deemed a "**Lyell Advanced CAR-T Target**" and thereafter GSK shall have no right to nominate such Target pursuant to this Section 3.3(b).

(c) **Additional TCR Targets**. GSK shall have the right to add up to **[*]** additional TCR Targets (other than any Excluded Target) believed to be useful in the Oncology Field as Collaboration Targets, each of which shall be deemed an "**Additional Target**," subject to payment of **[*]** for each such Additional Target selected, within **[*]** of receipt of a valid invoice therefor from Lyell. Any such Additional Target for a TCR T-Cell Therapy must be selected by GSK prior to the end of the **[*]** by written notice thereof to Lyell specifically referencing this Section 3.3(c), together with a written description of such TCR Target and other items described in **Exhibit 3.3(c)** ("**Target Selection Notice**").

(d) **Excluded Targets**. Notwithstanding the foregoing, unless otherwise agreed in writing by Lyell, the Targets listed on **Exhibit 3.3(d)**, as may be updated from time to time in accordance with this Section 3.3(d) ("**Excluded Targets**") shall not be eligible to be added as, selected or nominated to be an Additional Target, unless otherwise agreed by Lyell in its sole discretion. Lyell shall have the right to add **[*]** additional CAR-T Target or TCR Target to **Exhibit 3.3(d)** by notice to GSK on or after each of the **[*]** of the Effective Date, such that the list of Excluded Targets could comprise **[*]** Targets by the **[*]** of the Effective Date; *provided*, *however*, that no such additional Target at the time it is added (i) shall be the same as any Collaboration Targets or any Target nominated by GSK in a Target Nomination Notice, or (ii) shall be the same as any TCR Target that GSK (itself or through an Affiliate or Third Party) has publicly announced (including the disclosure of the identity of such Target) as having commenced, licensed to or partnered with GSK for research, development or commercialization. The identity of Excluded Targets shall be deemed Confidential Information of Lyell, and disclosure of such Excluded Targets shall be strictly limited to the JSC, the Alliance Managers, the Senior Executives or solely on a need to know basis within GSK in connection with proposed Target nominations.

(e) **Active GSK Program**. If GSK nominates a CAR-T Target pursuant to Section 3.3(b) or selects a TCR Target pursuant to Section 3.3(c), in each case in its pipeline and GSK either (x) **[*]** CAR-T Target or CAR-T T-Cell Therapy directed to such Target, or TCR Target or TCR T-Cell Therapy directed to such Target, **[*]** or (y) has entered **[*]** with respect to such Target (in each instance in respect of clause (x) or clause (y), "**Active GSK Program Criteria**"), GSK shall indicate such fact in its Target Nomination Notice or Target Selection Notice, as applicable. If Lyell disputes whether the Active GSK Program Criteria have been met with respect to such Target, the matter shall be referred to the JSC for decision (subject to

resolution pursuant to Section 2.1(d) and Section 16.3), and for CAR-T Targets, the Target Nomination Response Period shall be tolled until such dispute is resolved. If such Target is added as a Collaboration Target under this Agreement and Lyell does not dispute the Active GSK Program Criteria has been met (or it is decided by the JSC pursuant to Section 2.1(d) or Section 16.3 that the Active GSK Program Criteria have been met), the Collaboration Program for such Target shall be considered an "**Active GSK Program**." Notwithstanding the foregoing, if Lyell provides notice to GSK that Lyell also has such Target (i.e., the Target selected by GSK for the applicable Active GSK Program) in its pipeline and such Target meets the Active GSK Program Criteria with respect to Lyell *mutatis mutandis* (an "**Active Lyell Program Notice**"), then GSK shall have the option, by providing notice to Lyell of its election within, at or prior to the first JSC meeting that occurs after **[*]** following its receipt of the Active Lyell Program Notice, either to have the Collaboration Program for such Target (if such Target is actually added as a Collaboration Target) that had been in the pipeline of both Parties (A) be treated as an Active GSK Program (in which case, such Collaboration Program would be a Lyell Component Development Program and GSK would not obtain access or rights to such T-Cell Therapy program (or Patents or Information with respect thereto) other than with respect to the Collaboration Anti-Exhaustion Components delivered by Lyell pursuant to Section 3.1(a)(v)) or (B) not be treated as an Active GSK Program (in which case such Collaboration Program would be a Lyell PoC Development Program). In addition, with respect to a TCR Target that is not an Active GSK Program, the Parties shall agree on whether Lyell would continue to conduct its program as a Lyell PoC Development Program or GSK would obtain other access and rights to Lyell's program. If the Parties agree that GSK would get other access and rights to Lyell's TCR T-Cell Therapy program, the Parties shall also agree on the terms and conditions of such access and rights (including the Parties roles and responsibilities for advancing such program). If Lyell provides an Active Lyell Program Notice the Parties shall cooperate to make the decisions and agreements described above in a timely manner and Lyell shall not be obligated to begin Development activities under this Agreement with respect to the subject Target until such decisions and agreements have been made. For clarity: (i) the Collaboration Program for the Initial Collaboration Target **[*]** (or, as applicable, the Substitution Target or Monospecific Target, unless otherwise agreed by the Parties) shall not be deemed an Active GSK Program; (ii) the Collaboration Program for the Initial Collaboration Target **[*]** shall be deemed an Active GSK Program; and (iii) in the case of the **[*]** CAR-T Target, unless the Parties agree in writing that the Collaboration Program for such CAR-T Target is an Active GSK Program at the time such Target is first agreed upon as an Additional Target under Section 3.3(b), the Collaboration Program for such Target shall not be deemed an Active GSK Program.

(f) **Allogeneic Products**. Unless the Parties mutually agree at the time a Target is added as a Collaboration Target pursuant to this Section 3.3 that a T-Cell Therapy Developed for such Collaboration Target will be an allogeneic T-Cell Therapy, it shall be autologous and not allogeneic. If at the time such Target is added as a Collaboration Target, or at any subsequent time during the Royalty Term, the Parties agree that a T-Cell Therapy will be allogeneic, the Parties shall negotiate in good faith and mutually agree upon the milestones and royalties to be paid by GSK with respect to Compounds and Products for the Collaboration Program for such Collaboration Target, and neither Party shall develop a Product comprising an allogeneic T-Cell Therapy directed to a Collaboration Target unless and until such milestone and royalty determinations have been made and agreed in writing.

(g) **[*]; [*]**. Unless otherwise expressly agreed, GSK shall not have the right to propose pursuant to Section 3.3(b) or select pursuant to Section 3.3(c) more than **[*]** as the Target to which a Collaboration Program would be directed (*e.g.*, the Parties must expressly agree if a Collaboration Program will be for a **[*]** Product). In the event the Parties agree to such a **[*]** Collaboration Program, at such time the Parties shall also agree on any necessary modifications or clarifications to this Agreement to address such situation. For clarity, unless otherwise agreed by the Parties, (A) the Product Developed and Commercialized by GSK, its Affiliates and Sublicensees with respect to a **[*]** Collaboration Program must be directed to **[*]** Target within such Collaboration Target (*e.g.*, a Product under **[*]** Collaboration Program cannot be directed **[*]**), and in any case shall not be **[*]** other than the Collaboration Targets; and (B) the Collaboration Target for a **[*]** Product shall be deemed to refer to **[*]** Targets to which the Product is **[*]** (*e.g.*, the development and commercialization of a T-Cell Therapy **[*]** by a Party independent of this Agreement would not be restricted under Section 11.2 unless therapies directed to **[*]** Developed and Regulatory Approval is sought for administration **[*]** by such Party). Notwithstanding the foregoing, the Parties agree that with respect to the initial Collaboration Program directed to **[*]** as an Initial Collaboration Target (i) such Collaboration Target shall be considered **[*]**, and such **[*]** shall be deemed **[*]** CAR-T Targets that could be added as a Collaboration Target pursuant to Section 3.3(b) under this Agreement, and (ii) such Collaboration Program and such Collaboration Target includes **[*]** as a **[*]** with **[*]**, and **[*]** as a **[*]** with **[*]**, in each instance whether as an Unmodified **[*]** CAR T-Cell Therapy, or as a Modified **[*]** CAR T-Cell Therapy, and the exclusivity obligations set forth in Section 11.2 that are applicable to such Collaboration Program apply also to the **[*]** of **[*]** during the **[*]** for such Collaboration Program. For the avoidance of doubt, nothing herein would prohibit GSK, after Option Exercise on the Product directed to the **[*]** Initial Collaboration Target, from dosing patients who are **[*]**, or **[*]**, even though the Product is directed to **[*]**. In the event that Lyell elects to replace the **[*]** Initial Collaboration Target with the **[*]** pursuant to Section 3.1(a)(i)(3), then, subject to the terms of this Agreement, the exclusivity obligations set forth in Section 11.2 that are applicable to the Collaboration Program for such **[*]** shall continue to apply to **[*]** constructs, **[*]** constructs and **[*]** of **[*]** and **[*]**, in each case during the **[*]** for such Collaboration Program.

3.4 Responsibility for Expenses for Conduct of Collaboration Programs. Except as set forth in this Agreement or as may be otherwise specifically agreed to in writing by Lyell and GSK, each Party shall be responsible for its own costs and expenses that it incurs in connection with the conduct of the Collaboration Programs; *provided*, *however*, that in no event shall Lyell be obligated to incur expenses (including internal costs) for a Lyell Development Program in excess of the lesser of (a) with respect to such Lyell Development Program that is not an Active GSK Program, **[*]**, or **[*]** for such Lyell Development Program that is an Active GSK Program and (b) the amounts previously paid by GSK to Lyell pursuant to **[*]** with respect to such Collaboration Program (the "**Maximum Cost Amount**"). In the event a Lyell Development Program is terminated by Lyell under Section 3.1(a)(iv) prior to the point at which Lyell has incurred the Maximum Cost Amount for such Lyell Development Program, Lyell shall pay to GSK an amount equal to the difference between the expenses actually incurred by Lyell in performing such Lyell Development Program and the Maximum Cost Amount. The amount of Lyell's expenses shall be mutually agreed by the Parties, and if the Parties are unable to agree on the exact amount, such amount shall be decided by **[*]**.

3.5 Updates and Discussions. Lyell and GSK will each provide an update at each JSC meeting detailing the current status of each Lyell Development Program or Development Program, as applicable, and in the case of Lyell, Additional Development Activities, including in each case a summary in reasonable detail of the Collaboration Programs and the Additional Development Activities (as applicable), results obtained therein and future plans with respect thereto. In addition, the Parties shall provide to the JSC or its designees the information, opportunities and disclosures set forth in Sections 2.1(c)(i), (v) and (vi). In connection with such updates and disclosures, GSK further shall keep Lyell reasonably informed of the performance of the Collaboration Anti-Exhaustion Components in Compounds and Products under each Collaboration Program, including by providing Lyell Information Controlled by GSK generated under a Collaboration Program that is necessary or reasonably useful for Lyell to understand the performance of such Collaboration Anti-Exhaustion Components and performance of Products relative to the criteria required to achieve the milestones described in Sections 8.2 and 8.3 (it being understood that the foregoing shall not require GSK to provide Lyell clinical data from a Collaboration Program after Proof of Clinical Concept has been achieved for such Collaboration Program). The results, reports, analyses and other information disclosed by one Party to the other Party pursuant hereto shall be Confidential Information and may be used and disclosed only in accordance with the rights granted and other terms and conditions under this Agreement.

3.6 Materials Transfer. It is understood that, as required herein or otherwise to facilitate a Collaboration Program, either Party may provide to the other Party certain materials for use by the other Party. All transfers of such materials (the "**Materials**") by the providing Party to the receiving Party shall be documented by a material transfer record specifically referencing this Agreement in the form attached hereto as **Exhibit 3.6** (the "**Transfer Record**") that sets forth the type and name of the Materials transferred, the amount of the Materials transferred, the date of the transfer of such Materials and the purpose for such transfer. All such Materials (including, as applicable, any progeny, expression products, mutants, replicates, derivatives and modifications thereof that are made by or on behalf of the receiving Party which include or are made using the materials of the supplying Party), solely to the extent proprietary to the providing Party or not generally available from a Third Party, shall be used by the receiving Party only in accordance with the terms and conditions of this Agreement and solely for purposes of exercising its rights or performing its obligations under this Agreement as described in the Transfer Record, and the receiving Party shall not transfer such Materials to any Third Party other than in the exercise of rights expressly granted to such receiving Party under this Agreement or upon the written consent of the supplying Party. The Materials shall be used with appropriate and reasonable caution, given that the characteristics of any such Materials may not be known.

3.7 Data Integrity and Maintenance of Records. Each Party shall maintain complete and accurate records of all work conducted under this Agreement, and all results, data and developments made pursuant to its efforts under this Agreement. Such records shall be complete and accurate and shall fully and properly reflect all work done and results achieved in the performance of this Agreement in sufficient detail and in good scientific manner, including: (a) data generated using sound scientific techniques and processes; (b) data accurately recorded in accordance with data integrity practices by Persons performing Collaboration Programs hereunder; (c) data analyzed appropriately without bias in accordance with data integrity practices; (d) data and results stored securely and easily retrieved; and (e) data trails existing to easily demonstrate or reconstruct key decisions made during the performance of the Collaboration Programs and

conclusions reached with respect to the Collaboration Programs. Each Party shall maintain such records for a period of **[*]** after such records are created; *provided* that records may be maintained for an appropriate longer period in accordance with each Party's internal policies on record retention in order to ensure the preservation, prosecution, maintenance or enforcement of intellectual property rights. Each Party shall keep and maintain all records required by Applicable Law with respect to Products.

3.8 Subcontracting. Each Party or its Affiliate may (sub)contract part but not all of the work for which it is responsible in the performance of a Collaboration Program to one or more Third Parties (each such Third Party, a "**Subcontractor**") pursuant to a written agreement ("**Subcontract**") which shall include terms and conditions protecting and limiting use and disclosure of Confidential Information and materials at least to the same extent as under this Agreement. With respect to potential Subcontractors engaged for the manufacturing of Compounds, the conduct of Clinical Trials or the processing of Clinical Trial data under Lyell Development Programs, Lyell shall consult with GSK (through the JSC or its designees) regarding the identity of such proposed Subcontractors and shall **[*]** the performance, capabilities or qualifications of such Subcontractor (but which **[*]**). Notwithstanding the foregoing, the subcontracting Party (or Party whose Affiliate enters into a Subcontract) shall remain liable under this Agreement for the performance of all its obligations under this Agreement and shall be responsible for and liable for compliance by its Subcontractors with the applicable provisions of this Agreement. Any Subcontract used by such Party to perform its obligations under this Agreement shall not include terms that limit the rights with respect to intellectual property owned or exclusively in-licensed by such Party that is licensed or to be licensed to the other Party under this Agreement. Any Third Party subcontractor to be engaged by a Party to perform any of such Party's obligations set forth in this Agreement shall meet the qualifications typically required by such subcontracting Party for the performance of work similar in scope and complexity to the subcontracted activity.

3.9 Lyell Additional Development Activities. Subject to Section 3.9(a), for each CAR-T Collaboration Target that is the subject of a Lyell PoC Development Program (and is not an Active GSK Program), during and after such Lyell PoC Development Program, Lyell and its Affiliates shall have the right with respect to such CAR-T Collaboration Target to continue its research, create additional CARs and conduct additional Development (pre-clinical and clinical) with respect to such additional CARs (and CAR T-Cell Therapies incorporating such CARs) in accordance with this Section 3.9 (such activities, "**Additional Development Activities**"). Any such CAR T-Cell Therapy directed to such CAR-T Collaboration Target (each, an "**Additional Construct**") created using or incorporating any rights in, or otherwise Covered by any New Third Party Technology that, in the case of Additional Development Activities for Collaboration Programs other than the **[*]** Collaboration Program, is approved by GSK for inclusion pursuant to Section 8.7(c) (and solely with respect to the **[*]** Collaboration Program, whether or not such New Third Party Technology is included within the Lyell Technology pursuant to Section 8.7(c)) shall be deemed a "**New Construct**" and any other Additional Construct developed using Lyell Technology (other than New Third Party Technology) or using or incorporating any Lyell Technology developed by Lyell or in-licensed by Lyell under the Existing License Agreements shall be deemed an "**Improved Construct**." Solely for purposes of this Section 3.9 and Section 13.6(b)(i)(3), with respect to matters concerning Additional Development Activities, references to the **[*]** Collaboration Program and **[*]** Collaboration Target shall be deemed to include **[*]** constructs, **[*]** constructs and **[*]** of **[*]**.

(a) **Clinical Development**. Prior to **[*]** by GSK for a Product directed to such CAR-T Collaboration Target, Lyell may **[*]** for an Additional Construct; *provided*, *however*, that in order to **[*]**, Lyell must request the JSC to define the criteria, including the required contents of the Additional Construct Data Package, for determining whether such Additional Construct is an improvement over the Product directed to such Collaboration Target for which a Clinical Trial has been previously initiated ("**Success Criteria**"). For clarity, the Parties agree that in order to be an "improvement" as described in the foregoing sentence, the Success Criteria for such Additional Construct will at minimum require transformational benefits, including superior efficacy over the existing Product. Lyell acknowledges that Success Criteria will be agreed that will reflect a material best in class improvement in efficacy over either the current, anticipated standard of care or over the predecessor construct, similar in magnitude to the efficacy improvements specified in the **[*]** Proof of Clinical Concept or Cancer Proof of Clinical Concept definitions, as applicable. If the JSC has not reached consensus on the Success Criteria within **[*]** of Lyell's request to establish them, such matter shall be resolved pursuant to Section 2.1(d) and Section 16.3. At Lyell's discretion, and subject to the remainder of this Section 3.9(a), Lyell may **[*]**, while such matter is being resolved. To be clear, (i) GSK's decision pursuant to Section 8.7(c) to preclude New Third Party Technology from being included as Lyell Technology under this Agreement will not prevent Lyell from using such New Third Party Technology to create and Develop New Constructs directed to the **[*]** Collaboration Target and (ii) other than with respect to the **[*]** Collaboration Program, Lyell may not **[*]** directed to a CAR-T Collaboration Target created using or incorporating any rights in, or otherwise Covered by any New Third Party Technology not previously approved by GSK for inclusion pursuant to Section 8.7(c).

(b) **Results**. Lyell will keep GSK reasonably informed of its Additional Development Activities and the results thereof through the JSC as described in Section 3.5. If Lyell believes the Success Criteria have been met with respect to an Additional Construct ("**Proposed Additional Construct**"), Lyell shall prepare and submit to the JSC a data package demonstrating such achievement ("**Additional Construct Data Package**") and then the JSC shall decide (subject to resolution pursuant to Section 2.1(d) and Section 16.3) whether the Success Criteria have been met. For Proposed Additional Constructs that are New Constructs, together with the Additional Construct Data Package, Lyell shall provide to GSK a written description of the New Third Party Technology used to create, incorporated in or otherwise Covering the Proposed Additional Construct that Lyell proposes to be included within the Lyell Technology licensed to GSK under this Agreement (to the extent not already included within the Lyell Technology pursuant to Section 8.7(c)) (collectively, "**New Construct Third Party Technology**") and the payment and other terms that would apply to GSK if such New Construct Third Party Technology were so included in the Lyell Technology (each agreement under which Lyell acquired or licensed such New Construct Third Party Technology not already included within the Lyell Technology pursuant to Section 8.7(c), a "**New Construct License Agreement**").

(c) **Additional Construct Opt In**. GSK shall have the right (the "**Additional Construct Opt In**") to elect to include each Proposed Additional Construct as a Product under the applicable Collaboration Program subject to this Agreement, exercisable by written notice to Lyell at any time prior to **[*]** after the JSC decides (subject to resolution pursuant to Section 2.1(d) and

Section 16.3) whether or not the Success Criteria have been met with respect to such Proposed Additional Construct (such period, the "**Additional Construct Opt-In Period**"). If GSK exercises the Additional Construct Opt In for a Proposed Additional Construct:

(i) such Proposed Additional Construct shall be deemed a "**Product**" for all purposes under this Agreement;

(ii) GSK shall, if and when applicable, pay the milestones payments and royalties set forth in Article 8 below; *provided*, *however*, that the milestone payments set forth in Section 8.3 will be paid only once with respect to a Collaboration Program upon the first achievement of such milestone event by a Compound or Product for such Collaboration Program, regardless of the number of Compounds or Additional Constructs that may be included as a Product under such Collaboration Program;

(iii) if such Proposed Additional Construct is a New Construct, each New Construct License Agreement shall be deemed a New Third Party Technology Agreement for which GSK has made an election in accordance with Section 8.7(c) to include the New Construct Third Party Technology under such New Third Party Technology Agreement within the Lyell Technology hereunder (and thereafter such New Third Party Technology Agreement shall be a Lyell License Agreement hereunder); and

(iv) GSK shall pay to Lyell the milestones and royalties owed by Lyell under the Lyell License Agreements (including any New Construct License Agreement deemed to be a Lyell License Agreement in accordance with Section 3.9(c)(iii)) in accordance with Section 8.7, including as subject to Section 8.5(b), and GSK will, and will cause its Affiliates and Sublicensees to comply with the terms and conditions thereof to the extent applicable to a sublicensee of intellectual property or technology under the Lyell License Agreements and all such terms and conditions are incorporated herein by reference.

(d) **Further Lyell Development and/or Commercialization**. If the JSC decides (subject to resolution pursuant to Section 2.1(d) and Section 16.3) the Success Criteria have been met with respect to a Proposed Additional Construct and GSK does not exercise the Additional Construct Opt In for such Proposed Additional Construct in accordance with Section 3.9(c) within the Additional Construct Opt-In Period, then, notwithstanding Article 11, Lyell and its Affiliates may, alone or with or through Third Parties, Develop, manufacture and Commercialize the Proposed Additional Construct, and any modification, improvement or derivative thereof, as a CAR T-Cell Therapy, independently of GSK and this Agreement. If the JSC decides (subject to resolution pursuant to Section 2.1(d) and Section 16.3) the Success Criteria have not been met with respect to a Proposed Additional Construct and GSK does not elect to include such Proposed Additional Construct in accordance with Section 3.9(c) within the Additional Construct Opt-In Period, then Lyell and its Affiliates may continue to conduct Additional Development Activities with respect to such Proposed Additional Construct but will not Develop such Proposed Additional Construct with a Third Party (other than Third Parties working on behalf of or for the benefit of Lyell) during the **[*]** for the applicable Collaboration Program and will not Commercialize such Proposed Additional Construct alone or with a Third Party during the **[*]** for the applicable Collaboration Program.

