As filed with the Securities and Exchange Commission on November 29, 2024

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-3 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

Lyell Immunopharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 83-1300510 (I.R.S. Employer Identification Number)

201 Haskins Way South San Francisco, California 94080 (650) 695-0677

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Lynn Seely, M.D. President and Chief Executive Officer Lyell Immunopharma, Inc. 201 Haskins Way 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:

Thomas Greenberg Skadden, Arps, Slate, Meagher & Flom LLP One Manhattan West New York, NY 10001 (212) 735-3000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

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, as amended, other than securities offered only in connection with dividend or interest reinvestment plans, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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	\boxtimes	Accelerated filer	ב
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.

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 that 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.

The information in this preliminary prospectus is not complete and may be changed. The selling stockholders may not sell these securities or accept an offer to buy these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any state where such offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED NOVEMBER 29, 2024

Preliminary Prospectus



37,499,981

Shares of Common Stock

This prospectus relates to the proposed resale from time to time by the selling stockholders identified in this prospectus of up to 37,499,981 shares of our common stock, par value \$0.0001 per share. The shares of common stock registered for resale pursuant to this prospectus were issued as part of the merger consideration under an Agreement and Plan of Merger, dated as of October 24, 2024 (the "Merger Agreement"), by and among ImmPACT Bio USA Inc., a Delaware corporation ("ImmPACT Bio"), us, Inspire Merger Sub Inc., a Delaware corporation and our indirect, wholly owned subsidiary ("Merger Sub"), and WT Representative LLC, a Delaware limited liability company, solely in its capacity as the representative of the Company Securityholders (as defined in the Merger Agreement) (the "Representative"), pursuant to which we acquired ImmPACT Bio through the merger of Merger Sub with and into ImmPACT Bio (the "Merger"), with ImmPACT Bio surviving the Merger as the surviving entity and our indirect, wholly owned subsidiary. The Merger Agreement provides for the issuance by Lyell of 37,500,000 shares of our common stock to the selling stockholders, provided that in the event any fractional shares of our common stock are owed to any selling stockholder, in lieu of such issuance, such fractional shares are to be paid in cash. After accounting for the cash payments we made to certain selling stockholders in lieu of fractional shares, we issued a total of 37,499,981 shares of our common stock to the selling stockholders in connection with the Merger.

We are registering the shares of our common stock on behalf of the selling stockholders, to be offered and sold by them from time to time. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders.

This prospectus provides a general description of the common stock the selling stockholders may offer. The selling stockholders may sell the shares of our common stock described in this prospectus in a number of different ways and at varying prices. See the section titled "Plan of Distribution for Shares Offered by Selling Stockholders" on page 15 of this prospectus for more information about how the selling stockholders may sell the shares of common stock being registered pursuant to this prospectus.

We have agreed to pay the expenses incurred in registering the shares of common stock, including certain legal and accounting fees. The selling stockholders will bear all underwriting discounts, selling commissions and similar fees and arrangements and stock transfer taxes allocable to their respective sales of the shares of our common stock and certain additional legal and advisor fees.

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol "LYEL." On November 27, 2024, the last reported sale price of our common stock was \$0.92 per share.

Investing in our securities involves a high degree of risk. Before making an investment decision, you should review carefully the risks and uncertainties described under the section titled "Risk Factors" contained in this prospectus and under similar headings in the documents that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

> The date of this prospectus is , 2024.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the "SEC"), utilizing a "shelf" registration process under the Securities Act of 1933, as amended (the "Securities Act"). Under this shelf registration process, the selling stockholders, which as used herein include donees, pledgees, transferees, distributees or other successors-in-interest selling shares of our common stock received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer identified in this prospectus, may offer and sell up to 37,499,981 shares of our common stock. This prospectus provides a general description of the shares of our common stock the selling stockholders may offer. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders. For general information about the distribution of shares of common stock offered by the selling stockholders, see the section in this prospectus titled "*Plan of Distribution for Shares Offered by Selling Stockholders*".