4. REGULATORY MATTERS

4.1 Regulatory Matters for Compounds and Product.

(a) Lyell shall have sole responsibility and decision-making authority with respect to regulatory matters for Compounds or Products pertaining to activities under each Lyell PoC Development Program or Additional Development Activities conducted by Lyell, including for preparing and submitting all Regulatory Materials and holding all INDs for such Compounds or Products for such activities, it being understood that Lyell may use an academic partner to conduct activities under the Lyell PoC Development Program (including by having an academic partner be the holder of the applicable IND and sponsor of a Clinical Trial therefor). Lyell shall keep GSK reasonably informed of its or its academic partner's interactions with Regulatory Authorities regarding Regulatory Materials for Lyell PoC Development Programs and Additional Development Activities, to the extent such interactions reasonably relate to a Compound or Product. Lyell will own all Regulatory Materials for Compounds or Products prepared and submitted by Lyell under this Section 4.1(a) and all such Regulatory Materials shall be submitted in the name of Lyell. Subject to the terms and conditions of this Agreement, Lyell hereby grants to GSK a non-exclusive Right of Reference (including the right to grant further Rights of Reference to any of GSK's Affiliates or Sublicensees) to any such Regulatory Materials and Regulatory Approvals Controlled by Lyell, to the extent required or reasonably useful to obtain or maintain any Regulatory Approval of any Product in the Field in the Territory for the sole purpose of preparing, obtaining and maintaining such Regulatory Approvals and to otherwise Develop, manufacture and Commercialize such Product in the Field in the Territory.

(b) On a Collaboration Program-by-Collaboration Program basis, GSK shall have sole responsibility and decision-making authority with respect to regulatory matters for Compounds or Products in the Territory for: (i) each TCR Program (subject to Section 3.1 (a)(iii)); (ii) each CAR-T Program that is an Active GSK Program and (iii) after delivery to GSK by Lyell of the **[*]** Data Package and payment of **[*]** to Lyell by GSK, each CAR-T Program or TCR Program that is not an Active GSK Program. Subject to Section 4.1(a), GSK shall have sole responsibility for preparing and submitting all Regulatory Materials for Products in the Field in the Territory, including preparing, submitting and holding all INDs, BLAs and MAAs for Products. GSK shall keep Lyell reasonably informed, either through the JSC, or in the event the JSC has been disbanded, through its regular reporting obligations under this Agreement, of its (and its Affiliates) interactions with Regulatory Authorities regarding Regulatory Materials, to the extent such interactions reasonably relate to a Compound or Product. Lyell shall reasonably cooperate with GSK and, to the extent not previously provided, provide to GSK all Information Controlled by Lyell developed pursuant to a Lyell Development Program for the applicable Compound or Product, in each case as may be reasonably requested by GSK, in order to prepare or support any Regulatory Materials for Products in the Field in the Territory and interactions with any Regulatory Authority in connection with Development or Regulatory Approval of Products. GSK will own all Regulatory Materials for Products prepared and submitted by GSK under this Section 4.1(b) and all such Regulatory Materials shall be submitted in the name of GSK (or its Affiliate or Sublicensee, as applicable). For clarity, nothing in this Section 4.1 shall be deemed to transfer ownership of any Information provided by Lyell to GSK for use in preparing and submitting such Regulatory Materials. Subject to the terms and conditions of this Agreement, GSK (on behalf of itself and its Affiliates and Sublicensees) hereby grants to Lyell a non-exclusive

Right of Reference (including the right to grant further Rights of Reference to any of Lyell's Affiliates, licensees or Third Party distributors) to any such Regulatory Materials and Regulatory Approvals Controlled by GSK, but only to the extent (x) such Regulatory Materials and Regulatory Approvals pertain to the Anti-Exhaustion Components or other Lyell Anti-Exhaustion Technology and (y) such right of reference is required or reasonably useful to obtain or maintain any Regulatory Approval of a product containing such Anti-Exhaustion Components or other Lyell Anti-Exhaustion Technology and for the sole purpose of preparing, obtaining and maintaining such Regulatory Approvals and to otherwise Develop, manufacture and Commercialize such product. For the avoidance of doubt, the foregoing Right of Reference shall not be construed as an obligation for GSK to provide Lyell, its Affiliates, licensees or Third Party distributors with any Information Controlled by GSK developed pursuant to a GSK Program.

(c) If requested by a Party, the other Party shall provide, and Lyell shall procure from its academic partners sponsoring a Clinical Trial under a Lyell PoC Development Program, any signed statement that authorizes any Right of Reference granted under this Section 4.1 that is required by Applicable Law or the Regulatory Authority in the applicable country or jurisdiction.

(d) To the extent necessary, the Parties shall meet to negotiate in good faith and agree on processes and procedures for sharing adverse event and other pharmacovigilance information related to the Compounds and Products no later than the initiation of Clinical Trial activity by GSK with respect to any Compound or Product. Such written plan or agreement (the "**Pharmacovigilance Agreement**") shall contain provisions to ensure that adverse event and other pharmacovigilance information is exchanged according to a schedule that will permit each Party to comply with legal and regulatory requirements in its respective territories.

4.2 No Use of Debarred Person. If during or following the Term, either Party learns that any employee or consultant performing on its behalf under this Agreement has been debarred by any Regulatory Authority, or has become the subject of debarment proceedings by any Regulatory Authority, such Party will promptly notify the other Party and will prohibit such employee or consultant from performing on its behalf under this Agreement.

4.3 Standards of Conduct. Each Party shall perform, and shall use reasonable efforts to ensure that its Affiliates, licensees, sublicensees and Third Party contractors perform, its Development activities with respect to each Collaboration Program in good scientific manner, and in compliance in all material respects with the requirements of Applicable Law.

5. COMMERCIALIZATION

5.1 Commercialization of Products. Subject to Section 3.9(d), following Option Exercise for a Collaboration Program pursuant to Section 3.1(b), GSK shall have the sole right and responsibility, at its cost and expense, for the Commercialization in the Field in the Territory of Products within such Collaboration Program. GSK will use Commercially Reasonable Efforts to **[*]** directed to each Collaboration Target **[*]** for such Product.

5.2 Decision-Making Authority. GSK shall have the sole decision-making authority for the operations and Commercialization strategies and decisions, including funding and resourcing, related to the Commercialization of Products.

6. MANUFACTURING

6.1 Overview. Following the date of the Option Exercise for the applicable Lyell Development Program for a Collaboration Target, GSK will have the exclusive right and shall be solely responsible for the manufacture (including having a Third Party manufacture on its behalf) of all Compounds and Products directed to such Collaboration Target (including all such manufacturing for use in Clinical Trials and for commercial sale) for sale and use in the Territory, including all activities related to developing the process, analytics and formulation for the manufacture of clinical and commercial quantities of such Compounds or Products, the production, manufacture, processing, filling, finishing, packaging, labeling, inspection, receiving, holding and shipping of Compounds or Products, or any raw materials or packaging materials with respect thereto, or any intermediate of any of the foregoing, including process and cost optimization, process qualification and validation, commercial manufacture, stability, in-process and release testing, quality assurance and quality control, in each case for use in the GSK Development Programs and Commercialization in the Territory. Lyell shall have the right and shall be solely responsible for the manufacture (including having a Third Party manufacture on its behalf) of all Compounds and Products for use solely in the Lyell Development Programs. As used herein, the term "manufacture" includes the scale-up, production, processing, filling, finishing, packaging, inspection, receiving, holding and shipping of Compounds and Products, and any related materials used in connection with such manufacture.

6.2 Transfer of Manufacturing Technology.

(a) **By Lyell**. Following the date of the Option Exercise for a Lyell PoC Development Program and pursuant to rights granted to GSK under Article 7, for purposes of establishing manufacturing capability for Products directed to the Collaboration Target for such Lyell PoC Development Program, Lyell shall disclose and provide to GSK (or to an authorized Third Party manufacturer designated by GSK in accordance with the terms of this Agreement), the Lyell Manufacturing Technology used by or on behalf of Lyell to manufacture the Product incorporating or made using a Collaboration Anti-Exhaustion Component for the Clinical Trial in which Academic PoC was achieved (or, if such Collaboration Anti-Exhaustion Component was a Collaboration Anti-Exhaustion Component incorporated into an Additional Construct for which GSK exercises its Additional Construct Opt In right, a Clinical Trial for a Product incorporating or made using such Collaboration Anti-Exhaustion Component the results of which were included in the Additional Construct Data Package) for the sole purposes of the manufacture of such Products and to replicate the manufacturing processes employed by or on behalf of Lyell (including any Third Party manufacturer of Lyell) with respect to such Products for such Clinical Trial. As applicable, if requested by Commercially Reasonable Efforts to have an applicable Lyell Third Party manufacturer) provide reasonable technical assistance (including on-site assistance) and consultation, pursuant to a mutually agreed upon plan for the transfer and the implementation of such Lyell Manufacturing Technology by GSK or its Third Party manufacturer (it being understood that GSK will reimburse Lyell for any direct expenses incurred in providing such assistance).

(b) **By GSK**. At GSK's reasonable discretion following the Effective Date, GSK shall **[*]** under this Agreement solely in the Lyell PoC Development Programs ("**[*]**"), as the same may be updated from time to time, and provide reasonable consultation and assistance for Lyell to understand and implement such **[*]** of such Products or Compounds.

6.3 Improvements in the Manufacture of Compounds. After the Option Exercise or after the Additional Construct Opt In for each Collaboration Program and thereafter until the expiration of the Capture Period, Lyell shall promptly disclose to GSK any improvements, innovations, advancements, inventions or developments (whether or not patentable) made by or on behalf of Lyell during the Capture Period and Controlled by Lyell for the manufacture of Collaboration Anti-Exhaustion Components incorporated by Lyell into a Compound or Product for such Collaboration Program ("**Lyell Manufacturing Improvements**"), and upon request by GSK during the Capture Period, Lyell will provide GSK with Information and Materials in Lyell's Control that are necessary or reasonably useful (and used by or on behalf of Lyell for the manufacture of such Collaboration Anti-Exhaustion Component) for GSK to use such Lyell Manufacturing Improvement for the manufacture of such Product. "**Capture Period**" means the period commencing on the Effective Date and ending upon the later of (i) **[*]** or (ii) the date **[*]**.

7. GRANT OF RIGHTS AND LICENSES

7.1 License to GSK.

(a) Subject to the terms and conditions of this Agreement, with respect to each Collaboration Program, effective as of the date of GSK's Option Exercise for such Collaboration Program, Lyell hereby grants to GSK an exclusive license, with the right to grant sublicenses through multiple tiers as provided in Section 7.2, under Lyell Technology to make, have made, use, sell, offer for sale, import (including the exclusive right to Develop and Commercialize) (i) the Collaboration Anti-Exhaustion Components for such Collaboration Program in Compounds or Products (which further includes the right to make, have made, use, sell, offer for sale, import (including the exclusive right to Develop and Commercialize) Compounds or Products to the extent incorporating such Collaboration Anti-Exhaustion Components), (ii) with respect to a Lyell PoC Development Program, the Compound and Product for which Academic PoC was achieved, and (iii) in each case in respect of clauses (i) or (ii) as such Collaboration Anti-Exhaustion Components may be modified pursuant to Section 3.1(c), in all such cases in the Field in the Territory. To be clear, (x) nothing in this license provided under Section 7.1(a) shall be deemed to grant GSK a right or license to incorporate any Lyell Technology other than a Collaboration Anti-Exhaustion Component provided under this Agreement (or modification thereof under Section 3.1(c)) into a Compound or Product (*e.g.*, GSK would not be licensed, under a Patent Controlled by Lyell claiming a proprietary binding domain for a Target other than a Collaboration Target, to incorporate into a Product or Compound such binding domain) and (y) Lyell would have the right to make, have made, use, sell, offer for sale and import (including Develop and Commercialize) Collaboration Anti-Exhaustion Components in T-Cell Therapies directed to Targets other than Collaboration Targets, and, subject to Section 11. 1, grant sublicenses to Third Parties to so.

(b) The rights and licenses granted to GSK in this Section 7.1 shall be exclusive even as to Lyell, except that Lyell retains the right to (i) perform Lyell Development Programs; (ii) research, develop, use, import and manufacture Compounds and Products in the Territory for sale and use outside the Territory, or for use in performing Additional Development Activities that Lyell is permitted to perform; and (iii) otherwise perform its obligations and exercise its rights

under this Agreement, including as set forth in Section 3.9(d); in each case itself or through others; *provided* that Lyell shall not have the right to conduct (or to authorize any Affiliate or Third Party to conduct) Clinical Trials of a Compound or Product (or of an Additional Construct) in a Major Market other than as part of a Lyell Development Program or Additional Development Activities in accordance with Article 3 above.

7.2 Sublicensing by GSK. GSK is entitled to sublicense through multiple tiers the rights granted to it by Lyell under Section 7.1(a); *provided* that, without the prior written consent of Lyell, GSK shall not sublicense the rights granted to it by Lyell under Section 7.1(a) until the earlier of (a) the **[*]** or (b) on a Collaboration Program-by-Collaboration Program basis, the **[*]** for a Product under such Collaboration Program. GSK shall ensure that each of its Sublicensees is bound by a written agreement that is consistent with, and subject to the terms and conditions of, this Agreement. In addition, GSK shall be responsible for the performance (including compliance with obligations of confidentiality under this Agreement) of any of its Sublicensees that are exercising rights under a sublicense of the rights granted by Lyell to GSK under this Agreement, and the grant of any such sublicense shall not relieve GSK of its obligations under this Agreement, except to the extent they are satisfactorily performed by any such Sublicensee(s). Promptly after the execution of each sublicense to a Third Party as provided in this Section 7.2 (or amendment or termination thereof), GSK shall provide Lyell with a notice of the sublicense, including the identity of the Sublicensee; *provided* that if such sublicense includes a sublicense of intellectual property or technology under one or more Lyell License Agreements, then GSK shall additionally provide Lyell with a redacted copy of such sublicense agreement (and any other related information) in the manner and to the extent required in order for Lyell to timely comply with its obligations to the applicable Lyell Licensors under the Lyell License Agreements.

7.3 Licenses to Lyell.

(a) **Research License**. Subject to the terms and conditions of this Agreement, GSK hereby grants to Lyell a worldwide, non-exclusive, non-sublicensable, royalty-free license under any and all GSK intellectual property rights covering the GSK Information or Materials provided to Lyell, solely to conduct the Lyell Development Programs, and not for any other purpose.

(b) **[*] License**. Subject to the terms and conditions of this Agreement, GSK hereby grants to Lyell a worldwide, non-exclusive, non-sublicensable, fully-paid up license under **[*]** (including all intellectual property rights therein Controlled by GSK) disclosed to Lyell under this Agreement solely as necessary to enable Lyell to meet any of its **[*]** under this Agreement with respect to Lyell PoC Development Programs.

7.4 Improvements.

(a) **Modified TCRs**.

(i) Subject to the terms and conditions of this Agreement, Lyell hereby assigns to GSK, all right, title and interest of Lyell and its Affiliates in and to any Modified TCR made by or on behalf of Lyell or its Affiliates, including all intellectual property rights generated by or on behalf of Lyell or its Affiliates in such Modified TCRs.

(ii) Lyell shall promptly disclose and provide to GSK all Information and Materials with respect to Modified TCRs assigned to GSK under Section 7.4(a)(i) above. Such disclosure shall include all Information and Materials necessary or reasonably useful for GSK to understand and exploit such Modified TCRs, including protein or nucleotide sequences embodying or expressing such Modified TCRs, but only to the extent such Information and Materials comprise such Modified TCRs.

(iii) For such purposes, "**Modified TCR**" means a composition, to the extent the same comprises a modification of a TCR that was provided to Lyell by GSK in connection with this Agreement, or of a nucleotide sequence expressing such TCR, in each case which composition was made by or on behalf of Lyell or its Affiliate in connection with a Collaboration Program or using Materials provided to Lyell by GSK. Notwithstanding the foregoing, Modified TCRs shall not include any Anti-Exhaustion Components.

(b) **Improved Anti-Exhaustion Components; GSK Manufacturing Improvements**.

(i) Subject to the terms and conditions of this Agreement, GSK hereby grants to Lyell a worldwide, non-exclusive, fully-paid up license, with the right to grant and authorize sublicenses, to make, use, sell, offer to sell, import and otherwise exploit for any purpose Improved Anti-Exhaustion Components and GSK Manufacturing Improvements; in each case including all intellectual property rights therein Controlled by GSK, and subject to the exclusive license granted to GSK under Section 7.1(a) above.

(ii) GSK shall promptly disclose and provide to Lyell all Information and Materials with respect to Improved Anti-Exhaustion Components and GSK Manufacturing Improvements licensed to Lyell under Section 7.4(b)(i) above. Such disclosure shall include such Information and Materials as are necessary or reasonably useful to understand and exploit such Improved Anti-Exhaustion Components and GSK Manufacturing Improvements, including protein and nucleotide sequences embodying or expressing such Improved Anti-Exhaustion Components, and the formulation, use, production, scale-up, processing, handling, effects or characteristics of products comprising or utilizing such Improved Anti-Exhaustion Components, or comprising or utilizing such GSK Manufacturing Improvements, but only to the extent such Information and Materials comprise or relate primarily to such Improved Anti-Exhaustion Components or GSK Manufacturing Improvements.

(iii) For such purposes, "**Improved Anti-Exhaustion Components**" means compositions and methods made by or under the authority of GSK or its Affiliates in connection with this Agreement that comprise or incorporate Lyell Anti-Exhaustion Technology provided to GSK under a Collaboration Program to the extent such composition or method (made by or under the authority of GSK or its Affiliates) comprises an Anti-Exhaustion Component. Any composition or method made by or under the authority of GSK or any of its Affiliates independent of this Agreement and without using or comprising Lyell Anti-Exhaustion Technology shall not be an Improved Anti-Exhaustion Component.

(iv) For such purposes, "**GSK Manufacturing Improvements**" means improvements, innovations, advancements, inventions or developments (whether or not

patentable) to the extent: (1) relating primarily to the manufacture of any Anti-Exhaustion Components provided to GSK by Lyell in connection with this Agreement, (2) made by or on behalf of GSK during the period beginning on the Effective Date and ending on the **[*]** thereof, and (3) Controlled by GSK.

7.5 No Other Rights. Except for the rights expressly granted under this Agreement, no right, title or interest of any nature whatsoever is granted whether by implication, estoppel, reliance or otherwise, by a Party to the other Party. All rights with respect to Information, Patent or other intellectual property rights that are not specifically granted herein are reserved to the owner thereof. Without limiting the foregoing, for clarity, nothing herein shall be deemed to grant to GSK a right or license to any CAR, TCR or Target other than a Collaboration Target. Without limiting the generality of the foregoing, with respect to CAR T-Cell Therapies Lyell may not cite or include in a submission to a Regulatory Authority in China any Information comprising clinical data or data generated in IND Enabling Studies, in each case generated under a Collaboration Program, including such clinical data or IND Enabling Studies data in an Academic PoC Data Package, Collaboration Component Data Package or Regulatory Materials generated under a Collaboration Program, in the conduct of any activities (itself or with a Third Party) for the Development of CAR T-Cell Therapies for Commercialization in China, without the prior written consent of GSK and upon terms, including with respect to royalties and other consideration, to be negotiated and mutually agreed upon by the Parties in good faith.

7.6 Public Domain Information. Nothing in this Agreement shall prevent either Party or its Affiliates from using for any purpose any Information or other Confidential Information that is in the public domain.

7.7 Certain Rights and Obligations Under the Lyell License Agreements. Notwithstanding any other provision of this Agreement, the following provisions shall apply.

(a) Whenever Lyell receives any report, notice or other communication relating to Compounds, Products or this Agreement from a counterparty to a Lyell License Agreement (each a "**Lyell Licensor**") with respect to the applicable Lyell License Agreement and which report, notice or other communication would have a material adverse effect on this Agreement (including any notice with respect to any default, breach or termination of the Lyell License Agreement), Lyell shall promptly provide a copy of such report, notice or other communication to GSK, which, if such notice is a termination notice, shall be provided in a manner and on timelines to enable GSK to obtain a direct license from the applicable Lyell Licensor if permitted under the terms of the applicable Lyell License Agreement. Lyell shall have no obligation to disclose to GSK any confidential information of any Third Party (other than the Lyell Licensor) contained in any such report, notice or other communication and any information provided by Lyell to GSK may be redacted to remove any such information.

(b) Lyell shall not agree or consent to any amendment, supplement or other modification to the Lyell License Agreements, in each case in a manner that adversely affects the rights to intellectual property that at the time of the amendment have been incorporated by Lyell, or Lyell reasonably plans to incorporate, into a Collaboration Anti-Exhaustion Component or have been incorporated into a Compound or Product by mutual agreement of the Parties (including pursuant to Section 3.1(c)), in each case without GSK's prior written consent (such consent not to be unreasonably withheld, delayed or conditioned).

(c) Lyell shall not terminate, and shall not take or fail to take any action that would permit the Lyell Licensor to terminate, any Lyell License Agreement (either unilaterally or by mutual agreement of Lyell with the applicable Lyell Licensor) or any right thereunder, that would have an adverse effect on the rights sublicensed to GSK under this Agreement that at the time of such action or failure to take action have been incorporated by Lyell, or Lyell reasonably plans to incorporate, into a Collaboration Anti-Exhaustion Component or have been incorporated into a Compound or Product by mutual agreement of the Parties, without the prior written consent of GSK (which consent shall not be unreasonably withheld), in each case as it related to or impacts the rights sublicensed to GSK under this Agreement.

8. PAYMENTS

8.1 Upfront Payment. In partial consideration of the rights granted to GSK under this Agreement, GSK shall pay Lyell forty-five million Dollars ($45,000,000) within **[*]** after the Effective Date and receipt of a valid invoice from Lyell. Such payment shall be non-creditable and non-refundable.

8.2 Technology Validation Payments.

(a) GSK shall pay to Lyell **[*]** for the first achievement (whether by or on behalf of a Related Party or Lyell) of Proof of Biology for any **[*]**, including any **[*]**, in each case that was generated or developed by or on behalf of Lyell, payable by GSK within **[*]** from the date of receipt of a corresponding valid invoice from Lyell. If there is any dispute whether Proof of Biology has been achieved, such matter shall be decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3).

(b) GSK shall pay to Lyell **[*]** for the first achievement of Proof of Clinical Concept for any Compound or Product, including any Compound or Product directed to an Initial Collaboration Target (whether by or on behalf of a Related Party or Lyell), payable by GSK within **[*]** from the date of receipt of a corresponding valid invoice from Lyell. If there is any dispute whether Proof of Clinical Concept has been achieved, such matter shall be decided by the JSC (subject to resolution pursuant to Section 2.1(d) and Section 16.3).

(c) The payments under Sections 8.2(a) and 8.2(b) above shall each be made only one time, upon the first occurrence of the event described therein, and as a result, no more than **[*]** will be due under Section 8.2(a), and no more than **[*]** will be due under Section 8.2(b), in the aggregate. Such payments shall be non-creditable and non-refundable. The Party achieving Proof of Biology or Proof of Clinical Concept triggering payment under either of Section 8.2(a) or 8.2(b) shall provide written notice to the other within **[*]** after the first achievement of such event by or on behalf of it or its Affiliates, and within **[*]** after the first achievement of the specified milestone event by or on behalf of its Sublicensees or their Affiliates.

8.3 Development and Commercial Milestone Payments for Collaboration Programs.

(a) GSK shall pay to Lyell the milestone payments set forth in Table 1 below for each Collaboration Program (with the applicable milestone payment amount based on whether such Collaboration Program is an Active GSK Program or not), payable by GSK within **[*]** from the date of receipt of a corresponding valid invoice from Lyell after the first occurrence of the specified milestone event; *provided* that (i) the milestone payments shall apply to any milestone event whether (A) achieved by or on behalf of GSK, its Sublicensees or their Affiliates, or (B) in the case of (x) **[*]** for Collaboration Programs that are not Active GSK Programs, or (y) **[*]**, in either instance in respect of clause (x) or (y), achieved by or on behalf of Lyell or its Affiliates (but subject to Section 3.1(a)(i)(2)); and (ii) the payment amounts set forth in Table 1 shall only apply to the first Compound or Product for a given Collaboration Program to reach the milestone event (it being understood that subsequent milestone events that were not achieved by the first Compound or Product for such Collaboration Program may be met by another Compound or Product for the same Collaboration Program). Such payments shall be noncreditable and nonrefundable. With respect to any milestone event, the Party achieving a specified milestone event shall provide written notice to the other within **[*]** after the first achievement of such specified milestone event by or on behalf of it, or its Affiliates and within **[*]** after the first achievement of the specified milestone event by or on behalf of its Sublicensees or their Affiliates.

Table 1

Milestone #	Event	For any Collaboration Program other than an Active GSK Program	For any Collaboration Program that is a Active GSK Program
[*]*	[*]	[*]	[*]
[*]*	[*]		
[*]*	[*]		
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
	Total per Collaboration Program	[*]	[*]

***[*]** shall be payable with respect to the **[*]** Collaboration Program (or if the **[*]** Collaboration Program, respectively), **[*]** shall be payable with respect to the **[*]** Collaboration Program and **[*]** shall be payable with respect to each other Collaboration Program. Notwithstanding the foregoing: (i) "**[*]**" means achievement of each of the following: (1) **[*]**, and (2) **[*]**; *provided* that as of the date of such achievement **[*]**; (ii) "**[*]**" means the achievement of **[*]**; *provided* that as of the date of such achievement **[*]**; and (iii) "**[*]**" means the achievement of **[*]**; *provided* that, as of the date of such achievement such **[*]**. For clarity, the **[*]** do not need to have been met for achievement of the **[*]**.

(b) Other than with respect to **[*]** (which shall not be deemed achieved upon the achievement of **[*]** but shall be deemed achieved upon achievement of **[*]**), if a milestone payment becomes due with respect to a Compound or Product for a specific Collaboration Program before an earlier listed milestone payment became due for such Collaboration Program for any reason, then the earlier listed milestone payments for such Collaboration Program shall be payable upon occurrence of the later listed milestone event as follows: if **[*]** shall be due. For example, if **[*]**, then upon achievement of **[*]** shall be due.

(c) For purposes of Section 8.3, "**Initiate**" or "**Initiation**" of a Clinical Trial shall mean dosing of the first human subject in such Clinical Trial.

8.4 Sales Milestone Payments.

(a) GSK shall pay to Lyell the sales based milestone payments set forth in Table 2 below the first time the aggregate Net Sales for all Compounds and Products within any Calendar Year within a Collaboration Program ("**Annual Net Sales**") meets the corresponding threshold indicated below.

Table 2

Event	For any Collaboration Program that is not an Active GSK Program	For any Collaboration Program that is an Active GSK Program
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]
Total per Collaboration Program	[*]	[*]

(b) The sales based milestone payments set forth in Table 2 above shall be payable one time for a particular Collaboration Program. GSK will notify Lyell within **[*]** in which the first occurrence of the specified milestone event occurs, and Lyell shall invoice GSK for such sales milestone payment. Each milestone payment shall be made by GSK within **[*]** from the date of receipt of a corresponding valid invoice from Lyell. For clarity, if more than one of the foregoing sales based milestone events is achieved with respect to a Collaboration Program in a given payment period, GSK shall pay to Lyell a separate milestone payment with respect to each such sales based milestone event that is achieved in such period. Such payments shall be noncreditable and nonrefundable.

8.5 Royalty Payments to Lyell.

(a) **General**. In further consideration of the rights and licenses granted by Lyell to GSK hereunder, on a Collaboration Program-by-Collaboration Program basis, GSK shall pay to Lyell royalties based on the Net Sales of all Products and Compounds for a Collaboration Program during the applicable Royalty Term. The royalty payable with respect to Products and Compounds shall be tiered based upon the level of total aggregate Net Sales in a Calendar Year of all Products and Compounds within the same Collaboration Program by all Related Parties. Royalties shall be calculated by multiplying the applicable base royalty rates ("**Base Royalty Rate**") (which Base Royalty Rates shall also be determined based on whether a Collaboration Program is an Active GSK Program or not) by the corresponding incremental portion of Net Sales Products and Compounds within the Collaboration Program as set forth in Table 3 below:

Table 3

Portion of Total Annual Net Sales in the Territory for All Products and Compounds within a Collaboration Program	Base Royalty Rate for a Collaboration Program that is not an Active GSK Program	Base Royalty Rate for a Collaboration Program that is an Active GSK Program
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

For clarity, the Net Sales thresholds in the table above shall be determined on a Collaboration Program-by-Collaboration Program basis, and "annual" Net Sales shall be determined on a calendar year-by-calendar year basis. By way of example, if the total aggregate annual Net Sales of all Products and Compounds within a Collaboration Program that is not an Active GSK Program in the Territory in a particular Calendar Year are **[*]**, then amount of royalties payable hereunder for any Product within such Collaboration Program shall be calculated as follows (subject to any applicable reductions under this Section 8.5): **[*]**.

(b) **Third Party Payments: Royalty and Milestone Offsets**. Subject to Section 8.5(f), on a Collaboration Program-by-Collaboration Program basis, GSK's royalty obligations set forth above in this Section 8.5(a) for a Collaboration Program for a particular country in the Territory for a particular royalty tier shall be reduced by an amount equal to the "**Stacking Percentage**" for such royalty tier set forth in Table 4 below multiplied by the amount of the payments actually made by: (i) GSK to Lyell under Section 8.7 for any royalties owed under Lyell License Agreements for the sale of Compound or Product for such Collaboration Program in such country, except that in each instance the Stacking Percentage under Table 4 shall be increased to **[*]** with respect to and to the extent of any royalties payable in excess of **[*]** under a particular Lyell License Agreement, and (ii) subject to Section 8.7, GSK, its Affiliates or Sublicensees to a Third Party as a royalty on the sale of Compounds or Products in such country for such Collaboration Program in consideration for a license from such Third Party under

intellectual property rights incorporated into such Compound or Product. GSK shall not have the right under this Section 8.5(b) to reduce royalty payments owed to Lyell for amounts paid for intellectual property rights for "standalone pharmaceutically active ingredients" as such term is used in the definition of Combination Products that satisfy the criteria set forth in clause (a), (b) and (c) of the definition of Combination Products.

Table 4

Portion of Total Annual Net Sales in the Territory for All Products and Compounds within a Collaboration Program	Stacking Percentage for a Collaboration Program other than an Active GSK Program	Stacking Percentage for a Collaboration Program that is an Active GSK Program
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

Furthermore, on a Collaboration Program-by-Collaboration Program basis, GSK's milestone obligations set forth in Table 1 of Section 8.3 and Table 2 of Section 8.4 for a Collaboration Program shall be reduced by an amount up to **[*]** of the payments actually made by GSK to Lyell under Section 8.7 for any milestones owed under Lyell License Agreements for the Development or Commercialization of Compounds or Products ("**Milestone Offset Amount**") for such Collaboration Program; *provided*, *however*, that in no event shall any particular milestone obligation be reduced by more than **[*]** of the amount otherwise payable by GSK to Lyell for such milestone obligation set forth in Table 1 of Section 8.3 and Table 2 of Section 8.4, as applicable; *provided further* that any portion of the Milestone Offset Amount for such Collaboration Program that GSK would have been entitled to use to reduce a milestone obligation payable to Lyell for such Collaboration Program in the absence of the foregoing limitation shall be carried over and applied (in the same manner and subject to the same limitation) against future milestone obligations payable by GSK with respect to such Collaboration Program until (subject to the remainder of this Section 8.5(b)) the full Milestone Offset Amount is taken against milestone obligations due under such Collaboration Program; *provided further* that in no event shall any such milestone reductions apply in a given Collaboration Program once the reductions total: **[*]** (in each case, the "**Lyell License Milestone Cap**"). At such time as the Lyell License Milestone Cap is reached for a given Collaboration Program, the milestone reduction hereunder will no longer apply and GSK will be responsible for the full amount of any milestones due and owing under Sections 8.3 and 8.4 in this Agreement with respect to such Collaboration Program.

(c) **Biosimilar Competition**. Subject to Section 8.5(f), if there are one or more products being sold in a country that are Biosimilar Products with respect to a Product during the Royalty Term but after the Patent Exclusivity Term and Regulatory Exclusivity Term for such Product for such country, then the royalties that would otherwise be due to Lyell with respect to such Product for such country pursuant to Section 8.5(a) shall be reduced as follows:

(i) by **[*]** with respect to any calendar quarter during which such Biosimilar Product(s), by **[*]**, exceed a **[*]** share of the market;

(ii) by **[*]** with respect to any calendar quarter during which such Biosimilar Product(s), by **[*]**, exceed a **[*]** share of the market; and

(iii) by **[*]**, in the event that in any calendar quarter during which such Biosimilar Product(s), by **[*]**, exceed a **[*]** share of the market.

For purposes of this Section 8.5(c), "**market**" refers to the aggregate combined number of units of the Biosimilar Product(s) and the applicable Product that are sold commercially in the particular country during the applicable calendar quarter.

(d) **One Royalty**. The royalties owing under this Agreement are attributable independently but concurrently to the Lyell Patent Rights and the grant of other rights and undertakings of Lyell in this Agreement (including the grant of rights to Lyell Know-How and Lyell Materials). However, only one royalty shall be due to Lyell with respect to the same unit of Product, as described in Section 8.5(a) above. Further, GSK shall not be obligated to pay a royalty on the Net Sales of a unit of Compound in the event that Net Sales are payable on the sale of a Product including such unit of Compound.

(e) **Royalty Term**. Royalties payable by GSK to Lyell under this Section 8.5 shall be paid on a Product-by-Product, and country-by-country basis, until the later of (i) expiration in such country of the last Valid Claim of the last to expire Patent within the Lyell Patent Rights that Cover such Product ("**Patent Exclusivity Term**"), (ii) expiration of all applicable regulatory, pediatric, orphan drug or data exclusivity with respect to such Product for such country ("**Regulatory Exclusivity Term**"), or (iii) **[*]** after First Commercial Sale of the applicable Product in such country (collectively, the "**Royalty Term**"). For clarity, GSK shall not owe royalties on Products sold in a country after expiration of the Royalty Term for such Product in such country; and Net Sales of Products in a country after the applicable Royalty Term in such country shall not be included for purposes of determining the tier of Base Royalty Rate or Floor Royalty Rate to be used for calculating royalties as described in Section 8.3(a) for other Products or countries.

(f) **Royalty Floor**. Notwithstanding the foregoing, in no event shall the cumulative amount of all reductions applicable to any Product or Compound for a Collaboration Program in any country for a particular royalty tier pursuant to this Section 8.5 reduce the amount of royalties under Section 8.5(b) above with respect to such Product or Compound in such country to less than the Floor Royalty Rate for such royalty tier set forth in Table 5 below:

Table 5

Portion of Total Annual Net Sales in the Territory for All Products and Compounds within a Collaboration Program	Floor Royalty Rate for a Collaboration Program other than an Active GSK Program	Floor Royalty Rate for a Collaboration Program that is an Active GSK Program
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

8.6 Royalty Payments and Reports. All amounts payable to Lyell pursuant to Section 8.5 shall be paid in Dollars within **[*]** after the end of the calendar quarter in which the applicable Net Sales were recorded. Each payment of royalties shall be accompanied by a royalty report providing a statement, on a Product-by-Product and country-by-country basis, of: (a) the amount of Net Sales of Products in the Territory during the applicable calendar quarter, (b) a calculation of the amount of royalty payment due in Dollars on such Net Sales for such calendar quarter, and (c) the amount of withholding taxes, if any, required by Applicable Law to be deducted with respect to such royalties. In addition, to the extent not otherwise described in the royalty report, GSK shall obtain and deliver to Lyell, on an **[*]** basis and within **[*]** of Lyell's request to provide, information as reasonably requested by Lyell that is sufficient to meet any documentation requirements imposed by regulations issued under Section 250 of the Internal Revenue Code of 1986, as amended (the "**Internal Revenue Code**"), for the treatment of an appropriate portion of such amounts as "foreign-derived deduction eligible income" within the meaning of Section 250 of the Internal Revenue Code and the regulations thereunder.

8.7 Lyell License Agreements.

(a) Subject to Section 8.5(b), GSK shall bear and pay to Lyell milestone payments and royalties (but not License Upfront/Maintenance Fees) owed by Lyell to a Third Party after the Effective Date for the acquisition or licensing of intellectual property rights or technology that become due under the Lyell License Agreements as a result of the manufacture, Development or Commercialization of Compounds or Products under this Agreement or GSK's other exercise of rights to such intellectual property rights or technology. GSK shall pay all such royalties together with royalties owed under Section 8.5 and 8.6 and GSK shall pay such milestone payments within **[*]** after receipt of a valid invoice therefor (which such invoice Lyell may issue upon such milestone payment accruing under the applicable Lyell License Agreement). GSK shall provide written notice to Lyell within **[*]** after the achievement by or on behalf of it or its Affiliates of a milestone for which a payment under a Lyell License Agreement is due to be paid by GSK, and within **[*]** after the achievement of such a milestone by or on behalf of GSK's Sublicensees or their Affiliates.

(b) Without limiting Section 8.7(a) above, GSK and Lyell each acknowledge and agree that all licenses granted under this Agreement, to the extent they constitute rights under intellectual property rights or technology covered by a Lyell License Agreement, shall be subject to the relevant terms and conditions of such Lyell License Agreement (including with respect to the Prosecution, enforcement, extension or defense of any Patents licensed under such Lyell License Agreement); *provided*, *however*, that Lyell shall use Commercially Reasonable Efforts to obtain, prior to the Option Exercise for any applicable Collaboration Program, from the applicable Lyell Licensor a waiver in respect of this Agreement of the terms set forth in **Exhibit 8.7(b)-1** (the "**Waiver Terms**") from the Existing License Agreements set forth therein in each case to the extent such terms would otherwise be applicable to GSK as a sublicensee of intellectual property rights or technology covered by such Existing License Agreement. GSK shall not be obligated to comply with the Waiver Terms of the Existing License Agreements. Subject to the preceding sentence, GSK agrees to comply with the terms and conditions of each Lyell License Agreement to the extent required or applicable to the rights granted to GSK hereunder with respect to such intellectual property rights or technology (as of the Effective Date, such terms and conditions,

including any payment obligations, GSK will be responsible for are set forth on **Exhibit 8.7(b)-2**), and to the extent a Lyell License Agreement requires that such provisions be incorporated in a sublicense granted thereunder, such terms and conditions (other than the Waiver Terms) are hereby expressly incorporated in this Agreement by reference. Any exclusive licenses that are granted under this Agreement that constitute rights or sublicenses under such Lyell License Agreements are exclusive only to the extent of the exclusive nature of the rights granted to Lyell under such Lyell License Agreement.

(c) If Lyell in-licenses or acquires New Third Party Technology that is subject to milestone payments and royalties owed to a Third Party arising from the manufacture, Development or Commercialization of Compounds or Products or GSK's other exercise of rights to such New Third Party Technology (other than solely with respect to New Constructs for which GSK has not yet exercised its Additional Construct Opt In rights under Section 3.9(c) above) or would otherwise require GSK to comply with other obligations under such New Third Party Agreement, then Lyell shall so notify GSK and provide GSK a written description of the New Third Party Technology and the payment and other terms that would apply to GSK with respect to such New Third Party Technology Agreement. If GSK desires to include such New Third Party Technology within the Lyell Technology hereunder, GSK shall provide notice to the JSC thereof within **[*]** of GSK's receipt of such description, and shall comply, and cause its Affiliates and Sublicensees to comply, with the applicable terms of such New Third Party Technology Agreement. Unless and until such time as GSK delivers to Lyell such written election notice and agreement to be bound in accordance with the foregoing within such **[*]** period (or thereafter to the extent provided in Section 3.9(c) in connection with an Additional Construct Opt In for a New Construct) such New Third Party Technology and New Third Party Technology Agreement shall be deemed excluded from the Lyell Technology and Lyell License Agreements hereunder, respectively. For clarity, GSK will not be responsible for the payment of any License Upfront/Maintenance Fees.

(d) GSK may terminate its rights under any Lyell Technology covered by a Lyell License Agreement at any time by so notifying Lyell in writing and describing the Lyell License Agreement to which such termination applies, in which case the same shall be deemed excluded from the Lyell Technology, and GSK shall not be responsible for any corresponding payment or other obligations with respect to such terminated subject matter other than those which accrued prior to the date of such termination notice.

(e) Lyell shall not incorporate a New Third Party Technology into the Anti-Exhaustion Component(s) comprising any Collaboration Deliverables provided to GSK pursuant to Section 3.1(a)(v) above, unless GSK previously approved such incorporation.

8.8 Payment Method. All payments due under this Agreement to Lyell shall be made by bank wire transfer in immediately available funds to an account designated by Lyell. All payments hereunder shall be made in Dollars.

8.9 Withholding Taxes. All payments by GSK to Lyell hereunder shall be made free and clear of and without reduction for any taxes, duties or similar charges imposed by any government (other than taxes on the net income of Lyell), which shall be paid by GSK. Accordingly, if GSK is required to withhold any taxes on the amounts payable to Lyell hereunder,

GSK shall pay Lyell such additional amounts as are necessary to ensure receipt by Lyell of the full amount which GSK would have received but for the deduction on account of such withholding. GSK shall provide Lyell with official receipts issued by the appropriate governmental agency or such other evidence as is reasonably requested by Lyell to establish that such taxes have been paid. Each Party agrees to cooperate with the other Party in claiming refunds or exemptions from such deductions or withholdings under any relevant agreement or treaty that is in effect. The Parties shall discuss applicable mechanisms for minimizing such taxes to the extent possible in compliance with Applicable Law.

8.10 Indirect Taxes. All amounts set forth in this Agreement are exclusive of all indirect taxes (such as value added tax, sales tax, consumption tax and other similar taxes), and GSK shall be responsible for and shall pay any such taxes imposed on any payments contemplated by this Agreement. The Parties shall cooperate in accordance with Applicable Law to minimize any taxes described in this Section 8.10.

8.11 Royalty on Sublicensee Sales. For clarity, GSK shall have the responsibility to account for and report sales of any Product or Compound by an Affiliate or Sublicensee on the same basis as if such sales were Net Sales by GSK. GSK shall pay to Lyell such Sublicensee or Affiliate amounts when due under this Agreement.

8.12 Foreign Exchange. With respect to Net Sales invoiced in a currency other than Dollars, all such amounts shall be converted using a manner consistent with GSK's normal practices used to prepare its audited financial statements for external reporting purposes; *provided* that such practices use a widely accepted source of published exchange rates.

8.13 Records. GSK shall keep, and shall cause its Affiliates and Sublicensees to keep, complete, true and accurate books of accounts and records sufficient to determine and establish the amounts payable incurred under this Agreement (including with respect to any Lyell License Agreement), and compliance with the other terms and conditions of this Agreement. Such books and records shall be kept reasonably accessible and shall be made available for inspection for a **[*]** period in accordance with Section 8.14 below.

8.14 Inspection of GSK Records. Upon at least **[*]** notice, GSK shall permit an independent nationally recognized certified public accounting firm (subject to obligations of confidentiality to GSK), appointed by Lyell and reasonably acceptable to GSK, to inspect the audited financial records of GSK, its Affiliates and Sublicensees to the extent relating to payments to Lyell; *provided* that such inspection shall not occur more often than **[*]**. Any inspection conducted under this Section 8.14 shall be at the expense of Lyell, unless such inspection reveals any underpayment of the amounts due hereunder for the audited period by at least **[*]**, in which case the full costs of such inspection for such period shall be borne by GSK. Any underpayment shall be paid by GSK to Lyell within **[*]** with interest on the underpayment at the rate specified in Section 8.15 from the date such payment was originally due, and any overpayment shall be credited against future amounts due by GSK to Lyell or promptly refunded to GSK in the event no such future amounts are due. For clarity, such accounting firm may disclose to Lyell and its Affiliates, and Lyell and such accounting firm may disclose to the counterparties of the Lyell License Agreements, whether the reports and payments by GSK under this Agreement were correct or not and the amount of any discrepancy.