We urge you to read carefully this prospectus, together with the information incorporated herein by reference as described under the sections titled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference", before buying any of the shares of our common stock being offered.

You should rely only on the information contained in, or incorporated by reference into, this prospectus. We have not authorized any other person to provide you with different or additional information. If anyone provides you with different or inconsistent information, you should not rely on it. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information appearing in this prospectus and the documents incorporated by reference into this prospectus, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus and the documents incorporated by reference into this prospectus gain investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus titled "*Where You Can Find More Information*" and "*Incorporation of Certain Information by Reference*".

The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus and the offering of our securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our securities and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any shares of common stock offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

We obtained the industry and market data included or incorporated by reference in this prospectus from our own research as well as from industry and general publications, surveys and studies conducted by third parties. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section of this prospectus titled "*Risk Factors*" and documents incorporated by reference into this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by independent parties and by us.

This prospectus, including the information incorporated by reference into this prospectus, includes trademarks, service marks and trade names owned by us or others. All trademarks, service marks and trade names included or incorporated by reference in this prospectus are the property of their respective owners.

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This prospectus and the information incorporated herein by reference contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described in the sections titled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference".

PROSPECTUS SUMMARY

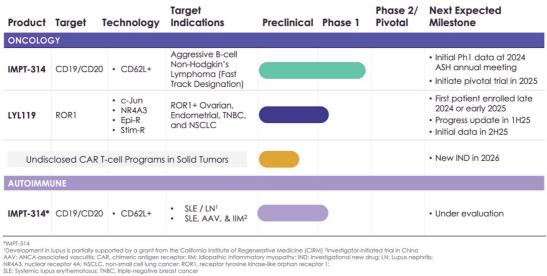
This summary highlights selected information appearing elsewhere in this prospectus or incorporated by reference in this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read this entire prospectus, including the risks of investing in our securities discussed under the section titled "Risk Factors" and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Unless the context requires otherwise, references in this prospectus to "Lyell," the "Company," "we," "us" and "our" refer to Lyell Immunopharma, Inc.

Overview

We are a clinical-stage cell therapy company advancing a pipeline of proprietary next-generation chimeric antigen receptor ("CAR") T-cell product candidates for patients with solid tumors or hematologic malignancies. We have developed novel technologies and manufacturing protocols designed to generate T cells that resist exhaustion and have qualities of durable stemness to drive durable tumor cytotoxicity and achieve consistent and long-lasting clinical responses. Our investigational therapies use the patient's own living cells as the starting point. We incorporate our innovative technology and manufacturing protocols to expand and activate the patient's T cells. Our technologies are designed to generate highly tumor-reactive, longer-lasting functional T cells with enhanced ability to persist, self-renew and kill cancer cells over time. Our technology can be applied in a target agnostic manner to multiple T-cell modalities, including CAR, tumor-infiltrating lymphocytes and T-cell receptor therapies.

Our pipeline of next-generation CAR T-cell product candidates target indications with large unmet need and provide opportunities to expand into additional indications beyond the patient populations we are initially evaluating. Our lead product candidates are summarized in Table 1 below:



We were incorporated in June 2018. Our primary activities to date have included clinical development of T-cell therapies, conducting research and development, acquiring technology and product candidates, entering into strategic collaboration and license agreements, enabling and executing manufacturing activities in support of

our product candidate development efforts, organizing and staffing our company, business planning, establishing our intellectual property portfolio, making regulatory submissions, executing clinical trials, raising capital and providing general and administrative support for these activities. We are early in our research and development efforts.