8.15 Late Payments. Any undisputed payments or portions thereof due hereunder that are not paid on the date such payments are due under this Agreement shall bear interest at a rate equal to **[*]** above the prime rate as published by Citibank, N.A., New York, New York, or any successor thereto, at 12:01 a.m. on the **[*]** in which such payments are overdue, calculated on the **[*]** such payment is delinquent, compounded **[*]**.

8.16 Invoicing. To the extent an invoice is required to be submitted to GSK hereunder, such invoice shall include the information set forth in **Exhibit 8.16**.

9. PATENT PROSECUTION AND ENFORCEMENT

9.1 Ownership of Information and Inventions. Inventorship of intellectual property will be determined in accordance with Applicable Laws relating to inventorship set forth in the U.S. Patent laws for all purposes under this Agreement, and such principles of inventorship shall be used to determine whether a Party solely, or the Parties jointly, discovered, invented or created any intellectual property arising as a result of the performance of its or their obligations under this Agreement. Notwithstanding the foregoing, except as set forth in Section 7.4: (a) each Party will own all inventions (and all Patent and other intellectual property rights therein) solely invented by or on behalf of it or its Affiliates and/or their respective employees, agents and independent contractors in the course of conducting its activities under this Agreement (collectively, "**Sole Inventions**"); and (b) all inventions invented jointly by employees, Affiliates, agents or independent contractors of each Party in the course of conducting its activities under this Agreement and all Patent and other intellectual property rights therein (collectively, "**Joint Inventions**") will be jointly owned by the Parties. Subject to any license grants provided or restrictions identified under this Agreement, each Party will be entitled to practice, license and otherwise exploit Joint Inventions without restriction or consent of the other or an obligation to account to the other Party, and each Party hereby waives any right it may have under the laws of any jurisdiction to require any such consent or accounting. Subject to a Party's obligations under applicable terms of this Agreement (*e.g.*, licenses granted hereunder, confidentiality obligations, etc.) with respect to same, any Information generated during or resulting from a Party's activities under this Agreement may be used by such Party for any purpose. This Agreement will be understood to be a joint research agreement under 35 U.S.C. §103(c)(3) entered into for the purpose of researching, identifying and developing Compounds and Products and other inventions under the terms set forth herein.

9.2 Prosecution of Product Specific Patents.

(a) For each Collaboration Program, Lyell shall file in the Major Markets one or more Product Specific Patents. Lyell shall provide GSK with a draft of each such application at least **[*]** prior to filing to give GSK a reasonable opportunity to review and comment on any such application proposed to be sent to any patent office. Lyell shall consider in good faith GSK's comments on such draft applications to the extent such applications pertain to Compounds and Products. Promptly after filing such patent application, Lyell shall provide GSK a copy of each such application as filed, together with notice of its filing date and serial number. After such patent application is so filed, it shall be deemed a Product Specific Patent and Prosecution of such patent application shall be handled thereafter by GSK as set forth in Section 9.2(b) below (or by Lyell to the extent set forth in the last sentence of Section 9.2(b)).

(b) Following the initial filing by Lyell under Section 9.2(a), GSK will have the first right, but not the obligation, to further draft, file, prosecute and maintain (including any oppositions, interferences, reissue proceedings, reexaminations and post-grant proceedings) in all jurisdictions in the Territory (such activities with respect to Patents being the "**Prosecution**", with the term "**Prosecute**" having the corresponding meaning) the Product Specific Patents for such Collaboration Program at its expense. GSK will provide Lyell reasonable opportunity to review and comment on such Prosecution efforts regarding such Product Specific Patent, and Lyell will provide GSK reasonable assistance in such efforts. GSK will provide Lyell with a copy of all material communications from any patent authority in the applicable jurisdictions regarding such Product Specific Patent being Prosecuted by GSK, and will provide Lyell drafts of any filings or responses to be made to such patent authorities reasonably well in advance of submitting such filings or responses so that Lyell may have an opportunity to review and comment thereon. GSK shall consider in good faith any comments of Lyell and GSK shall incorporate Lyell's comments to the extent they are directed to removing subject matter beyond the composition of matter or formulation of, or any method of making or using, a Collaboration Anti-Exhaustion Component as incorporated into a Product for such Collaboration Program. GSK shall not Prosecute or amend any Product Specific Patent in a manner to cause it to no longer be a Product Specific Patent, and shall use reasonable efforts to obtain and maintain broad issuance of the Product Specific Patents. If GSK determines in its sole discretion to: (i) abandon, cease Prosecution of or otherwise not file or maintain any such Product Specific Patents in any jurisdiction, or (ii) to abandon any subject matter or claims in any Patent within such Product Specific Patents, then GSK will provide Lyell written notice of such determination at least **[*]** before any deadline for taking action to avoid abandonment (or other loss of rights) and will provide Lyell with the opportunity to Prosecute such Product Specific Patent in such jurisdiction or, in the case of subject matter or claims, to file such subject matter or claims through a divisional or continuation Patent (or foreign equivalent thereof) of such Product Specific Patent and thereafter such Patent (and any continuation or divisional thereof) shall cease to be a Product Specific Patent and GSK's rights therein under Section 7.1(a) shall become nonexclusive.

(c) **Patent Term Extensions**. The Parties will confer regarding the desirability of seeking in any country in the Territory any patent term extension, supplemental patent protection or related extension of rights with respect to the Product Specific Patents. GSK shall have the sole right, but not the obligation, to apply for any such extension or protection with respect to the Product Specific Patents. Without limiting the foregoing, Lyell covenants that it will not seek patent term extensions, supplemental protection certificates, or similar rights or extensions for the Product Specific Patents without the prior written consent of GSK, not to be unreasonably withheld. Each Party will cooperate fully with and provide all reasonable assistance to the other Party and use all reasonable efforts consistent with its obligations under Applicable Law (including any applicable consent order or decree) in connection with obtaining any such extensions for the Product Specific Patents consistent with such strategy. To the extent reasonably and legally required in order to obtain any such extension in a particular country, each Party will make available to the other a copy of the necessary documentation to enable such other Party to use the same for the purpose of obtaining the extension in such country.

9.3 Prosecution of Other Patents.

(a) **GSK Patents**. GSK will have the sole right and authority with respect to GSK Patents in any jurisdiction, including Prosecution. GSK will be responsible for all costs incurred by it in the course of Prosecuting and enforcing such GSK Patents.

(b) **Lyell Patent Rights**. As between the Parties, Lyell will have the sole right and authority, but not the obligation, to Prosecute in all jurisdictions all Lyell Patent Rights other than the Product Specific Patents ("**Other Lyell Patents**"). Lyell will be responsible for all costs incurred by it in the course of Prosecuting such Other Lyell Patents.

(c) **General Tools Patents**. As between the Parties, Lyell will have the sole right and authority with respect to Patents covering the General Tools in any jurisdiction, including Prosecution and enforcement. Lyell will be responsible for all costs incurred by it in the course of Prosecuting and enforcing such General Tools Patents.

9.4 Infringement of Lyell Patent Rights by Third Parties.

(a) **Notification**. The Parties will promptly notify each other of any actual, threatened, alleged or suspected infringement by a Third Party (an "**Infringement**") of the Product Specific Patents with respect to any T-Cell Therapy directed to a Collaboration Target in the Territory of which it becomes aware, and will provide evidence in such Party's possession demonstrating such Infringement. A notice under 42 U.S.C. 262(l) (however such section may be amended from time to time during the Term) with respect to a Product will be deemed to describe an act of Infringement, regardless of its content. Each Party will notify and provide the other Party with copies of any allegations of patent invalidity, unenforceability or non-infringement of any Product Specific Patents Covering a Compound or Product (including methods of use or manufacture thereof). Such notification and copies will be provided by the Party receiving such certification to the other Party as soon as practicable and, unless prohibited by Applicable Law, at least within **[*]** after the receiving Party receives such certification.

(b) **Infringement of Product Specific Patents**. During the term of a Collaboration Program, GSK will have the first right, but not the obligation, to bring and control, at its expense, an appropriate suit or other action before any government or private tribunal against any person or entity allegedly engaged in any Infringement (an "**Infringement Action**") of any Product Specific Patent in the Territory to remedy the Infringement (or to settle or otherwise secure the abatement of such Infringement) with respect to any T-Cell Therapy that is directed to the Collaboration Target of such Collaboration Program in the Territory ("**Product Specific Infringement Action**"). The foregoing right of GSK shall include the right to perform all actions of a reference product sponsor set forth in 42 U.S.C. 262(l), excluding, for clarity, listing or enforcing any Other Lyell Patent in connection with the process described in 42 U.S.C. 262(l) without Lyell's prior written consent. Lyell will have the right, at its own expense and by counsel of its choice, to be represented in any Product Specific Infringement Action. At GSK's request, Lyell will join any Product Specific Infringement Action as a party and will use reasonable efforts (at GSK's expense) to cause any applicable Lyell Licensor to join such Product Specific Infringement Action as a party (all at GSK's expense) if doing so is necessary for the purposes of establishing standing or is otherwise required by Applicable Law to pursue such Product Specific

Infringement Action. GSK will have a period of **[*]** after its receipt or delivery of notice and evidence pursuant to Section 9.4(a) to elect to so enforce such Product Specific Patents in the applicable jurisdiction (or to settle or otherwise secure the abatement of such Infringement); *provided*, *however*, that such period will be more than **[*]** to the extent Applicable Law prevents earlier enforcement of such Product Specific Patents (such as the enforcement process set forth in 42 U.S.C. 262(l)) and such period will be less than **[*]** to the extent that a delay in bringing an action to enforce the applicable Product Specific Patents against such alleged Third Party infringer would limit or compromise the remedies (including monetary and injunctive relief) available against such alleged Third Party infringer. In the event GSK does not so elect (or settle or otherwise secure the abatement of such Infringement) within the aforementioned period of time or **[*]** before the time limit, if any, for the filing of a Product Specific Infringement Action, whichever is sooner, it will so notify Lyell in writing and in the case where Lyell then desires to commence a suit or take action to enforce the applicable Product Specific Patents with respect to such Infringement in the applicable jurisdiction, the Parties will confer and upon GSK's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), Lyell will have the right to commence and control such a suit or take such action to enforce the applicable Product Specific Patents, at Lyell's expense. Each Party will provide to the Party enforcing any such rights under this Section 9.4(b) reasonable assistance in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff if required by Applicable Law to pursue such action. The enforcing Party will keep the other Party regularly informed of the status and progress of such enforcement efforts, and will reasonably consider the other Party's comments on any such efforts.

(c) **Settlement**. Without the prior written consent of the other Party (not to be unreasonably withheld, conditioned or delayed), neither Party will settle any Product Specific Infringement Action in any manner that would adversely affect a Product Specific Patent (including by admitting the invalidity or unenforceability of such Product Specific Patent), that imposes on the other Party restrictions or obligations or that would limit or restrict the ability of GSK (or its Affiliates or Sublicensees, as applicable) to sell Products anywhere in the Territory.

(d) **Expenses and Recoveries**. A Party bringing a Product Specific Infringement Action under this Section 9.4 against any Third Party engaged in Infringement of the Product Specific Patents will be solely responsible for any expenses incurred by such Party as a result of such Product Specific Infringement Action. If such Party recovers monetary damages from such Third Party in such Product Specific Infringement Action, such recovery will first be applied to all out-of-pocket costs and expenses incurred by the Parties in connection therewith, including attorneys' fees. If such recovery is insufficient to cover all such costs and expenses of both Parties, it will be shared pro-rata in proportion to the relative amount of such costs and expenses incurred by each Party. If after such reimbursement any funds remain from such damages, such funds will be shared as follows: (i) if GSK is the Party bringing such Product Specific Infringement Action, such remaining funds will be **[*]**, and (ii) if Lyell is the Party bringing such Product Specific Infringement Action, such remaining funds will be **[*]**.

9.5 Infringement of Other Lyell Patents.

(a) Lyell will have the sole right, but not the obligation, to bring at its expense an Infringement Action against any Third Party allegedly engaged in any Infringement of any

Other Lyell Patent. Lyell will have the sole discretion to elect to so enforce such Lyell Patent Rights (or to settle or otherwise secure the abatement of such Infringement). In the event Lyell does not so elect (or settle or otherwise secure the abatement of such Infringement) with respect to any Infringement with respect to a Third Party T-Cell Therapy that is directed to a Collaboration Target in the Territory, it will so notify GSK in writing and in the case where GSK then desires to commence an Infringement Action to enforce the applicable Other Lyell Patents with respect to such Infringement, the Parties will confer and upon Lyell's prior written consent GSK will have the right to commence and control such an Infringement Action to enforce the applicable Other Lyell Patent against such Infringement, at GSK's expense. Lyell will have the right, at its own expense and by counsel of its choice, to be represented in any such Infringement Action with respect to an Other Lyell Patent commenced or controlled by GSK. Each Party will provide to the Party enforcing any such rights under this Section 9.5(a) reasonable assistance in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff if required by Applicable Law to pursue such action. The enforcing Party will keep the other Party regularly informed of the status and progress of such enforcement efforts, and will reasonably consider the other Party's comments on any such efforts, in each case to the extent the Infringement is with respect to a T-Cell Therapy that is directed to a Collaboration Target in the Territory.

(b) Without the prior written consent of the other Party (not to be unreasonably withheld, conditioned or delayed), the other Party will not settle any Infringement Action enforcing Other Lyell Patents with respect to a T-Cell Therapy directed to a Collaboration Target in the Territory in any manner that would limit or restrict the ability of a Party (or its Affiliates or sublicensees, as applicable) to sell Products in the Territory, and without the prior written consent of the Lyell, GSK will not settle any Infringement Action related to Other Lyell Patents in any manner that would adversely affect such Other Lyell Patents (including by limiting the scope, or admitting the invalidity or unenforceability, of such Other Lyell Patent) or that imposes on Lyell restrictions or obligations.

(c) A Party bringing an Infringement Action under Section 9.5(a) against any Third Party engaged in Infringement of any Other Lyell Patent will be solely responsible for any expenses incurred by such Party as a result of such Infringement Action. If such Party recovers monetary damages from such Third Party in such Infringement Action against Infringement with respect to a T-Cell Therapy that is directed to a Collaboration Target in the Territory, such recovery will be shared as follows: (i) if GSK is the Party bringing such Infringement Action, such remaining funds will be shared at the rate of **[*]** for GSK and **[*]** for Lyell, and (ii) if Lyell is the Party bringing such Infringement Action, such remaining funds will be shared in the ratio of **[*]** for Lyell and **[*]** for GSK. For clarity, neither Party shall have any obligation to share any amount of recoveries remaining after reimbursing out-of-pocket costs and expenses incurred by the other Party in connection with assisting such Party, to the extent such recoveries do not arise from Infringement by a T-Cell Therapy that is directed to a Collaboration Target in the Territory.

9.6 Reexaminations, Oppositions and Related Actions.

(a) The Parties will promptly notify each other in the event that any Third Party files, or threatens to file, any paper in a court, patent office or other government entity, seeking to invalidate, reexamine, oppose or compel the licensing of any Lyell Patent Right or Product Specific Patent (any such Third Party action being a "**Patent Challenge**").

(b) GSK will have the first right to bring and control, at its expense, any effort in defense of such a Patent Challenge against a Product Specific Patent, except in the case where such Patent Challenge is made in connection with an Infringement Action in which case the enforcing Party in the Infringement Action will have the first right to bring and control the defense of such Patent Challenge and such Patent Challenge will be considered part of the Infringement Action under this Article 9. In the case where GSK controls the defense of such Patent Challenge, Lyell will have the right, at its own expense and by counsel of its choice, to be represented in any such effort. If GSK fails to take action to defend such Patent Challenge within **[*]** of the time limit for bringing such defense (or within such shorter period to the extent that a delay in bringing such defense would limit or compromise the outcome of such defense of such Patent Challenge), then Lyell will have the right, but not the obligation, to bring and control any effort in defense of such Patent Challenge at its own expense.

(c) Lyell will have the first right to bring and control, at its expense, any effort in defense of such a Patent Challenge related to any Other Lyell Patent (including, for clarity, any challenge by a Third Party with respect to an Other Lyell Patent in connection with the process described in 42 U.S.C. 262(l)), except in the case where such Patent Challenge is made in connection with an Infringement Action in which case the enforcing Party in the Infringement Action will have the first right to bring and control the defense of such Patent Challenge and such Patent Challenge will be considered part of the Infringement Action under this Article 9.

9.7 Licensor Rights to Prosecute, Enforce, Extend or Defend. To the extent that a Third Party licensor of Lyell has retained any right to Prosecute, enforce, extend or defend any Patent within the Lyell Patent Rights licensed to Lyell pursuant to a Lyell License Agreement, or otherwise be involved in such activities, the rights and obligations under Article 9 shall be subject and subordinate to such rights and Lyell will not be deemed to be in breach of Article 9 as a result thereof. In such event, the Patent Contacts of each Party shall cooperate to provide each Party with the benefits of this Article 9 as is reasonably practical consistent with the rights of such Third Party licensor.

9.8 Patent Contacts. Each Party will designate patent counsel representatives who will be responsible for coordinating the activities between the Parties in accordance with this Article 9 (each a "**Patent Contact**"). Each Party will designate its initial Patent Contact within **[*]** following the Effective Date and will promptly thereafter notify the other Party of such designation. If at any time a vacancy occurs for any reason, the Party that appointed the prior incumbent will as soon as reasonably practicable appoint a successor. Each Party will promptly notify the other Party of any substitution of another person as its Patent Contact. The Patent Contacts will, from time to time, coordinate the respective patent strategies of the Parties relating to this Agreement.

9.9 Further Action. Each Party will, upon the reasonable request of the other Party, provide such assistance and execute such documents as are reasonably necessary for such Party to exercise its rights and perform its obligations pursuant to this Article 9; *provided*, *however*, that neither Party will be required to take any action pursuant to Article 9 that such Party reasonably determines in its sole judgment and discretion conflicts with or violates any applicable court or government order or decree or Applicable Law.

10. TRADEMARKS

10.1 Product Trademarks. As between the Parties, GSK shall have the sole right and responsibility for the selection (including the creation, searching and clearing), registration, maintenance, policing and enforcement of all trademarks developed for use in connection with the marketing, sale or distribution of Products in the Field in the Territory (the "**Product Marks**").

10.2 Use of Name. Neither Party shall, without the other Party's prior written consent, use any trademarks or other marks of the other Party (including the other Party's corporate name), advertising taglines or slogans confusingly similar thereto, in connection with such Party's marketing or promotion of Products under this Agreement or for any other purpose, except as may be expressly authorized in writing in connection with activities under this Agreement and except to the extent required to comply with Applicable Law.

11. EXCLUSIVITY

11.1 Lyell Exclusivity. Lyell will not work with any Third Party for the purpose of Development or Commercialization of (a) a CAR T-Cell Therapy anywhere in the world (other than for China with respect to CAR T-Cell Therapies that are not directed to a Target for an Active GSK Program) during the period beginning on the Effective Date and ending upon **[*]** (i) **[*]** after the Effective Date and (ii) the date when the **[*]** CAR-T Target is added as a Collaboration Target; or (b) a TCR T-Cell Therapy anywhere in the world (other than for China with respect to TCR T-Cell Therapies that are not directed to a Target for an Active GSK Program) during the period beginning on the Effective Date and ending upon the **[*]** (i) **[*]** after the Effective Date and (ii) the date when the **[*]** TCR Target is added as a Collaboration Target; *provided* that this Section 11.1 (A) shall not apply to T-Cell Therapies directed to any Excluded Target (subject to GSK's reserved rights, and Lyell's obligations, with respect to the Substitution Target pursuant to Section 3.1(a)(i)(1)), Lyell Advanced CAR-T Targets, or Lyell's activities permitted under Section 3.9(d), and (B) shall not restrict Lyell from working with contractors or clinical sites by or for the benefit of Lyell or from working with research institutions (including universities and research centers such as the Fred Hutchinson Cancer Research Center) and provided, in the case of this clause (B), such Third Parties are not granted any commercialization rights with respect to such Lyell Technology.

11.2 Program Exclusivity. On a Collaboration Program-by-Collaboration Program basis, during the **[*]** for a Collaboration Program, Lyell and any of its Affiliates shall not, directly or indirectly, conduct any research, development and/or commercialization activities with respect to any T-Cell Therapy directed to such Collaboration Program's Collaboration Target for the Territory, except to the extent expressly permitted pursuant to this Agreement. "**[*]**" means, with respect to a Collaboration Program, the period beginning upon **[*]** and ending upon **[*]**.

12. CONFIDENTIALITY

12.1 Confidentiality. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the Parties, each Party (the "**Receiving Party**") agrees that it shall

keep confidential and shall not publish or otherwise disclose and shall not use for any purpose other than as provided for in this Agreement (which includes the exercise of any rights or the performance of any obligations hereunder) any Confidential Information furnished to it by the other Party (the "**Disclosing Party**") pursuant to this Agreement except for that portion of such Information that the Receiving Party can demonstrate by competent written proof:

(a) was already known to the Receiving Party or any of its Affiliates, other than under an obligation of confidentiality, at the time of disclosure by the other Party;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the Receiving Party in breach of this Agreement;

(d) is subsequently disclosed to the Receiving Party or any of its Affiliates by a Third Party without obligations of confidentiality with respect thereto; or

(e) is subsequently independently discovered or developed by the Receiving Party or its Affiliate without the aid, application, or use of Confidential Information of the Disclosing Party, as demonstrated by documented evidence prepared contemporaneously with such independent development.

12.2 Authorized Disclosure. Each Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is necessary or reasonably useful in the following situations:

(a) filing or prosecuting Patents in accordance with Article 9;

(b) subject to Section 12.3, regulatory filings and other filings with Governmental Authorities (including Regulatory Authorities), in the exercise of rights granted herein, or as otherwise required in connection with any filing, application or request for Regulatory Approval; *provided, however*, that reasonable measures will be taken to assure confidential treatment of such information;

(c) prosecuting or defending litigation;

(d) subject to Section 12.3, complying with Applicable Law, including regulations promulgated by securities exchanges;

(e) disclosure to its Affiliates, employees, agents, independent contractors, licensors and licensees (including sublicensees) on a reasonable need-to-know basis, solely in connection with the exercise of rights or performance of obligations under this Agreement; *provided* that the Party making such disclosure shall use reasonable efforts to maintain the confidentiality thereof, but in any event such Party shall use no less efforts than such Party uses to maintain confidentiality of its own information of a similar nature to such Confidential Information;

(f) disclosure of this Agreement (including its material terms) to a bona fide potential or actual investor, stockholder, investment banker, acquirer, or merger partner, and others on a reasonable need-to-know basis; *provided* that each disclosee must be bound by appropriate obligations of confidentiality; *provided* a copy of this Agreement would not be disclosed to a GSK Competitor until a bona fide offer (e.g., in each instance with respect to such GSK Competitor, a co-signed term sheet or a mutually agreed letter of intent or non-binding offer letter, which in each case does not need to be legally binding) is provided.

(g) disclosure of the stage of Development of Products under this Agreement and blinded data generated under this Agreement to a bona fide potential or actual investor, stockholder, investment banker, acquirer, merger partner or other bona fide potential or actual business partner (but without limiting or modifying Lyell's obligations with respect to a Target Rejection Prohibition or under Article 11); *provided* that each disclosee must be bound by obligations of confidentiality and non-use at least as equivalent in scope as and no less restrictive than those set forth in this Article 12 prior to any such disclosure and where "blinded" means that technical details of the Product and Compound, and the identity of the Collaboration Target, are not disclosed and such disclosure is made in a manner that does not reasonably allow the recipient to identify the Product, Compound or Collaboration Target or GSK's identity;

(h) disclosure pursuant to Section 12.5.

Notwithstanding the foregoing, in the event a Party is required to make a disclosure of the other Party's Confidential Information pursuant to Sections 12.2(a), 12.2(c) or 12.2(d), it will, except where impracticable, give reasonable advance notice to the other Party of such disclosure and use reasonable efforts to secure confidential treatment of such information. Nothing in Sections 12.1 or 12.2 shall limit either Party in any way from disclosing to any Third Party such Party's U.S. or foreign income tax treatment and the U.S. or foreign income tax structure of the transactions relating to such Party that are based on or derived from this Agreement, as well as all materials of any kind (including opinions or other tax analyses) relating to such tax treatment or tax structure, except to the extent that nondisclosure of such matters is necessary in order to comply with applicable securities laws.

12.3 Publicity; Terms of Agreement.

(a) The Parties agree that the material terms of this Agreement are the Confidential Information of both Parties, subject to the special authorized disclosure provisions set forth in Section 12.2 and this Section 12.3. Except as set forth in Section 12.3(b) and 12.3(c) and as the Parties may otherwise agree, each Party agrees not to issue any press release or other public announcement disclosing the terms of this Agreement or the transaction contemplated hereby without the prior written consent of the other Party. Notwithstanding the foregoing, in the event the Parties agree upon a mutual press release to announce the execution of this Agreement or other matter related to this Agreement, such press release shall be issued at a time and in a form mutually agreed upon by the Parties; thereafter, Lyell and GSK may each disclose to Third Parties the information contained in such press release (or that is thereafter publicly disclosed without breach of this Article 12), without the need for further approval by the other Party.

(b) In the case of a press release or governmental filing concerning the terms of this Agreement or the transaction contemplated hereby required by Applicable Law (where reasonably advised by the disclosing Party's counsel), the disclosing Party shall give prior advance notice of the proposed text of such release or filing to the other Party for its prior review but shall not be required to obtain approval therefor.

(c) The Parties acknowledge that either or both Parties may be obligated to file under Applicable Law a copy of this Agreement with the SEC or other Governmental Authorities. Each Party shall be entitled to make such a required filing, *provided* that it requests confidential treatment of at least the financial terms and sensitive technical terms hereof to the extent such confidential treatment is reasonably available to such Party. In the event of any such filing, each Party will provide the other Party with a copy of this Agreement marked to show provisions for which such Party intends to seek confidential treatment not less than **[*]** prior to such filing (and any revisions to such portions of the proposed filing a reasonable time prior to the filing thereof), and shall reasonably consider the other Party's comments thereon to the extent consistent with the legal requirements, with respect to the filing Party, governing disclosure of material agreements and material information that must be publicly filed, and shall only disclose Confidential Information which it is advised by counsel or the applicable Governmental Authority is legally required to be disclosed. No such notice shall be required under this Section 12.3(c) if the substance of the description of or reference to this Agreement contained in the proposed filing has been included in any previous filing made by either Party hereunder or otherwise approved by the other Party.

(d) Each Party shall require each of its Affiliates and private investors to which Confidential Information of the other Party is disclosed as permitted hereunder to comply with the covenants and restrictions set forth in Sections 12.1 through Section 12.3 as if each such Affiliate and each such investor were a Party to this Agreement and shall be fully responsible for any breach of such covenants and restrictions by any such Affiliate or investor.

12.4 Publications.

(a) Neither Party shall publicly present or publish results of studies with respect to a Compound or Product carried out under this Agreement (each such presentation or publication a "**Publication**") without the opportunity for prior review by the other Party, except to the extent otherwise required by Applicable Law, in which case Section 12.3 shall apply with respect to disclosures required by the SEC or for regulatory filings. Moreover (i) except as required by Applicable Law, Lyell shall not issue a Publication with respect to Active GSK Programs except with respect to the exercise of reasonable and customary rights of academic or research institutions performing activities in connection with an Active GSK Program, in which case Lyell shall obtain review rights for the benefit of GSK (directly or indirectly through Lyell); and (ii) with respect to Publications proposed by GSK, Lyell's right to comment shall be limited to disclosures relating to the Lyell Technology included within the Collaboration Program and Lyell's Confidential Information.

(b) Without amending the restrictions set forth in Section 12.4(a), the submitting Party shall provide the other Party the opportunity to review any proposed Publication at least **[*]** prior to the earlier of its presentation or intended submission for publication. The

submitting Party agrees, upon request by the other Party, not to submit or present any Publication until the other Party has had **[*]** to comment on any material in such Publication. The submitting Party shall consider the comments of the other Party in good faith, but will retain the sole authority to submit the manuscript for Publication; *provided* that the submitting Party agrees to delay such Publication as necessary to enable the Parties to file a Patent if such Publication might adversely affect such Patent. The submitting Party shall provide the other Party a copy of the Publication at the time of the submission or presentation. Notwithstanding the foregoing, GSK shall not have the right to publish or present Lyell's Confidential Information without Lyell's prior written consent, and Lyell shall not have the right to publish or present GSK's Confidential Information without GSK's prior written consent. Each Party agrees to acknowledge the contributions of the other Party, and the employees of the other Party, in all publications as scientifically appropriate. This Section 12.4 shall not limit and shall be subject to Section 12.5.

(c) Nothing contained in this Section 12.4 shall prohibit the inclusion of information in a patent application claiming, and in furtherance of, the manufacture, use, sale or formulation of a Compound or Product, *provided* that the non-filing Party is given a reasonable opportunity to review, comment upon and/or approve the information to be included prior to submission of such patent application, where and to the extent required by Article 9 and Section 12.2 hereof. Notwithstanding the foregoing, the Parties recognize that independent investigators have been engaged, and will be engaged in the future, to conduct Clinical Trials or other studies of Compounds and Products. The Parties recognize that such investigators operate in an academic environment and may release information regarding such Clinical Trials or studies in a manner consistent with academic standards; *provided* that each Party will use reasonable efforts to prevent publication prior to the filing of relevant patent applications and to ensure that no Confidential Information of either Party is disclosed.

12.5 Publication and Listing of Clinical Trials. Subject to Lyell's right to review and comment as described in Section 12.4, GSK shall have the right at any time after exercise of each Option for a Collaboration Program, during and after the Term, to (a) publish the clinical results or summaries of clinical results of all GSK sponsored or GSK supported (outside of this Agreement) Clinical Trials conducted with respect to a Product for such Collaboration Program in any Clinical Trial register maintained by GSK or its Affiliates and the protocols of such Clinical Trials relating to such Product on www.ClinicalTrials.gov or in each case publish the results, summaries and protocols of such Clinical Trials on such other websites or repositories and at scientific congresses and in a peer-reviewed journal within such timescales as required by Applicable Law or GSK's or its Affiliates' standard operating procedures, irrespective of the outcome of such Clinical Trials; (b) make patient level data from such Clinical Trials conducted with respect to a Product for such Collaboration Program available under the GSK Data Sharing Initiative; and (c) publish the status of each Product for such Collaboration Program in its annual and quarterly reports and any other updates regarding GSK's research and development pipeline. Each such publication or disclosure made in accordance with this Section 12.5 shall not be a breach of the confidentiality obligations provided in this Article 12, and GSK shall be entitled to maintain or effect such publication or disclosure even following any termination of GSK's rights in respect of the relevant Product. Any disclosure made under this Section 12.5 shall not include any Confidential Information of Lyell other than Confidential Information to the extent comprising clinical results of a Product for which GSK has exercised its Option for the applicable Collaboration Program (including with respect to any Additional Constructs for which GSK exercised Additional Construct Opt In), without the prior written consent of Lyell.

12.6 Termination of Prior CDA. This Agreement terminates, as of the Effective Date, the Prior CDA. All Information exchanged between the Parties under the Prior CDA shall be deemed Confidential Information of the corresponding Party under this Agreement (with the mutual understanding and agreement that any use or disclosure thereof that is authorized under Article 12 shall not be restricted by, or be deemed a violation of, such Prior CDA) and shall be subject to the terms of this Article 12.

13. TERM AND TERMINATION

13.1 Term. This Agreement shall become effective on the Effective Date and, unless earlier terminated pursuant to this Article 13 shall continue, on a Collaboration Program-by-Collaboration Program basis, until the end of each applicable Royalty Term (the "**Term**").

13.2 Termination by GSK at Will. GSK may terminate this Agreement as a whole or on a Collaboration Program-by-Collaboration Program basis, effective upon **[*]** prior written notice to Lyell in the case where Regulatory Approval has not been obtained for any applicable Product in either the U.S. or the EU, or upon **[*]** prior written notice to Lyell in the case where Regulatory Approval has been obtained in either the U.S. or the EU for an applicable Product.

13.3 Termination by Either Party for Breach.

(a) **Breach**. Either Party may terminate this Agreement in whole or with respect to a Collaboration Program as to the entire Territory, in the event the other Party materially breaches this Agreement, and such breach shall have continued for **[*]** (or, if such default cannot be cured within such **[*]** period, if the alleged breaching Party has not commenced and diligently continued good faith efforts to cure such breach, but in no case longer than **[*]** after notice) after written notice shall have been provided to the breaching Party by the non-breaching Party requiring such breach to be remedied and stating an intention to terminate if not so cured (a "**Termination Notice**"). Any such termination shall become effective at the end of such **[*]** period unless the breaching Party has cured any such breach prior to the expiration of the **[*]** period (or, if such default cannot be cured within such **[*]** period, if the breaching Party has not commenced and diligently continued good faith efforts to cure such breach, but in no case longer than **[*]** after such notice).

(b) **Breach Dispute**. If the alleged breaching Party reasonably and in good faith disagrees as to the occurrence of the material breach alleged in a Termination Notice, the alleged breaching Party shall provide written notice thereof to the non-breaching Party prior to expiration of the applicable cure period under Section 13.3(a) for such alleged material breach and thereafter such dispute shall be resolved in accordance with Section 16.1(b) and, if not resolved by the JSC or Senior Executives, in binding arbitration proceedings to be conducted in accordance with Section 16.2; *provided* that such dispute, notwithstanding anything to the contrary in this Agreement, shall not be subject to, eligible for or required to have been presented for mediation proceedings under Section 16.1(c), in each case except by mutual agreement of the Parties. As of the date that the alleged breaching Party delivers to the non-breaching Party written notice

disputing such claim of material breach the applicable cure period under Section 13.3(a) for such alleged material breach shall begin to be tolled. Within **[*]** following the appointment of the arbitrator(s) for any arbitration proceeding conducted pursuant to this Section 13.3(b) and Section 16.2, the arbitrator(s) shall determine whether such cure period shall continue be tolled until such time as the dispute regarding such claimed material breach has become finally settled or determined. The arbitrator(s) shall determine whether or not such tolling shall continue based on the totality of the circumstances, including, without limitation, the likelihood of a final determination by the arbitrator(s) that the alleged breaching Party is actually in material breach of this Agreement and the relative hardship on the Parties of continuing or ending such tolling. If the arbitrator(s) determines that such tolling shall continue, the non-breaching Party shall not have the right to terminate this Agreement unless and until it has been finally determined in accordance with Section 16.2 that the alleged breaching Party is in material breach of this Agreement and the breaching Party fails to cure such breach within the time period remaining in the applicable cure period as of the date of such determination. If the arbitrator(s) determine that such tolling shall not continue, then the applicable cure period shall cease to be tolled as of the date of such determination. It is understood that such determination of the arbitrator(s) under this Section 13.3(b) shall not be binding on either Party as to the question of whether the alleged breaching Party is in material breach of the Agreement and shall apply only to determine whether or not the applicable cure period should continue to be tolled as provided in this Section 13.3(b). In any case, the final determination of whether the alleged breaching Party is in material breach of this Agreement shall be determined only pursuant to Section 16.2 and no termination under Section 13.3(a) shall become effective until such determination.

13.4 Termination by Either Party for Insolvency. A Party shall have the right to terminate this Agreement upon written notice if the other Party incurs an Insolvency Event; *provided*, *however*, in the case of any involuntary bankruptcy proceeding, such right to terminate shall only become effective if the Party that incurs the Insolvency Event consents to the involuntary bankruptcy or if such proceeding is not dismissed or stayed within **[*]** after the filing thereof. "**Insolvency Event**" means circumstances under which a Party (a) has a receiver or similar officer appointed over all or a material part of its assets or business; (b) passes a resolution for winding-up of all or a material part of its assets or business (other than a winding-up for the purpose of, or in connection with, any solvent amalgamation or reconstruction) or a court enters an order to that effect; (c) has entered against it an order for relief recognizing it as a debtor under any insolvency or bankruptcy laws (or any equivalent order in any jurisdiction); or (d) enters into any composition or arrangement with its creditors with respect to all or a material part of its assets or business (other than relating to a solvent restructuring).

13.5 Termination for Patent Challenge. Lyell may terminate this Agreement upon notice to GSK in the event that a Related Party, or any Third Party designated by a Related Party, takes any action, directly or indirectly, or knowingly provides financial or other assistance, including legal or technical advice, directly or indirectly, to any Third Party, to invalidate or challenge the validity, enforceability, or otherwise oppose, any Lyell Patent Rights that are included in the license granted to GSK under this Agreement (or any Patents licensed to Lyell under a Lyell License Agreement) in any court or tribunal or any patent office in a jurisdiction, or in any arbitration proceeding, including in connection with an opposition proceeding, re-examination or post-grant proceeding; *provided* that (i) solely with respect to Lyell Patent Rights other than Patents licensed to Lyell under a Lyell License Agreement, a Related Party acting

as a defendant in a patent infringement claim, lawsuit or other action filed or maintained by Lyell or a Third Party designated by Lyell may assert as cross-claims or counterclaims that challenges the validity or enforceability of such Lyell Patent Rights to the extent being enforced against such Related Party, and (ii) with respect to Patents licensed to Lyell under a Lyell License Agreement, a Related Party acting as a defendant in a patent infringement claim, lawsuit or other action maintained by Lyell or the Lyell Licensor may assert as a defense in such proceeding a counterclaim that challenges the validity or enforceability of such Patent to the extent being enforced against such Related Party solely to the extent and in the manner permitted by the terms of the applicable Lyell License Agreement and without giving rise to loss of rights under such Lyell License Agreement. In addition, GSK shall reimburse Lyell for any amounts that become due under the Lyell License Agreements as a result of such action or assistance by GSK, its Affiliate or Sublicensee.

13.6 Effects of Termination. Upon termination of this Agreement in whole or with respect to a Collaboration Program, the following shall apply with respect to the terminated Collaboration Programs (in addition to any other rights and obligations under this Agreement with respect to such termination). For clarity, termination of this Agreement in whole shall terminate all Collaboration Programs, and if at any time after the end of the **[*]** there are no active Collaboration Programs or the Agreement has terminated for all Collaboration Programs, the Agreement shall be deemed to have been terminated in its entirety.

(a) **GSK Breach or Termination at Will**.

(i) Upon the effective date of the termination of a terminated Collaboration Program by GSK under Section 13.2 or by Lyell under Section 13.3, 13.4 or 13.5 (i) the Options granted to GSK in Section 3.1(b) and licenses granted to GSK in Section 7.1(a) shall terminate with respect to the Collaboration Target that is the subject of the terminated Collaboration Program (such Collaboration Target, a "**Terminated Target**"); (ii) such Terminated Target shall cease to be a Collaboration Target, the Collaboration Program for such Terminated Target ("**Terminated Program**") shall cease to be a Collaboration Program and Compounds and Products with respect to such Terminated Target ("**Terminated Compounds**" and "**Terminated Products**") shall cease to be Compounds and Products (which includes, for clarity, the termination of the restrictions set forth in Section 7.5 with respect to which Lyell may not cite or include in a submission to a Regulatory Authority in China any Information comprising clinical data or data generated in IND Enabling Studies, in each case generated under a Collaboration Program, **[*]** without the prior written consent of GSK), in each case for all purposes of this Agreement, except for those rights and obligations expressly surviving under Section 13.9 below; *provided*, *however*, that (A) such Terminated Target shall continue to count towards the maximum number of Collaboration Targets that can be added pursuant to Section 3.3 and the addition back of such Terminated Target as a Collaboration Target under this Agreement shall require the mutual agreement of the Parties; and (B) the restrictions and obligations applicable to Lyell under Sections 11.1 and 11.2 shall terminate with respect to such Terminated Target and T-Cell Therapies directed to such Terminated Target.

(ii) **License**. In the event of a termination by GSK under Section 13.2 or by Lyell under Section 13.3, 13.4 or 13.5, at Lyell's option upon notice and written request to GSK, and upon terms mutually agreed upon by the Parties as the result of good faith negotiations,

GSK shall grant to Lyell a royalty-bearing license, with the right to grant and authorize sublicenses, to make, have made, use, sell, offer for sale and import any Terminated Compound or Terminated Product (other than a Terminated Compound or Terminated Product that originated from an Active GSK Program) under Patents Controlled by GSK that Cover such Terminated Compound or Terminated Product, and any Information Controlled by GSK that previously was disclosed to Lyell specifically relating to such Terminated Compound or Terminated Product (including with respect to the manufacture, development, use or other exploitation thereof); *provided*, *however*, that if any such Patent or Information was in-licensed or acquired from a Third Party, and is subject to payment or other obligations to such Third Party, GSK shall disclose a description of such Patents or Information and such obligations to Lyell in writing and such Patents and Information shall be subject to the license granted in this Section 13.6(a)(ii) only to the extent Lyell agrees in writing to be bound by such obligations and reimburse or pay all amounts owed to such Third Party as a result of Lyell's exercise of such license with respect to such Patent or Information, as applicable.

(b) **Lyell Breach; Acquisition by a GSK Competitor**.