We recently acquired ImmPACT Bio, a privately-owned clinical stage biotechnology company developing next-generation CAR T-cell product candidates including a dual-targeting CD19/CD20 CAR T-cell product candidate currently in Phase 1 clinical development for the treatment of aggressive B-cell non-Hodgkin lymphoma. In conjunction with this acquisition, we prioritized our pipeline to focus resources on our most differentiated next generation CAR T-cell product candidates, including IMPT-314 for patients with aggressive B-cell lymphoma and LYL119. LYL119, our next-generation ROR1-targeted CAR T-cell product candidate, has received FDA clearance of its Investigational New Drug ("IND") application and is entering a Phase 1 dose-escalation, dose-expansion clinical trial, initially in patients with platinum-resistant ovarian cancer or relapsed/refractory endometrial cancer. We do not have any products approved for sale.

Corporate Information

We were incorporated in June 2018 as a Delaware corporation. Our principal executive offices are located at 201 Haskins Way, South San Francisco, California 94080 and our telephone number is (650) 695-0677. Our website address is www.lyell.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus, and you should not consider it as part of this prospectus. Our website address is included in this prospectus as an inactive textual reference only.

The Lyell logo and other trademarks or service marks of Lyell Immunopharma, Inc. appearing in this prospectus are the property of Lyell. Other trademarks, service marks or trade names appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

The Offering								
The Securities the Selling Stockholders May Offer	The selling stockholders may offer up to 37,499,981 shares of our common stock, from time to time in one or more offerings under this prospectus, at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the common stock the selling stockholders may offer.							
	The selling stockholders may sell shares of our common stock directly to investors or to or through agents, underwriters or dealers. The selling stockholders and their agents or underwriters reserve the right to accept or reject all or part of any proposed purchase of shares our common stock. If the selling stockholders do offer shares of our common stock to or through agents or underwriters, a prospectus supplement, if required, will be distributed, which will include, among other things:							
	• the names of those agents or underwriters;							
	• applicable fees, discounts and commissions to be paid; and details regarding options to purchase additional shares, if any.							
	We may suspend the sale of our shares of common stock by the selling stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.							
	The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Subject to preferences that may be applicable to any then-outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of legally available funds. Upon our liquidation, dissolution or winding up, the holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any then-outstanding shares of preferred stock. Holders of our common stock have no preemptive rights and no right to convert their common stock into any other securities.							
	There are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future. In this prospectus, we have summarized certain general features of our common stock under the section titled " <i>Description of Capital Stock</i> — <i>Common Stock</i> ".							
Use of Proceeds	We are not selling any securities under this prospectus and will not receive any of the							

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders.

Nasdaq Global Select Market Listing	Our common stock is listed on the Nasdaq Global Select Market under the symbol "LYEL."
Risk Factors	Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks and uncertainties discussed under the section titled "Risk Factors" in this prospectus and our most recent Annual Report on Form 10-K, as updated by our subsequent Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus and the other documents incorporated by reference into this prospectus.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks and uncertainties discussed under the section titled "*Risk Factors*" contained in our most recent Annual Report on Form 10-K, as updated by our subsequent Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus and the other documents incorporated by reference into this prospectus. The risks described in these documents are not the only ones we face. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occur, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or a part of your investment. Please also read carefully the section below titled "*Special Note Regarding Forward-Looking Statements*".