(i) In the event this Agreement is terminated in its entirety or on a Collaboration Program-by-Collaboration Program basis by GSK under Section 13.3 or Section 13.6(b)(ii) (a "**Breach Termination**"), Section 13.4, or Section 17.8(e) (a "**Competitor Acquisition Termination**"), then the following shall apply:

(1) for any such terminated Collaboration Program for which the Program Option Trigger has occurred (whether a Surviving Program or an Expired Program) and for which GSK has exercised its Option (or exercises its Option within the Exercise Period for such Collaboration Program), the rights and licenses granted to GSK under Section 7.1 shall remain in effect with respect to such Surviving Program or Expired Program, as applicable, and, further with respect to a Surviving Program, shall be perpetual from the date of termination for any such terminated Surviving Program for so long as GSK is continuing to make payments applicable thereto under Article 8;

(2) for any such terminated Collaboration Program (i.e., as used in this Agreement, a Surviving Program) for which the Program Option Trigger has not yet occurred, GSK shall have the option, by providing written notice to Lyell within **[*]** of the termination of such Collaboration Program, to obtain a license (effective automatically upon such notice to Lyell) under Section 7.1 to any Collaboration Anti-Exhaustion Component developed by Lyell with respect to such Surviving Program as it then-exists as of the effective date of termination. Such license shall remain in effect for so long as GSK is continuing to make payments applicable thereto under Article 8 (treating exercise of such option as an Option Exercise), *provided* that: (A) in the event of a Competitor Acquisition Termination for such a Lyell PoC Development Program, (x) **[*]** shall be reduced by **[*]**, and if the Parties are unable to agree on the exact amount, such amount shall be decided by **[*]**, (y) Academic PoC shall be deemed achieved upon Advancement of Program by or under the authority of GSK for such Surviving Program, and (z) the data required to be received under the definitions of Cancer Academic PoC or **[*]** Academic PoC, as applicable, in order for achievement of Academic PoC for such Surviving Program may be from any indication that GSK elects to pursue (i.e., achievement of Academic PoC shall not be limited to be in a Prevalent Solid Tumor) and; (B) in the event of a Breach Termination of a Collaboration Program, GSK shall not be obligated to pay Lyell **[*]** for such Surviving Program;

(3) with respect to the survival of Section 7.1 as set forth in Section 13.6(b)(i)(1) and Section 13.6(b)(i)(2) above, any provisions of this Agreement required to give full effect to the continued exercise of GSK's license in connection with Section 7.1 shall continue to apply. For illustrative purposes only, if the license under Section 7.1 includes Lyell Technology licensed to Lyell under an Existing License Agreement, then the provisions applicable to GSK's compliance with such Existing License Agreement (including Waiver Terms) shall continue to apply;

(4) any communications between the Parties or decisions to be made by the Parties to effectuate ongoing rights and obligations of the Parties under this Section 13.6(b) or Section 13.9 shall be carried out in accordance with Section 2.2 as if the JSC terminated with respect to any Surviving Program;

(5) in furtherance of the license grant that is continued under either Section 13.6(b)(i)(1) or Section 13.6(b)(i)(2), Lyell shall disclose to GSK the Collaboration Deliverable (as it then-exists as of the effective date of termination) for the applicable Collaboration Anti-Exhaustion Component and shall conduct a technology transfer pursuant to Section 3.1(b)(i) and Section 3.1(d) in respect of such Collaboration Program, and will transfer to GSK any other information then available as set forth in **Exhibits 1.2**, **1.21**, **3.1(b)** and **3.1(d)** as well as any Lyell Manufacturing Technology under Section 6.2(a) to the extent not previously provided and if applicable, all as promptly as reasonably practicable;

(6) in furtherance of the license grant that is continued under either Section 13.6(b)(i)(1) or Section 13.6(b)(i)(2), the rights and obligations under Section 4.1(a) and Section 4.1(b) shall continue (including GSK's Right of Reference) and under Section 4.1(c) (solely with respect to Lyell's obligations thereunder);

(7) except with respect to the **[*]** Collaboration Program, Lyell's rights to initiate Additional Development Activities under Section 3.9 with respect to such Surviving Program terminates, it being understood that Lyell's rights with respect to Additional Constructs for which the Success Criteria have been met but for which GSK did not exercise the Additional Construct Opt In shall survive;

(8) Lyell shall return or destroy (at GSK's election) any GSK Confidential Information or other GSK Materials provided to Lyell that pertain primarily to any such terminated Collaboration Program other than those necessary or reasonably useful to exercise its license in Section 7.4(b);

(9) Lyell shall promptly wind-down work with respect to any such terminated Collaboration Program, the terms and conditions of a wind-down plan to be agreed by the Parties in good faith; *provided*, *however*, that Lyell shall be required to complete any ongoing Clinical Trial unless determined by GSK, in its sole discretion, that any such trial can and should be terminated or transferred to GSK. This clause (9) shall not apply with respect to terminated Collaboration Programs for which the Program Option Trigger has not yet occurred

and GSK does not exercise its option described in clause (2) above (which such terminated Collaboration Programs shall be treated as terminated by GSK pursuant to Section 13.2 and Section 13.6(a)(i) shall apply);

(10) the rights and obligations in Section 12.4 survive with respect to proposed publications or presentations by GSK, but Lyell's right under Sections 12.4(a) and 12.4(b) to publicly present or publish results of studies with respect to any Surviving Program terminates other than with respect to presentations and publications by academic or research institutions pursuant to their then-existing rights, and both Parties' rights under Section 12.4(c) survive with respect to Surviving Programs;

(11) GSK will retain prosecution and enforcement rights under Article 9 for any Product Specific Patents still licensed to GSK hereunder, and Lyell will cooperate with GSK as reasonably necessary for GSK to conduct such prosecution and enforcement activities; and

(12) the restrictions and obligations applicable to Lyell under Section 3.3(g) (with respect to the **[*]** Initial Collaboration Target and Monospecific Targets, including in particular the last three sentences of Section 3.3(g), to the extent such Target is the subject of a Surviving Program), Section 11.1 and 11.2 (with respect to the applicable Collaboration Targets) shall survive (for the periods set forth therein) for so long as GSK is continuing to make payments (subject to Section 13.6(b)(i)(2)) applicable thereto under Article 8. This Section 13.6(b)(i)(12) shall not apply with respect to terminated Collaboration Programs for which the Program Option Trigger has not yet occurred and GSK does not exercise its option described in Section 13.6(b)(i)(2) above or with respect to terminated Collaboration Programs for which the Program Option Trigger has occurred and GSK does not exercise its Option within the Exercise Period for such Collaboration Program.

(ii) GSK shall be entitled to terminate this Agreement upon **[*]** written notice to Lyell if Lyell materially fails to perform its obligations in accordance with Section 14.2(j). Lyell shall have no claim against GSK for compensation for such termination of this Agreement by GSK in accordance with Section 13.3(b).

(c) **Return of Materials and Confidential Information**. Except with respect to any termination due to Lyell's breach and for so long as GSK is continuing to make payments due under Article 8, within **[*]** after termination is effective (or after GSK ceases to make payments due under Article 8), GSK shall return to Lyell all remaining quantities of any Materials and Collaboration Deliverables provided by Lyell to GSK hereunder (including versions thereof generated by or on behalf of GSK or its Affiliate) and shall destroy all other tangible items comprising, bearing or containing any Confidential Information of Lyell that are in GSK's or its Affiliates' possession or control, to the extent such Confidential Information relates to any Terminated Compounds or Terminated Products, and provide written certification of such destruction, or prepare such tangible items of Confidential Information for shipment to Lyell, as Lyell may direct; *provided* that GSK may retain one copy of such Confidential Information solely for its legal archives, and *provided further* that GSK shall not be required to destroy electronic files containing Confidential Information that are made in the ordinary course of its business information back-up procedures pursuant to its electronic record retention and destruction practices that apply to its own general electronic files and information.

(d) **Payments**. Lyell shall remain entitled to receive payments that accrue under Article 8 above before the effective date of such termination or with respect to any continued Development or Commercialization of Products by or on behalf of a Related Party following such termination.

(e) **Transition**. Each Party will execute all documents and take, or cause to be taken, all such further actions as may be reasonably requested by the other Party in order to give effect to the terms of this Section 13.6.

13.7 Effects of Expiration of Agreement. With respect to each Expired Program, the Agreement will stay in full force and effect (including all rights and obligations hereunder) for so long as necessary except as modified in this Section 13.7 to allow GSK to continue to Commercialize the applicable Compound or Product from such Expired Program in the same manner after expiration as it was prior to such expiration. The following shall apply on an Expired Program-by-Expired Program basis:

(a) Upon the expiration of the Royalty Term (i.e., in the case where there is no earlier termination pursuant to this Article 13), on a Collaboration Program-by-Collaboration Program and country-by-country basis, the licenses granted to GSK under Article 7 with respect to Lyell Technology shall convert to non-exclusive, perpetual, fully paid-up, non-royalty-bearing, sublicensable licenses; and

(b) Any communications between the Parties or decisions to be made by the Parties to effectuate ongoing rights and obligations of the Parties under this Section 13.7 shall be carried out in accordance with Section 2.2 as if the JSC terminated with respect to any Expired Program.

13.8 Other Remedies. Termination or expiration of this Agreement for any reason shall not release either Party from any liability or obligation that already has accrued prior to such expiration or termination, nor affect the survival of any provision hereof to the extent it is expressly stated to survive such termination. Subject to and without limiting the terms and conditions of this Agreement (including Section 15.4), expiration or termination of this Agreement shall not preclude any Party from (a) claiming any other damages, compensation or relief that it may be entitled to upon such expiration or termination, (b) any right to receive any amounts accrued under this Agreement prior to the expiration or termination date but which are unpaid or become payable thereafter and (c) any right to obtain performance of any obligation provided for in this Agreement which shall survive expiration or termination.

13.9 Survival. Termination or expiration of this Agreement shall not affect rights or obligations of the Parties under this Agreement that have accrued prior to the date of termination or expiration of this Agreement and shall not affect any rights specifically stated in this Agreement to survive the applicable termination or expiration. In addition and notwithstanding anything to the contrary, obligations that by their nature are intended to survive expiration or termination of this Agreement (or, as applicable, intended to survive expiration or termination of the applicable

Collaboration Program) in order to give effect to the continuing rights or obligations of the Parties shall survive and apply after expiration or termination of this Agreement or an applicable Collaboration Program. Without limiting the foregoing, the following Articles and Sections will survive and apply as follows:

(a) With respect to any Surviving Program: Section 3.1(c) (solely with respect to (x) any modification or incorporation of Collaboration Anti-Exhaustion Components or Anti-Exhaustion Components within Lyell Anti-Exhaustion Technology not being made unless a plan is agreed upon by the Parties, (y) GSK's obligation to use Commercially Reasonable Efforts as set forth in Section 3.1(c) and (z) GSK's rights under the last sentence of Section 3.1(c)), Section 3.7, Section 3.8 (solely as it applies to GSK's conduct of the Surviving Program), Section 3.9(d) (solely with respect to the first sentence thereof), Article 5, Section 6.1 (solely with respect to GSK's rights as set forth therein), Section 7. 1, Section 7.2, Section 7.7, Article 8 (except (A) in the event of termination of the entire Agreement, Section 8.7(c) shall not survive, and (B) in the event of termination of a Collaboration Program but not the entire Agreement, then only the first two sentences of Section 8.7(c) shall not survive), Sections 9.2 through 9.8, Section 10. 1, Section 12.4 (but subject to Section 13.6(b)(i)(10)), Section 13.2, Sections 13.3, 13.4 and 13.6;

(b) With respect to any Expired Program: Section 13.7; and

(c) Without limiting Sections 13.9(a) or 13.9(b), further with respect to any termination or expiration: Article 1, Section 2.2 (solely with respect to the decision-making of the Parties following discontinuance of the JSC), Section 3.1(b)(iii), Section 3.1(e) (solely with respect to GSK's obligation to reimburse Lyell's costs as described therein), Section 3.4 (but only insofar as any reimbursable expenses are incurred prior to the effective date of expiration or termination), Section 3.6 (*provided* that a Party's right to use the other Party's Materials shall be limited to the exercise of rights or performance of obligations that are then surviving), Section 3.7, Section 4.1(b) (solely with respect to the last three sentences), Section 4.1(c), Section 4.2, Section 7.4(a) (with respect to any assignment obligation that accrued prior to the effective date of termination or expiration of this Agreement or the applicable Collaboration Program), Section 7.4(b) (with respect to any license granted prior to the effective date of termination or expiration of this Agreement or the applicable Collaboration Program), Section 7.5 (except as may be limited by Section 13.6(a)(i), to the extent applicable), Section 7.6, Sections 8.13 through 8.15, Section 9.1, Section 9.9 (solely with respect to the rights and obligations set forth in Article 9 that are then surviving), Section 10.2, Sections 12.1 through 12.3, Section 12.4 (subject to Section 13.6(b)(i)(10) with respect to Surviving Programs, and otherwise solely to the extent any proposed publication or presentation contains the Confidential Information of the other Party), Sections 12.5 and 12.6, Sections 13.5 and 13.6, Sections 13.8 and 13.9, Section 14.3, Article 15, Article 16 and Article 17 (other than Section 17.16). In addition, the other applicable provisions of Article 8 shall survive to the extent required to make final payments incurred or accrued prior to the date of termination or expiration.

All provisions not surviving in accordance with the foregoing shall terminate upon expiration or termination of this Agreement and be of no further force and effect. Notwithstanding anything to the contrary, (x) Section 11.1 shall not survive the expiration or termination of this Agreement in its entirety except as expressly set forth in Section 13.6(b)(i)(12), (y) on a Collaboration Program-by-Collaboration Program basis, Section 11.2 shall not survive the expiration or termination of

such Collaboration Program except as expressly set forth in Section 13.6(b)(i)(12) for a Surviving Program and (z) the prohibition on a Lyell TCR or Lyell CAR binding a certain peptide as described in the second to last sentence of the Target definition shall terminate with respect to a Collaboration Target upon the expiration or termination of Section 11.2 with respect to the Collaboration Program for such Collaboration Target.

14. REPRESENTATIONS AND WARRANTIES

14.1 Mutual Representations and Warranties. Each Party hereby represents, warrants, and covenants (as applicable) to the other Party as follows:

(a) As of the Execution Date and the Effective Date, is a company or corporation duly organized, validly existing, and in good standing under the laws of the jurisdiction in which it is incorporated, and has full corporate power and authority and the legal right to own and operate its property and assets and to carry on its business as it is now being conducted and as contemplated in this Agreement, including the right to grant the licenses granted by it hereunder;

(b) As of the Execution Date and the Effective Date, it has the full corporate power and authority and the legal right to enter into this Agreement and perform its obligations hereunder. It has taken all necessary corporate action on its part required to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder. This Agreement has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, and binding obligation of such Party that is enforceable against it in accordance with its terms;

(c) As of the Execution Date and the Effective Date, the execution, delivery and performance of this Agreement by such Party (i) are not prohibited or limited by, and shall not result in the breach of or a default under, any provision of the certificate or articles of incorporation or bylaws of such Party; (ii) do not conflict with any Applicable Law applicable to such Party; and (iii) do not conflict with, result in a breach of or constitute a default under any agreement binding on such Party or any applicable order, writ, injunction or decree of any Governmental Authority to which such Party is a party or by which such Party is bound. Such Party has not previously granted any rights in conflict with the rights and licenses granted by it herein. As of the Effective Date, except with respect to the Existing License Agreements, there are no existing agreements, options, commitments or rights with, of or to any Person to acquire or obtain any rights with respect to such Party's intellectual property rights in conflict with the rights and licenses granted by such Party herein;

(d) In the course of the development of Lyell Technology, including Lyell Anti-Exhaustion Technology, Lyell has not used prior to the Execution Date and neither Party shall use, during the Term, any employee, agent or independent contractor who has been debarred by any Regulatory Authority, or, to the best of such Party's knowledge, is the subject of debarment proceedings by a Regulatory Authority;

(e) It has not, and will not, after the Execution Date and during the Term, grant any right to any Third Party that would conflict with the rights granted to the other Party hereunder; and

(f) Except for any filings that may be required to comply with the HSR Act or with respect to Regulatory Authorities to perform the transactions contemplated hereby, it is not and will not be required to give any notice to any Governmental Authority or obtain any approval in connection with the execution and delivery of this Agreement or the consummation or performance of any of the transactions contemplated hereby.

14.2 Representations and Warranties and Covenants by Lyell. Lyell hereby represents and warrants and, where denoted below, covenants to GSK as follows:

(a) As of the Execution Date and the Effective Date, Lyell has the full right and authority to grant the rights and licenses as provided herein;

(b) As of the Execution Date and the Effective Date, Lyell has not previously granted any right, license or interest in or to the Lyell Technology that is in conflict with the rights or licenses granted to GSK under this Agreement;

(c) Lyell has provided GSK or its external legal counsel with true and complete copies of all Existing License Agreements, including all modifications or amendments thereto as of the Execution Date and the Effective Date;

(d) As of the Execution Date, there are no actual, pending, alleged or threatened actions, suits, claims, interferences or governmental investigations involving the Lyell Patents Rights or the Lyell Know-How by or against Lyell or any of its Affiliates;

(e) To Lyell's knowledge as of the Execution Date, none of the issued Lyell Patent Rights are invalid or unenforceable;

(f) As of the Execution Date and the Effective Date, Lyell and its Affiliates are in compliance in all material respects with each Existing License Agreement, and have performed all material obligations required to be performed by them to date under each Existing License Agreement;

(g) To Lyell's knowledge as of the Execution Date, the conduct of the Lyell Development Programs by or on behalf of Lyell (i) has not infringed, does not infringe and will not infringe any issued Patents owned by any Third Party, and (ii) has not misappropriated, does not misappropriate and will not misappropriate any proprietary materials, trade secrets, Information or other non-Patent intellectual property rights owned by any Third Party;

(h) Lyell and its Affiliates will respect the human rights of its staff and will not employ child labor, forced labor, unsafe working conditions, or cruel or abusive disciplinary practices in the workplace and it will not discriminate against any workers on any ground (including race, religion, disability, gender, sexual orientation or gender identity). Lyell and its Affiliates will pay each employee at least the minimum wage, provide each employee with all legally mandated benefits, and comply with the Applicable Laws on working hours and employment rights in the countries in which it operates. Lyell shall be respectful of its employee's right to freedom of association;

(i) Lyell will not use any human embryonic or fetal derived material (including cell lines) in connection with the Lyell Development Programs or Additional Development Activities without the express prior written approval of GSK. Lyell and its Affiliates comply with and will continue to comply with all Applicable Laws relating to the collection, storage, use and disposal of Human Biological Samples to be used in the Lyell Development Programs and appropriate and adequate consent or ethics committee approval has been or will be obtained in respect of all Human Biological Samples to be collected, transferred, stored, used and disposed of for the purpose of the Lyell Development Programs or Additional Development Activities by Lyell;

(j) Lyell shall comply with Applicable Laws relating to anti-corruption and anti-bribery. Lyell has not prior to the Execution Date, and will not, in connection with the performance of this Agreement, directly or indirectly, make, promise, authorize, ratify or offer to make, or take any act in furtherance of any payment or transfer of anything of value for the purpose of influencing, inducing or rewarding any act, omission or decision to secure an improper advantage, or improperly assisting Lyell or GSK in obtaining or retaining business, or in any way with the purpose or effect of public or commercial bribery. Lyell will use Commercially Reasonable Efforts to prevent subcontractors, agents or any other Third Parties, subject to its control or determining influence, from doing any of the foregoing activities. For the avoidance of doubt, the foregoing activities include facilitating payments, which are unofficial, improper, small payments or gifts offered or made to Government Officials to secure or expedite a routine or necessary action to which Lyell or GSK are legally entitled; and

(k) Lyell shall comply with the Animal Research Policy set forth in **Exhibit 14.2(k)** in connection with the Lyell Development Programs.

14.3 No Other Representations or Warranties. EXCEPT AS EXPRESSLY STATED IN THIS ARTICLE 14 OR ELSEWHERE IN THIS AGREEMENT, NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR NON-MISAPPROPRIATION OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS, OR THAT ANY OF THE DEVELOPMENT OR COMMERCIALIZATION EFFORTS WITH REGARD TO ANY COMPOUND OR PRODUCT WILL BE SUCCESSFUL, IS MADE OR GIVEN BY OR ON BEHALF OF A PARTY. EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, ALL REPRESENTATIONS AND WARRANTIES, WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE, ARE HEREBY EXPRESSLY EXCLUDED.

15. INDEMNIFICATION AND LIMITATION OF LIABILITY

15.1 Indemnification by Lyell for Third Party Claims. Lyell shall defend, indemnify, and hold GSK, its Affiliates, and their respective officers, directors, employees, and agents (the "**GSK Indemnitees**") harmless from and against any and all damages or other amounts payable to a Third Party claimant, as well as any reasonable attorneys' fees and costs of litigation incurred by such GSK Indemnitees (collectively, "**GSK Damages**"), all to the extent resulting from any claims, suits, proceedings or causes of action brought by such Third Party (collectively, "**GSK Claims**") against such GSK Indemnitee that arise out of or result from (or are alleged to arise out

of or result from): (a) a material breach of any of Lyell's representations, warranties, covenants and obligations under this Agreement; (b) the gross negligence or willful misconduct of any Lyell Indemnitees or its Affiliates; (c) any breach by Lyell or its Affiliates of, or any failure by Lyell or its Affiliates, or their respective contractors or agents, to perform, observe or comply with any of the provisions of, a Lyell License Agreement; (d) the Development, manufacture, storage, handling, use, sale, offer for sale and importation of any Lyell Technology or compounds or products comprising or incorporating Lyell Technology by Lyell or its Affiliates or their respective contractors or agents, anywhere in the world, in exercise of Lyell's rights under this Agreement in China; (e) the Development, manufacture, storage, handling or use of any Lyell Technology by Lyell or its Affiliates or their respective contractors or agents, excluding GSK Claims arising from the activities described in clause (a) of Section 15.2; or (f) with respect to the Existing License Agreements, Lyell's failure to modify or obtain waivers of the Waiver Terms of the Existing License Agreement in accordance with Section 8.7(b). The foregoing indemnity obligation shall not apply to the extent that any GSK Claim is subject to indemnity pursuant to Section 15.2 or is based on or alleges a breach by GSK or its Affiliates of an obligation under an agreement between GSK or its Affiliates and a Third Party.

15.2 Indemnification by GSK for Third Party Claims. GSK shall defend, indemnify, and hold Lyell, its Affiliates, and each of their respective officers, directors, employees, and agents and the Existing Third Party Licensor, (the "**Lyell Indemnitees**") harmless from and against any and all damages or other amounts payable to a Third Party claimant, as well as any reasonable attorneys' fees and costs of litigation incurred by such Lyell Indemnitees (collectively, "**Lyell Damages**"), all to the extent resulting from any claims, suits, proceedings or causes of action brought by such Third Party (collectively, "**Lyell Claims**") against such Lyell Indemnitee that arise out of or result from (or are alleged to arise out of or result from): (a) the Development, manufacture, storage, handling, use, sale, offer for sale, and importation of any Compounds or Products by GSK or its Affiliates, or Sublicensees; (b) a material breach of any of GSK's representations, warranties, covenants and obligations under this Agreement; or (c) the gross negligence or willful misconduct of any GSK Indemnitees. The foregoing indemnity obligation shall not apply to the extent that any Lyell Claim is subject to indemnity pursuant to Section 15.1 (other than clause (e) thereof) or is based on or alleges a breach by Lyell or its Affiliates of an obligation under an agreement between Lyell or its Affiliates and a Third Party, including Lyell License Agreements.

15.3 Indemnification Procedures. The Party claiming indemnity under this Article 15 (the "**Indemnified Party**") shall give written notice to the Party from whom indemnity is being sought (the "**Indemnifying Party**") promptly after learning of the claim, suit, proceeding or cause of action for which indemnity is being sought ("**Claim**"), and, *provided* that the Indemnifying Party is not contesting the indemnity obligation, shall permit the Indemnifying Party to control and assume the defense of any litigation relating to such claim and disposition of any such Claim unless the Indemnifying Party is also a party (or likely to be named a party) to the proceeding in which such claim is made and the Indemnified Party gives notice to the Indemnifying Party that it may have defenses to such claim or proceeding that are in conflict with the interests of the Indemnifying Party, in which case the Indemnifying Party shall not be so entitled to assume the defense of the case. If the Indemnifying Party does assume the defense of any Claim, it (i) shall act diligently and in good faith with respect to all matters relating to the settlement or disposition of any Claim as the settlement or disposition relates to Parties being indemnified under this Article 15, (ii) shall

cause such defense to be conducted by counsel reasonably acceptable to the Indemnified Party and (iii) shall not settle or otherwise resolve any Claim without prior notice to the Indemnified Party and the consent of the Indemnified Party if such settlement involves anything other than the payment of money by the Indemnifying Party (including, for example, any settlement admitting fault or wrongdoing of the Indemnified Party, or consenting to any injunctive relief). The Indemnified Party shall reasonably cooperate with the Indemnifying Party in its defense of any claim for which the Indemnifying Party has assumed the defense in accordance with this Section 15.3, and shall have the right (at its own expense) to be present in person or through counsel at all legal proceedings giving rise to the right of indemnification. So long as the Indemnifying Party is diligently defending the Claim in good faith, the Indemnified Party shall not settle any such Claim without the prior written consent of the Indemnifying Party. If the Indemnifying Party does not assume and conduct the defense of the Claim as provided above, (a) the Indemnified Party may defend against, and consent to the entry of any judgment or enter into any settlement with respect to the Claim in any manner the Indemnified Party may deem reasonably appropriate (and the Indemnified Party need not consult with, or obtain any consent from, the Indemnifying Party in connection therewith), and (b) the Indemnifying Party will remain responsible to indemnify the Indemnified Party as provided in this Article 15.