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, as well as the documents incorporated by reference in this prospectus, contain "forward-looking statements" within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements relate to our future events, including our anticipated operations, research, development and commercialization activities, clinical trials, operating results and financial condition. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may 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 and timing of our estimates regarding expenses, revenue opportunities, capital requirements and needs for additional financing;
- the scope, progress, results and costs of developing IMPT-314, LYL119 or any other product candidates we may acquire or develop, and conducting nonclinical studies and clinical trials, including for IMPT-314 and LYL119;
- the timing and costs involved in obtaining and maintaining regulatory approvals of IMPT-314, LYL119 or any other product candidates we
 may acquire or develop, and the timing or likelihood of regulatory filings and approvals, including any expectations or plans regarding
 seeking special designations, such as Regenerative Medicine Advanced Therapy designation or Fast Track designation, for our product
 candidates for various diseases;
- our plans relating to the commercialization of IMPT-314, LYL119 or any other product candidates we may acquire or develop, if approved, including the geographic areas of focus, and our ability to commercially differentiate such product candidates and grow a sales force;
- the size of the market opportunities for IMPT-314, LYL119 or any other product candidates we may acquire or develop in each of the diseases we may target;
- our reliance on third parties to conduct research activities for IMPT-314, LYL119 or any other product candidates we may acquire or develop;
- the characteristics, safety, efficacy and therapeutic effects of IMPT-314, LYL119 or any other product candidates we may acquire or develop;
- the advancement of our technology platform and the effectiveness and expected benefits of any of our technologies and manufacturing processes;
- our estimates of the number of patients in the United States and worldwide who suffer from the diseases we target and the number of patients that may enroll in our clinical trials;
- the progress and focus of the current and planned clinical trials of our product candidates, and the reporting of data from those trials, including the timing thereof;
- the ability of our clinical trials to sufficiently demonstrate the safety and efficacy of IMPT-314, LYL119 or any other product candidates we may acquire or develop, and other clinical trial results;
- the success of competing therapies that are, or may become, available;
- developments relating to our competitors and our industry, including any existing or future competing product candidates or therapies;

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• our plans relating to the further development and manufacturing of IMPT-314, LYL119 or any other product candidates we may acquire or 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 or our ability to contract with third parties to manufacture and supply IMPT-314, LYL119 or any other product candidates we may acquire or develop for clinical trials and for commercial use, if approved;
- the rate and degree of market acceptance, as well as the pricing and reimbursement, of IMPT-314, LYL119 or any other product candidates we may acquire or develop, if approved;
- our continued reliance on third parties to assist us in conducting additional clinical trials of IMPT-314, LYL119 or any other product candidates we may acquire or develop;
- the scope of protection we are able to establish and maintain for intellectual property rights, including covering our product candidates and technology platforms;
- 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 inflation, macroeconomic conditions and geopolitical conflicts on our business and operations, including on our manufacturing suppliers, collaborators, contract research organizations and employees;
- our ability to realize the anticipated benefits of and potential value created by our acquisition of ImmPACT Bio or any other acquisition or strategic transaction and our success in commercializing any product candidates we acquire in connection therewith, including IMPT-314;
- the inherent risks, costs and uncertainties associated with integrating the businesses in the merger with ImmPACT Bio successfully and the
 amount of any costs, fees, expenses, impairments and charges relating to the merger with ImmPACT Bio; and
- our anticipated use of our existing cash, cash equivalents and marketable securities.

All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by use of future dates or by terms such as: "anticipates," "believes," "continues," "could," "estimates," "expects," "intends," "may," "plans," "seeks," "should," "will," "likely," "ongoing," "project," "assume," "target," "forecast," "guidance," "objective," "aim," "goal" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events, are based on assumptions and are subject to risks and uncertainties. Given these assumptions, risks and uncertainties, you should not place undue reliance on these forward-looking statements. We cannot guarantee that any forward-looking statement will be realized. We discuss in greater detail, and incorporate by reference into this prospectus in their entirety, many of these risks and uncertainties under the section titled "*Risk Factors*" contained in our most recent Annual Report on Form 10-K, as updated by our subsequent Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. You should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. You should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. You should nead this prospec

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 investors are cautioned not to unduly rely upon these statements.

USE OF PROCEEDS

All the shares of our common stock to be sold pursuant to this prospectus will be sold by the selling stockholders. We will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders pursuant to this prospectus.

We have agreed to pay the expenses incurred in registering the shares of our common stock, including certain legal and accounting fees. The selling stockholders will bear all underwriting discounts, selling commissions and similar fees and arrangements and stock transfer taxes allocable to their respective sales of the shares of our common stock and certain additional legal and advisor fees.

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, pursuant to our amended and restated certificate of corporation (the "Restated Certificate"), our authorized capital stock consists of 500,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value per share. All of our authorized shares of preferred stock are undesignated.

This information may not be complete in all respects and is qualified entirely by reference to the provisions of the Restated Certificate, our amended and restated bylaws ("Bylaws"), our amended and restated investors' rights agreement with certain investors and purchasers, dated as of March 5, 2020 (the "Investors' Rights Agreement"), our Registration Rights Agreement with the Representative and certain former stockholders of ImmPACT Bio, dated as of October 31, 2024 (the "Registration Rights Agreement") and the General Corporation Law of the State of Delaware. For information on how to obtain copies of the Restated Certificate, our Bylaws, our Investors' Rights Agreement and our Registration Rights Agreement, which are exhibits to the registration statement of which this prospectus forms a part, see the section in this prospectus titled "*Where You Can Find More Information*".

Common Stock

Voting Rights. Our common stock is entitled to one vote per share on any matter that is submitted to a vote of our stockholders. Our Restated Certificate does not provide for cumulative voting for the election of directors. Our Restated Certificate 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 Restated Certificate, including provisions relating to amending our 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 Restated Certificate 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.
- 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. When shares of common stock are issued under this prospectus, the shares will be fully paid and non-assessable.

Preferred Stock

Under the Restated Certificate, our board of directors has 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 our 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, deterring 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 our common stock.

Voting Rights. The Delaware General Corporation Law provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Economic Rights. Unless we specify otherwise, the preferred stock will rank, with respect to dividends and upon our liquidation, dissolution or winding up:

- senior to all classes or series of our common stock and to all of our equity securities ranking junior to the preferred stock;
- on a parity with all of our equity securities the terms of which specifically provide that the equity securities rank on a parity with the preferred stock; and
- junior to all of our equity securities the terms of which specifically provide that the equity securities rank senior to the preferred stock.

The term "equity securities" does not include convertible debt securities.

Fully Paid and Non-Assessable. When we issue shares of preferred stock, such shares will be fully paid and nonassessable.

Registration Rights

Subject to federal securities laws, certain holders of shares of our common stock are 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 Investors' Rights Agreement and our Registration Rights Agreement, as described in additional detail below. The registration of shares of our common stock pursuant to the exercise of such registration rights would enable the holders to trade these shares without restriction under the Securities Act when an applicable registration statement is declared effective by the SEC. We will pay the registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, of the shares registered in connection with the exercise of such demand rights and piggyback rights, and associated Form S-3 registration statements, as applicable.

Investors' Rights Agreement

Certain holders of our common stock are entitled to certain demand registration rights at any time after 180 days after June 16, 2021, the effective date of the registration statement for our initial public 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 file more than two registration statements which are declared or ordered effective by the SEC. Such request for registration must cover shares with an anticipated aggregate offering price of at least \$35 million.

Additionally, certain holders of 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.

Further, certain holders of shares of common stock will be entitled to certain Form S-3 registration statement registration rights. Holders of 20% of these shares can make a request that we register their shares on a Form S-3 registration statement if we are qualified to file such registration statement and if the reasonably anticipated aggregate net proceeds of the shares offered would equal or exceed \$20 million. We will not be required to file more than two Form S-3 registration statements within any 12-month period.

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 statement registration rights will expire no later than five years after our initial public offering in June 2021.

Registration Rights Agreement

In connection with the closing of the Merger, on October 31, 2024 (the "Closing"), we entered into the Registration Rights Agreement, pursuant to which we agreed to provide former ImmPACT Bio stockholders certain registration rights in connection with the shares of our common stock, including to file shelf registration statements to permit resale of closing stock consideration and equity milestone consideration issuable under the Merger Agreement. The closing stock consideration has been issued in connection with the Closing, and the equity milestone consideration that may be issued consists of 12,500,000 shares of our common stock that may be earned upon the achievement of the earlier to occur of (i) the demonstration of certain clinical milestones or (ii) the receipt of certain regulatory approvals.