15.4 Limitation of Liability. EXCEPT FOR (A) DAMAGES, INCLUDING INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES PAID OR PAYABLE TO A THIRD PARTY BY AN INDEMNIFIED PARTY FOR WHICH THE INDEMNIFIED PARTY IS ENTITLED TO INDEMNIFICATION PURSUANT TO SECTION 15.1 OR 15.2 HEREUNDER, OR (B) ANY BREACH OF ANY OF SECTIONS 11.1, 11.2, 12.1, 15.1 AND 15.2 OF THIS AGREEMENT BY A PARTY OR ITS AFFILIATES, OR (C) DAMAGES THAT ARE DUE TO THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE LIABLE PARTY, IN NO EVENT SHALL EITHER PARTY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS OR AFFILIATES BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES, WHETHER BASED UPON A CLAIM OR ACTION OF CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE, ARISING OUT OF THIS AGREEMENT.

16. DISPUTE RESOLUTION

16.1 Disputes; Resolution by Senior Executives.

(a) The Parties recognize that disputes as to certain matters may from time to time arise during the Term that relate to decisions to be made by the Parties herein or to the Parties' respective rights and/or obligations hereunder. It is the desire of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to arbitration or litigation. To accomplish this objective, the Parties agree to follow the procedures set forth in this Article 16 if and when a dispute arises under this Agreement, subject to Section 16.6 and Section 16.9.

(b) Any disputes, controversies or differences, other than a matter within the final decision-making authority of a Party which may arise between the Parties out of or in relation to or in connection with this Agreement shall be promptly presented to the JSC for resolution, or

if the entire JSC is not available, to its co-chairs. If the JSC is unable to resolve such dispute within **[*]** after a matter has been presented to it, then upon the request of either Party by written notice, the Parties agree to meet and discuss in good faith a possible resolution thereof, which good faith efforts shall include at least one in-person meeting between the Senior Executives of each Party within **[*]** after receipt by the other Party of such written notice. If the matter is not resolved within **[*]** following presentation to the Senior Executives, then if such matter arises under or results from an allegation of breach of this Agreement by or on behalf of a Party, either Party may invoke the provisions of Section 16.1(c), and thereafter if needed, the provisions of Section 16.2 (other than with respect to any dispute between the Parties concerning the validity, scope, enforceability, inventorship, or ownership of intellectual property rights, which shall be subject to Section 16.9). Deadlocks or disputes that do not arise under or result from an allegation of breach of this Agreement, and that are not reserved for resolution under Section 16.3 or by one Party or the other as specified under this Agreement, shall be resolved in good faith discussion and negotiation of the Parties without referral to mediation under Section 16.1(c) or arbitration under Section 16.2 (unless otherwise expressly agreed by the Parties).

(c) If the Parties are unable to resolve a dispute arising out of or relating to an allegation of breach of this Agreement through the negotiation procedures set forth in Section 16.1(b), then at the end of such **[*]** period, such dispute (other than a dispute concerning the occurrence of the material breach alleged in a Termination Notice and subject to resolution as provided in Section 13.3(b)) shall be submitted to mediation in accordance with the International Mediation Rules of JAMS except to the extent of conflict with the express provisions of this Section 16.1(c). Such mediation shall be attended on behalf of each Party for at least **[*]** session by a senior executive with sufficient authority to resolve the dispute and shall be held in San Francisco, California, USA. The Parties shall select an Expert (defined in Section 16.2(a)) to serve as mediatory. If the Parties cannot agree, they will defer to JAMS to select an Expert as mediator. The cost of the mediator shall be borne equally by the Parties. Any dispute related to alleged breach of this Agreement that is referred to mediation that is not resolved within **[*]** (or within such other time period as may be agreed to by the Parties in writing) after appointment of a mediator shall be finally resolved by arbitration pursuant to Section 16.2. For the avoidance of doubt, disputes that are to be settled by baseball arbitration in accordance with Section 16.3 shall not proceed to mediation under this Section 16.2.

16.2 Arbitration. Subject to Section 16.9, any dispute related to an alleged breach or the validity of this Agreement, or the interpretation of Article 13 of this Agreement, that is not resolved pursuant to Section 16. 1, shall be settled by binding arbitration to be conducted as set forth below in this Section 16.2 in accordance with the then current Comprehensive Arbitration Rules (the "**Rules**") of the Judicial Arbitration and Mediation Services ("**JAMS**"), except to the extent such Rules conflict with the express provisions of this Section 16.2.

(a) Either Party, following the end of the **[*]** period referenced in Section 16.1(c) or as and when otherwise permitted by Section 13.3(b), may refer such issue to arbitration by submitting a written notice of such request to the other Party. In any proceeding under this Section 16.2, the arbitration shall be conducted by a panel of three (3) arbitrators chosen as follows: (i) claimant shall appoint a neutral arbitrator in accordance with the Rules in its request for arbitration; (ii) the respondent shall appoint a neutral arbitrator in accordance with the Rules within **[*]** of the receipt of this request for arbitration, and (iii) the two arbitrators shall appoint a third

neutral arbitrator in accordance with the Rules within **[*]** after the appointment of the second arbitrator, which third arbitrator shall be mutually acceptable to the Parties. Notwithstanding the foregoing, if the aggregate damages sought by the claimant and/or the counterclaimant are stated to be less than a total of **[*]** then a single arbitrator shall be chosen in accordance with the Rules. The arbitrator shall have the authority to engage one or more Experts who are expert in the subject matter of the dispute to advise the arbitrator in rendering his or her decision, and the costs of such Expert(s) shall be included in the costs of the arbitration. The arbitrator shall seek to obtain the mutual agreement of the Parties regarding such Expert(s), but absent such agreement, such Expert(s) shall be selected by the arbitrator. For such purposes, an "**Expert**" means a disinterested individual who is not affiliated with either Party or its Affiliates and who has expertise or experience with respect to the subject matter of the dispute, as determined by the arbitrator. Neither the Expert nor any of the Expert's former employers shall be or have been at any time an Affiliate, employee, officer or director of, or during the previous **[*]**, a consultant for, either Party or any of its Affiliates.

(b) The governing law in Section 17.9 shall govern such proceedings. No individual will be appointed to arbitrate a dispute pursuant to this Agreement unless he or she agrees in writing to be bound by the provisions of this Section 16.2. The place of arbitration will be San Francisco, California, unless otherwise agreed to by the Parties, and the arbitration shall be conducted in English.

(c) The arbitrator shall use their best efforts to rule on each disputed issue within **[*]** after appointment of the arbitrator. The determination of the arbitrator as to the resolution of any dispute shall be binding and conclusive upon the Parties, absent manifest error. All rulings of the arbitrator shall be in writing and shall be delivered to the Parties as soon as is reasonably possible. Nothing contained herein shall be construed to permit the arbitrator to award punitive, exemplary or any similar damages. The arbitrator shall render a "reasoned decision" within the meaning of the Comprehensive Arbitration Rules that shall include findings of fact and conclusions of law. Any arbitration award may be entered in and enforced by a court in accordance with Sections 16.4, 16.6 and 16.9.

16.3 Baseball Arbitration. Any disputed matter expressly stated in this Agreement to be resolved in accordance with this Section 16.3 shall be resolved by binding arbitration by a single arbitrator conducted pursuant to Section 16.2, except that the procedures for the conduct of such arbitration shall be as follows:

(a) Within **[*]** after the arbitrator (and Expert(s), if the arbitrator determines to engage an Expert(s)) is appointed, each Party shall provide the arbitrator and the other Party with a written report setting forth its position with respect to the substance of such disputed matter (and if the dispute is with respect to determining Success Criteria, a draft of the Success Criteria being proposed by such Party). Each Party may submit a revised report, position and draft Success Criteria, as applicable, to the arbitrator within **[*]** of receiving the other Party's report and draft Success Criteria, as applicable. If so requested by the arbitrator, each Party shall make oral and/or other written submissions to the arbitrator in accordance with procedures to be established by the arbitrator; *provided* that the other Party shall have the right to be present during any oral submissions. The arbitrator shall select one of the Party's position (or Success Criteria, as applicable) at his or her decision, based on what is most reasonable and equitable to each of the

Parties under the circumstances, and shall not have the authority to render any substantive decision other than to so select one Party's position (or draft Success Criteria, as applicable) as initially submitted, or as revised in accordance with the foregoing, as applicable. The arbitrator shall take into account Section 3.9(a) (in the context of considering the standard for the Success Criteria or the achievement thereof) and whether a Party's position is more likely to advance the Product towards meeting the primary strategic goal for the Collaboration Program and reflects the overall commercial potential of the Product.

(b) The Parties agree that the decision of the arbitrator shall become the binding decision of the JSC on the matter. For clarity, it is understood that the Parties intend the arbitration under this Section 16.3 to be a "baseball arbitration" type proceeding; and the arbitrator may fashion such detailed procedures, as the arbitrator considers appropriate to implement this intent.

(c) In any arbitration under this Section 16.3, the arbitrator and the Parties shall use their best efforts to resolve such disputed matter within **[*]** after the selection of the arbitrator, or as soon thereafter as is practicable.

16.4 Award. Any award to be paid by one Party to the other Party as determined by the arbitrator as set forth above under Section 16.2 shall be promptly paid in Dollars free of any tax, deduction or offset; and any costs, fees or taxes incident to enforcing the award shall, to the maximum extent permitted by law, be charged against the Party resisting enforcement. Each Party agrees to abide by the award rendered in any arbitration conducted pursuant to this Article 16, and agrees that, subject to the Federal Arbitration Act, judgment may be entered upon the final award in a court of competent jurisdiction and that other courts may award full faith and credit to such judgment in order to enforce such award. With respect to money damages, nothing contained herein shall be construed to permit the arbitrators, any court, or any other forum to award punitive or exemplary damages. By entering into this agreement to arbitrate, the Parties expressly waive any claim for punitive or exemplary damages. The only damages recoverable under this Agreement are compensatory damages.

16.5 Costs. Each Party shall bear its own legal fees in connection with any arbitration procedure. The arbitrator may in its discretion assess the arbitrator's cost, fees and expenses (and those any Expert hired by the arbitrators) against the Party losing the arbitration.

16.6 Injunctive Relief. Nothing in this Article 16 will preclude either Party from seeking equitable relief or interim or provisional relief from a court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief, concerning a dispute either prior to or during any arbitration if necessary to protect the interests of such Party or to preserve the status quo pending the arbitration proceeding. For the avoidance of doubt, nothing in this Section 16.6 shall otherwise limit a breaching Party's opportunity to cure a material breach as permitted in accordance with Section 13.3.

16.7 Confidentiality. The arbitration proceeding shall be confidential and the arbitrators shall issue appropriate protective orders to safeguard each Party's Confidential Information. Except as required by Applicable Law, no Party shall make (or instruct the arbitrators to make) any public announcement with respect to the proceedings or decision of the arbitrators without prior written consent of the other Party. The existence of any dispute submitted to arbitration, and

any award shall be kept in confidence by the Parties and the arbitrators, except as required in connection with the enforcement of such award or as otherwise required by Applicable Law. Notwithstanding the foregoing, each Party shall have the right to disclose information regarding the arbitration proceeding to the same extent as it may disclose Confidential Information of the other Party under Article 12 above.

16.8 Survivability. Any duty to arbitrate under this Agreement shall remain in effect and be enforceable after termination of this Agreement for any reason.

16.9 Patent and Trademark Disputes. Notwithstanding Sections 16.2 and 16.3, any dispute, controversy or claim relating to the validity, scope, enforceability, inventorship, or ownership of intellectual property rights shall be submitted to a court of competent jurisdiction in the country in which such intellectual property rights were granted or arose.

17. MISCELLANEOUS

17.1 Entire Agreement; Amendments. This Agreement, including the Exhibits hereto (which are incorporated into and made a part of this Agreement), sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter hereof and supersedes, as of the Effective Date, all prior agreements and understandings between the Parties with respect to the subject matter hereof, including the Prior CDA. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as are set forth herein and therein. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized representative of each Party.

17.2 Export Control. This Agreement is made subject to any restrictions concerning the export of products or technical information from the U.S. or other countries that may be imposed upon or related to Lyell or GSK from time to time. Each Party agrees that it shall not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate agency or other governmental entity.

17.3 Rights in Bankruptcy.

(a) All rights and licenses granted under or pursuant to this Agreement by one Party to the other are, for all purposes of Section 365(n) of Title 11 of the United States Code ("**Title 11**"), licenses of rights to "intellectual property" as defined in Title 11, and, in the event that a case under Title 11 is commenced by or against either Party (the "**Bankrupt Party**"), the other Party shall have all of the rights set forth in Section 365(n) of Title 11 to the maximum extent permitted thereby. During the Term, each Party shall create and maintain current copies to the extent practicable of all such intellectual property. Without limiting the Parties' rights under Section 365(n) of Title 11, if a case under Title 11 is commenced by or against the Bankrupt Party, the other Party shall be entitled to a copy of any and all such intellectual property and all embodiments of such intellectual property, and the same, if not in the possession of such other

Party, shall be promptly delivered to it (i) before this Agreement is rejected by or on behalf of the Bankrupt Party, within **[*]** after the other Party's written request, unless the Bankrupt Party, or its trustee or receiver, elects within **[*]** to continue to perform all of its obligations under this Agreement, or (ii) after any rejection of this Agreement by or on behalf of the Bankrupt Party, if not previously delivered as provided under clause (i) above. All rights of the Parties under this Section 17.3 and under Section 365(n) of Title 11 are in addition to and not in substitution of any and all other rights, powers, and remedies that each Party may have under this Agreement, Title 11, and any other Applicable Law. The non-Bankrupt Party shall have the right to perform the obligations of the Bankrupt Party hereunder with respect to such intellectual property, but neither such provision nor such performance by the non-Bankrupt Party shall release the Bankrupt Party from any such obligation or liability for failing to perform it.

(b) Any intellectual property provided pursuant to the provisions of this Section 17.3 shall be subject to the licenses set forth elsewhere in this Agreement and the payment obligations of this Agreement, which shall be deemed to be royalties for purposes of Title 11.

17.4 Force Majeure. Each Party shall be excused from the performance of its obligations under this Agreement to the extent that such performance is prevented by force majeure (defined below) and the nonperforming Party promptly provides notice of such prevention to the other Party. Such excuse shall be continued so long as the condition constituting force majeure continues. The Party affected by such force majeure also shall notify the other Party of the anticipated duration of such force majeure, any actions being taken to avoid or minimize its effect after such occurrence, and shall take reasonable efforts to remove the condition constituting such force majeure. For purposes of this Agreement, "**force majeure**" shall include conditions beyond the control of the Parties, including an act of God, acts of terrorism, voluntary or involuntary compliance with any regulation, law or order of any government, war, acts of war (whether war be declared or not), labor strike or lock-out, civil commotion, epidemic, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe. The payment of invoices due and owing hereunder shall in no event be delayed by the payer for more than **[*]** because of a force majeure affecting the payer.

17.5 Notices. Any notice required or permitted to be given under this Agreement shall be in writing, shall refer to this Agreement, and shall be addressed to the appropriate Party at the address specified below or such other address as may be specified by such Party in writing in accordance with this Section 17.5, and shall be deemed to have been given for all purposes (a) when received, if hand-delivered or sent by a reputable international expedited delivery service, or (b) **[*]** after mailing, if mailed by first class certified or registered mail, postage prepaid, return receipt requested.

For Lyell: **[*]**

and

[*]

With a copy (which shall not constitute notice) to:

[*]

For GSK and **[*]**: **[*]**

and

With a copy (which shall not constitute notice) to:

[*]

17.6 Independent Contractors. Each Party shall act solely as an independent contractor, and nothing in this Agreement shall be construed to give either Party the power or authority to act for, bind, or commit the other Party in any way. Nothing herein shall be construed to create the relationship of partners, principal and agent, or joint-venture partners between the Parties.

17.7 Assignment. Neither Party may assign this Agreement without the prior written consent of the other, except that a Party may make such an assignment without the other Party's consent (a) to any Affiliate of such Party, *provided* that such transfer does not adversely affect the other Party's rights and obligations under this Agreement and that such assigning/transferring Party remains jointly and severally liable with such Affiliate for the performance of this Agreement, or (b) to any Third Party successor-in-interest or purchaser of all or substantially all of the business or assets of such Party to which this Agreement relates, whether in a merger, combination, reorganization, sale of stock, sale of assets or other transaction; *provided*, *however*, that in each case (a) and (b) that the assigning Party provides written notice to the other Party of such assignment and the assignee shall have agreed in writing to be bound (or is otherwise required by operation of Applicable Law to be bound) in the same manner as such assigning Party hereunder. In addition, Lyell may assign its right to receive proceeds under this Agreement or grant a security interest in such right to receive proceeds under this Agreement to one or more Third Parties pursuant to the terms of a security or other agreement related to such financing (i.e., for purposes of a royalty financing arrangement), and GSK shall reasonably cooperate to facilitate such assignment. Any permitted assignment shall be binding on the successors of the assigning Party. Any assignment or attempted assignment by either Party in violation of the terms of this Section 17.7 shall be null, void and of no legal effect.

17.8 Effect of Change of Control of Lyell. In the event that Lyell is acquired in a Change of Control Transaction by a Third Party (an Acquirer as defined below), then notwithstanding any other provision in this Agreement (including the definitions of Lyell Manufacturing Technology and Lyell Technology):

(a) the intellectual property of such Acquirer held or developed by such Acquirer prior to such acquisition, to the extent such intellectual property then existed ("**Acquirer Technology**") shall be excluded from Lyell Technology (including Lyell Patent Rights, Lyell Know-How, and Lyell Manufacturing Technology).

(b) intellectual property that, following such Change of Control Transaction, is developed (initially or further developed), made or otherwise acquired or controlled by the Acquirer shall not be included within the Lyell Technology, unless such intellectual property was made as a result of the Acquirer's use of proprietary Lyell Know-How (such proprietary Lyell Know-How, the "**Segregated Technology**") in a manner that violates (i) any exclusive licenses

granted to GSK under this Agreement or (ii) Section 3.3(b) (with respect to the Target Rejection Prohibition), or Article 11, to the extent Section 3.3(b) or Article 11 is applicable to the Acquirer under Section 17.8(g) below. Lyell and the Acquirer shall adopt reasonable procedures to prevent data access and sharing of Information pertaining to Compounds, Products, Collaboration Targets or Lyell Development Programs between Acquirer personnel working on any T-Cell Therapy directed to any Collaboration Target and Lyell personnel working on the Lyell Development Programs or having access to data from the Lyell Development Programs, except as needed to comply with Applicable Law.

(c) Notwithstanding Section 17.8(b), if rights to Segregated Technology were granted to the Acquirer prior to the Change of Control Transaction, then the use of such Segregated Technology in accordance with such grant (and consistent with the exclusive licenses granted under this Agreement) shall not be deemed use of Segregated Technology for purposes of this Section 17.8 but shall be deemed Acquirer Technology.

(d) such Acquirer (and Affiliates of such Acquirer which are not controlled by (as defined under the Affiliate definition in Article 1) Lyell itself) shall be excluded from the Affiliate definition solely for purposes of the definition of Lyell Technology. For clarity and except with respect to a violation described under clauses (i) or (ii) of Section 17.8(b), the Acquirer has sole discretion as to whether it will contribute its intellectual property, Information or materials to Lyell's activities and Lyell Technology under this Agreement.

(e) If the Acquirer is a GSK Competitor: (i) Lyell's ability to develop **[*]**, (ii) certain functions of the JSC shall terminate in accordance with **Exhibit 17.8(e)**, and (iii) GSK shall be entitled to terminate this Agreement by written notice to Lyell within **[*]** after the consummation of such Change of Control Transaction or other assignment to a GSK Competitor, such termination effective **[*]** thereafter and in such case Section 13.6(b)(i) shall apply.

(f) As used herein, "**Acquirer**" means the Third Party involved in the Change of Control Transaction, and any Affiliate of such Third Party that was not an Affiliate of the Acquired Party immediately prior to the Change of Control Transaction; and "**Acquired Party**" means the Party that was the subject of such Change of Control Transaction, together with any entity that was its Affiliate immediately prior to the Change of Control Transaction.

(g) The provisions of Section 3.3(b) (with respect to the Target Rejection Prohibition) and Article 11 shall not apply to any Acquirer Technology or to any products Developed or Commercialized by the Acquirer without use of Segregated Technology. However, if the Acquirer uses Segregated Technology to develop a T-Cell Therapy directed to a Collaboration Target, or directed to a Target that is then subject to a Target Rejection Prohibition under Section 3.3(b), the restrictions set forth in Section 3.3(b) (with respect to the Target Rejection Prohibition) and Article 11 thereafter shall apply to such Acquirer with respect to such T-Cell Therapy.

17.9 Governing Law. This Agreement shall be governed by and construed and enforced under the substantive laws of the State of Delaware, excluding any conflicts or choice of law rule or principle that might otherwise make this Agreement subject to the substantive law of another jurisdiction. For clarification, any dispute relating to the inventorship, scope, validity, enforceability or infringement of any patent right shall be governed by and construed and enforced in accordance with the patent laws of the applicable jurisdiction.

17.10 Performance by Affiliates; [*].

(a) Subject to the terms and conditions of this Agreement, each Party may discharge any obligations and exercise any right hereunder through any of its Affiliates. Each Party hereby guarantees the performance by its Affiliates of such Party's obligations under this Agreement, and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance. Any breach by a Party's Affiliate of any of such Party's obligations under this Agreement shall be deemed a breach by such Party, and the other Party may proceed directly against such Party without any obligation to first proceed against such Party's Affiliate.