Additionally, upon request by the demanding stockholders to sell any registrable shares of our common stock held by such demanding stockholders in an underwritten offering pursuant to any of the shelf registration statements, we are obligated to effect such an underwritten shelf takedown if the total offering price exceeds \$25 million. The Representative, on behalf of the demanding stockholders, is not entitled to request such underwritten shelf takedown (i) more than three times in the aggregate or (ii) more than one time in any single calendar year.

Further, each selling stockholder may not sell more than ten percent (10%) of the average daily trading volume of our common stock over the five (5) business day period ending on the business day immediately prior to the date of the proposed sale, other than pursuant to a block trade or other disposition through a market participant designated by us.

Anti-Takeover Provisions

The provisions of Delaware law, our Restated Certificate and our 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.

Restated Certificate and Bylaws

Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the voting power of our shares of common stock are able to elect all of our directors. Our Restated Certificate and our Bylaws provide that all stockholder actions are required to be taken by a vote of the stockholders at an annual



or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. According to our Bylaws, a special meeting of stockholders may only 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 Bylaws require 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. In addition, our board of directors is divided into three classes with staggered three-year terms. Our Restated Certificate also provides that directors may be removed only for cause by the affirmative vote of the holders of at least 66 2/3% of the shares then entitled to vote at an annual election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

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

We are subject to the provisions of Section 203 of the Delaware General Corporation Law (Section 203). In general, Section 203 prohibits a publicly-held 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. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock.

Choice of Forum

Our Restated Certificate provides that, unless we consent 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 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 Delaware General Corporation Law, our Restated Certificate 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 cause of action as to which the Delaware General Corporation 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 belaware General Corporation Law 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 belaware General Corporation Law 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 to us or our such of former directors, officers or other employees due addition due to time due to time, including any right, obligation, or remedy thereunder);

indispensable parties named as defendants. Our Restated Certificate further provides that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, 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 a 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 Restated Certificate provides 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. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims, but will not waive our compliance with federal securities laws and the rules and regulations thereunder.

Limitation of Liability and Indemnification Matters

Our Restated Certificate contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our 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 as provided in Section 174 of the Delaware General Corporation Law; 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 Restated Certificate authorizes us to indemnify our directors, officers, employees and other agents to the fullest extent permitted by Delaware law. Each of our Restated Certificate and Bylaws provide that we are required to indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our Bylaws also obligate us to 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 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 our board of directors. With specified exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our Restated Certificate and Bylaws may discourage stockholders from bringing a lawsuit against our directors and officers 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 our stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damages.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC. The transfer agent's address is 55 Challenger Road, 2nd floor, Ridgefield Park, NJ 07660.

Rule 144

Pursuant to Rule 144 under the Securities Act ("Rule 144"), a person who has beneficially owned our restricted common stock for at least six months would be entitled to sell their shares of our common stock provided that (i) such person is not deemed to have been our affiliate at the time of, or at any time during the three months preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least three months before the sale and have filed all required reports under Section 13 or 15(d) of the Exchange Act during the 12 months (or such shorter period as required to file such reports) preceding the sale.

Persons who have beneficially owned our restricted common stock for at least six months but who are our affiliates at the time of, or at any time during the three months preceding, a sale would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of shares of our common stock that does not exceed the greater of:

- 1% of the total number of shares of our common stock then outstanding; or
- the average weekly reported trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales by our affiliates under Rule 144 are also limited by manner of sale provisions and notice requirements and by the availability of current public information about us.

Listing on the Nasdaq Global Select Market

Our common stock is listed on the Nasdaq Global Select Market under the symbol "LYEL."

SELLING STOCKHOLDERS

We have prepared this prospectus to allow the selling stockholders, which as used herein includes donees, pledgees, transferees, distributees or other successors-in-interest selling shares of our common stock or interests in our common stock received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer, to offer and sell from time to time up to 37,499,981 shares of our common stock. We are registering the offer and sale of the shares beneficially owned by the selling stockholders to satisfy certain registration obligations that we granted the selling stockholders in connection with the Merger.