(b) **[*]** to Lyell the full and timely **[*]**, and in respect of damages or liabilities arising under Article 16 (dispute resolution) of this Agreement (collectively, the "**[*]**"). **[*]** agrees that the validity of the **[*]** in this Section 17.10(b) and the obligations of **[*]** hereunder shall not be terminated, affected, diminished or impaired by reason of the assertion or the failure to assert by Lyell against GSK any of the rights or remedies reserved to Lyell pursuant to the provisions of this Agreement or otherwise or any other remedy or right which such Lyell may have at law or in equity or otherwise. The foregoing **[*]**, and shall be and continue to be fully effective notwithstanding any amendment to the Agreement or any of the **[*]**. To the extent that Lyell grants to GSK (i) any waiver of any default by GSK of the **[*]**, (ii) any extension of time of performance by GSK **[*]**, (iii) any release of GSK from the performance of the **[*]**, or (iv) any other indulgences whatsoever, Lyell shall have and shall be deemed to have also **[*]** hereunder. **[*]** further agrees that its **[*]**. However, prior to seeking satisfaction of any **[*]**, Lyell will first direct any requests with respect to the **[*]** to GSK.

17.11 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

17.12 Compliance with Applicable Law. Each Party shall comply with Applicable Law in the course of performing its obligations or exercising its rights pursuant to this Agreement. Notwithstanding anything to the contrary in this Agreement, neither Party nor any of its Affiliates shall be required to take, or shall be penalized for not taking, any action that such Party reasonably believes is not in compliance with Applicable Law.

17.13 Severability. If any one or more of the provisions of this Agreement are held to be invalid or unenforceable by an arbitrator or any court of competent jurisdiction from which no appeal can be or is taken, the provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering this Agreement may be realized. If a Party or its Affiliate challenges in a court action or other legal proceeding, or before any governmental authority, the validity, legality or enforceability of any provision of this Agreement, or assists any Third Party in bringing any such challenge, the other Party shall have the right to terminate this

Agreement upon **[*]** prior written notice to the complaining Party, unless such challenge is withdrawn and the effect of such challenge cured within such **[*]** period. For purposes of Section 13.6, a termination in accordance with the foregoing shall be deemed a termination under Section 13.3 by reason of a breach of the Party who made or assisted in the bringing of such challenge.

17.14 No Waiver. Neither Party may waive nor release any of its rights or interests in this Agreement except in writing. The failure of either Party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition. No waiver by either Party of any condition or term in any one or more instances shall be construed as a continuing waiver of such condition or term or of another condition or term.

17.15 Interpretation. The captions and headings to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections or Exhibits mean the particular Articles, Sections or Exhibits of this Agreement and references to this Agreement include all Exhibits hereto. Unless context otherwise clearly requires, whenever used in this Agreement: (a) the words “include”, “includes” or “including” shall be construed as incorporating also the phrase “but not limited to” or “without limitation”; (b) the word “day” or “quarter” shall mean a calendar day or quarter, unless otherwise specified; (c) the word “notice” shall mean notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (d) the words “hereof,” “herein,” “hereby” and derivative or similar words refer to this Agreement (including any Exhibits); (e) provisions that require that a Party, the Parties or the JSC hereunder “agree,” “consent” or “approve” or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise; (f) words of any gender include the other gender; (g) words using the singular or plural number also include the plural or singular number, respectively; (h) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof; and (i) the word “will” shall be construed to have the same meaning and effect as the word “shall”. Ambiguities, if any, in this Agreement shall not be construed against any Party, irrespective of which Party may be deemed to have authored the ambiguous provision. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction shall be applied against either Party hereto. This Agreement should be interpreted in its entirety and the fact that certain provisions of this Agreement may be cross-referenced in a Section shall not be deemed or construed to limit the application of other provisions of this Agreement to such Section and *vice versa*.

As used in this Agreement, (i) the phrase ‘with respect to a given Collaboration Target’ or ‘with respect to any Collaboration Target’ or ‘for a Collaboration Target’ (or similar phrases) when referring to: (x) GSK’s licenses or license rights (including the termination of GSK’s licenses or license rights hereunder) refers to the licensed Lyell Technology that applies to Compounds and Products directed to such Collaboration Target, (y) the Compounds or Products refers to the Compounds or Products directed to such Collaboration Target, and (z) a Collaboration Program refers to a Collaboration Program for Compounds and Product directed to such Collaboration Target and (ii) the phrase ‘directed to a Target’, (and similar phrases) with respect to Compounds and Products means Compounds and Products that specifically bind to and a principle intended therapeutic mechanism of action is to so bind to such Target.

17.16 HSR Filing.

(a) Both Parties (or their Affiliates) shall use reasonable efforts to file the appropriate notices under the Hart Scott Rodino Antitrust Improvements Act ("**HSR Act**") within **[*]** after the Execution Date. The Parties shall promptly make required filings to obtain clearance under the HSR Act for the consummation of this Agreement and the transactions contemplated hereby and shall keep each other apprised of the status of any communications with, and any inquiries or requests for additional information from, the United States' Federal Trade Commission ("**FTC**") or the Antitrust Division of the United States Department of Justice ("**DOJ**") and shall comply promptly with any reasonable FTC or DOJ inquiry or request of this nature; *provided*, *however*, neither Party shall be required to consent to the divestiture or other disposition of any of its assets or the assets of its Affiliates or to consent to any other structural or conduct remedy, and each Party and its Affiliates shall have no obligation to contest, administratively or in court, any ruling, order or other action of the FTC or DOJ or any Third Party with respect to the transactions contemplated by this Agreement. Each Party shall be responsible for paying the filing fees it incurs in connection with the HSR filings. The Effective Date shall not be deemed to have occurred until the later of the HSR Clearance Date and the date of the "**Closing**" under that certain Series AA Preferred Stock Purchase Agreement between Lyell and **[*]** dated concurrent with the Execution Date. As used herein, the "**HSR Clearance Date**" means the earlier of (i) the date on which the FTC or DOJ shall notify the Parties of early termination of the waiting period under the HSR Act or (ii) the date on which the applicable waiting period under the HSR Act expires; *provided*, *however*, that if the FTC or DOJ commences any investigation by means of a second request or otherwise, HSR Clearance Date means the date on which any investigation opened by the FTC or DOJ has been terminated, without action to prevent the Parties from implementing the transactions contemplated by this Agreement with respect to the United States. Notwithstanding any other provisions of this Agreement to the contrary, either Party may terminate its obligation under this Section 17.16(a), and this Agreement shall be void and of no further effect upon notice to the other Party, if the HSR Clearance Date has not occurred on or before the date that is **[*]** after the date as of which both Parties have made their respective HSR filings and the initial waiting period under the HSR Act has commenced.

(b) If GSK reasonably determines that the transactions to occur upon consummation of any Option Exercise requires an HSR filing, then upon notice of Option Exercise (i) GSK shall provide notice of such HSR filing obligation to Lyell (to the extent it has not already done so), (ii) Section 17.16(a) (excluding the third to last sentence thereof) shall apply with respect to the effectiveness of such Option Exercise (replacing Execution Date in the first sentence thereof with the notice date of Option Exercise) and (iii) all rights and obligations of the Parties related to such Option or Option Exercise (including payment of any milestones and the grant of any license to GSK under the Option, but not with respect to making any HSR filing) shall be tolled until the HSR Clearance Date. The last sentence of Section 17.16(a) (i.e., a Party's termination right) shall not apply to any delay in achieving the HSR Clearance Date with respect to an HSR filing following notice of Option Exercise under this Section 17.16(b). If the HSR Clearance Date with respect to such Option Exercise has not occurred on or before the date that is **[*]** after the date as of which both Parties have made their respective HSR filings and the initial waiting period under

the HSR Act has commenced with respect to such Option, then either Party may terminate the Collaboration Program for which the Option Exercise was made upon notice to the other Party (and such termination, regardless of whether by Lyell or GSK, shall be treated a termination by GSK pursuant to Section 13.2), *provided* that as long as GSK is using reasonable efforts to obtain clearance under the HSR Act, GSK may extend the period to achieve the HSR Clearance Date to be up to **[*]** from the date as of which both Parties have made their respective HSR filings and the initial waiting period under the HSR Act has commenced by providing written notice to Lyell prior to the expiration of such period.

17.17 Counterparts. This Agreement may be executed in counterparts with the same effect as if both Parties had signed the same document, each of which shall be deemed an original, shall be construed together and shall constitute one and the same instrument. This Agreement may be executed and delivered through the email of pdf copies of the executed Agreement.

[signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives effective as of the Execution Date.

For **LYELL IMMUNOPHARMA, INC.**

By: /s/ Richard Klausner
Name: Richard Klausner
Title: CEO

For **GLAXOSMITHKLINE INTELLECTUAL PROPERTY (NO. 5) LIMITED**

By: /s/ Adam Walker
Name: Adam Walker
Title: Director

For [*]

By: /s/ Adam Walker
Name: Adam Walker
Title: Director

EXHIBIT 1.2

Academic PoC Data Package

[*]

EXHIBIT 1.21

Collaboration Component Data Package

[*]

EXHIBIT 1.40

Existing License Agreements

[*]

EXHIBIT 1.65

Lyell Patents

[*]

Exhibit 1.71

Net Sales Deductions

[*]

EXHIBIT 3.1(b)

Program Diligence Information

[*]

EXHIBIT 3.1(d)

Technology Transfer Requirements

[*]

EXHIBIT 3.2

Items to be Provided by GSK to Lyell, to the Extent Controlled by GSK, Prior to Initiation of Lyell Development Program

[*]

EXHIBIT 3.3(a)

Initial Collaboration Targets

[*]

EXHIBIT 3.3(b)

GSK Nominated CAR Target Information – Items to be Provided by GSK to Lyell, to the Extent Controlled by GSK

[*]

EXHIBIT 3.3(b)(ii)

Lyell Advanced CAR-T Target Information

[*]

EXHIBIT 3.3(c)

Items to be Included in Target Selection Notice

[*]

EXHIBIT 3.3(d)

Excluded Targets

[*]

EXHIBIT 3.6

Transfer Record

[*]

EXHIBIT 8.7(b)-1

Waiver of Certain Terms of Existing License Agreements

[*]

EXHIBIT 8.7(b)-2(A)

Lyell License Agreement Provisions: Stanford License

[*]

EXHIBIT 8.7(b)-2(B)

Lyell License Agreement Provisions: Hutchinson License

[*]

EXHIBIT 8.16

Invoicing Information

[*]

EXHIBIT 14.2(k)

Animal Research Policy

[*]

EXHIBIT 17.8(e)

JSC Functions

[*]

Certain confidential information contained in this document, marked by **[*]**, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

FIRST AMENDMENT
TO THE
COLLABORATION AND LICENSE AGREEMENT
BETWEEN
LYELL IMMUNOPHARMA
AND
GLAXOSMITHKLINE INTELLECTUAL PROPERTY (NO.5) LIMITED [*]

This FIRST AMENDMENT TO THE COLLABORATION AND LICENSE AGREEMENT (the "**First Amendment**") is dated as of 25th June 2020 (the "**Amendment Effective Date**"), by and between Lyell Immunopharma, having a principal office at 400 E Jamie Ct #300, South San Francisco, California 94080, USA ("**Lyell**") and GlaxoSmithKline Intellectual Property (No.5) Limited, a company registered in England and Wales (registered number 11959399) with a registered office at 980 Great West Road, Brentford, Middlesex TW8 9GS, United Kingdom ("**GSK**") and, **[*]**. Lyell and GSK are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**").

BACKGROUND

WHEREAS, the Parties entered into that certain Collaboration and License Agreement of May 23, 2019 governing the research, development and commercialization of human therapeutic products (the "**Agreement**");

WHEREAS, Lyell desires to amend the Agreement to enable Lyell's research and development of Anti-Exhaustion Components and to modify the list of Excluded Targets;

WHEREAS, GSK desires to amend the Agreement to transfer certain materials from Lyell to GSK for work to be performed under the Agreement; and

WHEREAS, GSK and Lyell wish to amend the Agreement in accordance with Section 17.1 of the Agreement to enable the foregoing.

NOW, THEREFORE, IN CONSIDERATION OF the mutual covenants set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. All terms and conditions of the Agreement not modified by this First Amendment shall continue in full force and effect in accordance with their terms. All capitalized terms not otherwise defined herein shall have the same definition as in the Agreement.

2. **Section 1.32 "Develop" or "Development"**. Section 1.32 "**Develop**" or "**Development**" is hereby deleted and replaced in its entirety with the following:

> "Section 1.32 "**Develop**" or "**Development**" means all development activities with respect to a Product, including those in support of obtaining, maintaining or expanding Regulatory Approval of a Product, for one or more indications in the Field. This includes: (a) preclinical/nonclinical research and testing that are intended or designed to be included in an IND package for that Product, toxicology and Clinical Trials; and (b) preparation, submission, review and development of data or information and Regulatory Materials for the purpose of submission to a Governmental Authority to obtain, maintain or expand Regulatory Approval of a Product (including contacts with Regulatory Authorities."

3. **Section 1.72 "New Third Party Technology"**. The following sentence is hereby added to the end of Section 1.72:

"For the avoidance of doubt, "**New Third Party Technology**" includes any Patents and Information in-licensed or acquired by Lyell as a result of the activities described in Section 11.1(B)(i) and (ii)."

4. **Section 1.91 "[*]"**. Section 1.91 "**[*]**" is hereby deleted and replaced in its entirety with the following:

Section 1.91 "**[*]**" means the period beginning on the Effective Date and ending upon **[*]** after the Effective Date or termination of this Agreement. For clarity, it is understood that GSK will have the right to nominate CAR-T Targets under Section 3.3 (b) only during the **[*]** after the Effective Date, subject to extension pursuant to Section 3.3 a(b).

5. **Section 3.3(b)(i) Additional CAR-T Target Option**. Section 3.3(b)(i) of the Agreement is deleted and replaced in its entirety as follows:

"The Parties, by mutual written agreement as to the selected Target, shall add **[*]** additional CAR-T Target believed to be useful in the Oncology Field as a Collaboration Target during the **[*]** after the Effective Date. Subject to the remainder of this Section 3.3 (b), during the **[*]** after the Effective Date until such a CAR-T Target is added as a Collaboration Target, GSK may nominate **[*]** Target (other than any Excluded Target or any Lyell Advanced CAR-T Target) to be added as a CAR-T Collaboration Target by providing written notice thereof to Lyell specifically referencing this Section 3.3 (b), together with a written description of such proposed CAR-T Target, its NCBI reference sequence accession number and other items described in **Exhibit 3.3 (b)** (a "**Target Nomination Notice**"), which proposed CAR-T Target may be from Lyell's existing pipeline or GSK's existing pipeline of CAR-T Targets of interest or a new CAR-T Target for which a new research program would need to be initiated. Each Target Nomination Notice shall not include more than **[*]** proposed CAR-T Target and GSK shall not have the right to issue a subsequent Target Nomination Notice until Lyell provides a Target Nomination Response Notice for an outstanding Target Nomination Notice. Within **[*]** following Lyell's receipt of the Target Nomination Notice ("**Target Nomination Response Period**"), Lyell shall notify GSK in writing of its agreement to add such nominated CAR-T Target or rejection of such nominated CAR-T Target as a Collaboration Target ("**Target Nomination Response Notice**"), and if rejecting, shall provide the reasons for such rejection. If Lyell agrees to add such CAR-T Target as a Collaboration Target, then such CAR-T Target shall be deemed an "**Additional Target**," and GSK shall pay to Lyell **[*]** with respect to such Additional Target, within **[*]** of receipt of a valid invoice therefor from Lyell. Notwithstanding any JSC review pursuant to Section 2.1 (c), if Lyell rejects a certain CAR-T Target so nominated by GSK, then for the period beginning on the date of the Target Nomination Response Notice and ending **[*]** thereafter, Lyell shall not Develop itself, or collaborate with a Third Party on the Development of, a CART-Cell Therapy directed to such rejected CAR-T Target for the Territory (such prohibition, a "**Target Rejection Prohibition**"). If a nominated CAR-T Target is rejected in the final **[*]** of the **[*]**, then the **[*]** as it applies to CAR-T Targets shall be extended **[*]**, and GSK shall have the right to nominate another CAR-T Target to be added as a Collaboration Target pursuant to the same process described in this Section 3.3 (b), and such nomination process shall continue to repeat during such extended **[*]** period until **[*]** CAR-T Target is added as an Additional Target; provided, however, that if Lyell rejects the **[*]** CAR-T Targets nominated during such extended period of the **[*]**, then GSK shall have the right to nominate a **[*]** CAR-T Target (other than an Excluded Target and a Lyell Advanced CAR-T Target), which **[*]** CAR-T Target may not be rejected by Lyell and will be added as an Additional Target."

6. **Section 3.3(b)(ii) Additional CAR-T Target Option**. The first sentence of Section 3.3(b)(ii) of the Agreement is hereby deleted and replaced in its entirety as follows:

"Lyell shall provide written notice to GSK if it has initiated IND Enabling Studies for a CAR T-Cell Therapy directed to a CAR-T Target (other than an Excluded Target) in Lyell's then-existing pipeline during the period prior to the earlier of **[*]** after the Effective Date and the addition pursuant to this Section 3.3 (b) of GSK's **[*]** CAR-T Target as a Collaboration Target, together with a written description of Information described in **Exhibit 3.3 (b) (ii)**, to the extent such Information is in Lyell's Control as of the delivery of such notice to GSK."

7. **Exhibit 3.3(d) Excluded Targets**. Exhibit 3.3(d) Excluded Targets is hereby amended as follows :

[*]

For clarity, as of the Amendment Effective Date, GSK shall have the right to **[*]**

8. **Section 11.1 Lyell Exclusivity**. Section 11.1 Lyell Exclusivity is hereby deleted and replaced with the following:

" 11.1 **Lyell Exclusivity**. Lyell will not work with any Third Party for the purpose of Development or Commercialization of:

(a) a CAR T-Cell Therapy anywhere in the world (other than for China with respect to CAR T-Cell Therapies that are not directed to a Target for an Active GSK Program) during the period beginning on the Effective Date and ending upon **[*]** (i) **[*]** after the Effective Date and (ii) the date when the **[*]** CAR-T Target is added as a Collaboration Target; or

(b) a TCR T-Cell Therapy anywhere in the world (other than for China with respect to TCR T-Cell Therapies that are not directed to a Target for an Active GSK Program) during the period beginning on the Effective Date and ending upon **[*]** (i) **[*]** after the Effective Date and (ii) the date when the **[*]** TCR Target is added as a Collaboration Target;

provided that this Section 11.1:

(A) shall not apply to T-Cell Therapies directed to any Excluded Target (subject to GSK's reserved rights, and Lyell's obligations, with respect to the Substitution Target pursuant to Section 3.1(a)(i)(l)), Lyell Advanced CAR-T Targets, or Lyell's activities permitted under Section 3.9(d), and

(B) shall not restrict Lyell from working with:

(i) contractors or clinical sites for the benefit of Lyell or from working with research institutions (including universities and research centers such as the Fred Hutchinson Cancer Research Center), or

(ii) corporate entities (that are not GSK Competitors) on the following technologies and tools, which are designed to enable Lyell's research and development of Anti-Exhaustion Components for T-Cell Therapy: gene editing, T-cell activation technologies, and T-cell sorting technologies,

and provided, in the case of this clause (B) such Third Parties are not granted any commercialization rights with respect to such Lyell Technology.

9. **Pre-Option Research**. In addition to the responsibilities of the JSC as set forth in Section 2.l (c), the JSC shall also have the right to agree to allow GSK to conduct certain research studies in accordance with a research plan mutually agreed and approved by the JSC, in each case, related to a Collaboration Program for which GSK has not yet exercised its Option (each, a "Research Plan"). Where applicable, Lyell may transfer certain Materials to GSK under a Transfer Record in order to facilitate the Research Plan. For the avoidance of doubt, such Materials shall be subject to Sections 3.6 and 7.4(b).

10. **Section 7.1(c)**. A new Section 7.1 (c) is hereby added to the Agreement as follows:

Lyell hereby grants to GSK as of the Amendment Effective Date, a non-exclusive, royalty-free, worldwide license to Lyell Technology solely for the purpose of GSK' s performance of a Research Plan agreed by the JSC. The foregoing license shall expire upon the earlier of (i) completion of GSK's activities under the relevant Research Plan or (ii) Option Exercise with respect to the Collaboration Program to which the Research Plan relates. The foregoing license shall be subcontractable to GSK's Affiliates and subcontractors to the extent such Affiliates and subcontractors are performing any of GSK's assigned activities on behalf of GSK under the relevant Research Plan.

11. **Miscellaneous** . This First Amendment may be executed in counterparts, each of which shall constitute an original and all of which, when taken together, shall constitute one instrument. For purposes hereof, this First Amendment may be executed and delivered through the email of pdf copies of the executed First Amendment. No modification of or amendment to this First Amendment, nor any waiver of any rights under this First Amendment, will be effective unless in writing signed by the duly authorized representatives of both parties, and the waiver of any breach or default will not constitute a waiver of any other right hereunder or any subsequent breach or default. This First Amendment shall be governed in accordance with the substantive laws of the State of Delaware, excluding any conflicts or choice of law or principle that might otherwise make this Agreement subject to the substantive law of another jurisdiction.

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IN WITNESS WHEREOF, the Parties hereto have caused this First Amendment to be executed by their duly authorized representatives as set forth below.

Lyell Immunopharma

By: */s/ Rick Klausner*

Name: Rick Klausner

Title: CEO, Lyell

GlaxoSmithKline Intellectual Property (No.5) Limited

By: */s/ Claire Macleod*

Name: Claire Macleod

Title: Authorized Signatory,

For and on behalf of Edinburgh Pharmaceutical Industries Limited, The Corporate director

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated April 12, 2021, in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-256470) and related Prospectus of Lyell Immunopharma, Inc. for the registration of its common stock.

/s/ Ernst & Young LLP

Redwood City, California
June 8, 2021