The following tables set forth, based upon information currently known by us as of the date of this prospectus, (i) the name of each selling stockholder, (ii) the aggregate number of shares of common stock beneficially owned by each selling stockholder, (iii) the aggregate number of shares of common stock that the selling stockholders may offer pursuant to this prospectus and (iv) the number of shares of common stock beneficially owned by each selling stockholder assuming all of the shares covered hereby are sold. We have based percentage ownership of securities beneficially owned prior to this offering on 292,161,656 shares of our common stock outstanding as of November 26, 2024. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale or other disposition of any shares, except that, pursuant to the Registration Rights Agreement, each selling stockholder may not sell more than ten (10%) of the average daily trading volume of our common stock over the five (5) business day period ending on the business day immediately prior to the date of the proposed sale, other than pursuant to a block trade or other disposition through a market participant designated by us.

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.

Except as described in the footnotes in the tables below, to our knowledge, none of the selling stockholders have held any position or office, or otherwise had a material relationship, with us or any of our subsidiaries within the past three years prior to the date of this prospectus other than as a result of the ownership of our securities.

See the section in this prospectus titled "Plan of Distribution for Shares Offered by Selling Stockholders" for further information regarding the selling stockholders' methods of distributing these securities.

We cannot advise you as to whether the selling stockholders will in fact sell any or all of our shares of common stock. A selling stockholder may sell or otherwise transfer all, some or none of such shares of our common stock in this offering.

	Securities Benefic Prior to Of		Securities to be Sold in this Offering	Securities Beneficially Owned After this Offering		
Name of Selling Stockholder	Shares of Common Stock	Percentage	Shares of Common Stock	Shares of Common Stock	Percentage	
Arkin Bio Capital LP ⁽¹⁾	932,248	*	932,248			
Bukwang Pharmaceutical Co., Ltd. ⁽²⁾	1,410,071	*	1,410,071	—	_	
CFAM 2017 LLC ⁽³⁾	27,232	*	27,232	—	—	
Citadel Multi-Strategy Equities Master Fund Ltd. ⁽⁴⁾	2,745,001	*	2,745,001	—	_	
Decheng Capital Global Life Sciences Fund IV, L.P. ⁽⁵⁾	11,909,341	4.1%	5,795,032	6,114,309	2.1%	
Excellent Capital LLC ⁽⁶⁾	108,928	*	108,928	—	_	
Foresite Capital Fund V, L.P. ⁽⁷⁾	8,133,047	2.8%	4,225,547	3,907,500	1.3%	

	Securities Beneficially Owned Prior to Offering		Securities to be Sold in this Offering	Securities Beneficially Owned After this Offering	
Name of Selling Stockholder	Shares of Common Stock	Percentage_	Shares of Common Stock	Shares of Common Stock	Percentage
Foresite Capital Opportunity Fund V, L.P. ⁽⁸⁾	3,020,846	1.0%	1,569,488	1,451,358	*
Handok Inc. ⁽⁹⁾	239,642	*	239,642	—	_
Hayan I, L.P. ⁽¹⁰⁾	477,311	*	477,311	—	
Johnson & Johnson Innovation – JJDC, Inc. ⁽¹¹⁾	823,317	*	823,317	—	_
JVC CPF LLC ⁽¹²⁾	119,329	*	119,329	—	
Novartis Bioventures Ltd. ⁽¹³⁾	3,241,716	1.1%	3,241,716	—	_
OrbiMed Israel Partners II, LP ⁽¹⁴⁾	3,103,623	1.1%	3,103,623	—	
RMGP Bio-Pharma Investment Fund L.P. ⁽¹⁵⁾	2,633,679	*	2,633,679	—	_
Takeda Ventures, Inc. ⁽¹⁶⁾	823,317	*	823,317	—	
Torrey Coast Ventures, LLC ⁽¹⁷⁾	2,056,955	*	2,056,955	—	_
venBio Global Strategic Fund IV, LP ⁽¹⁸⁾	7,102,190	2.4%	7,102,190	—	
Y&S International Co.,Ltd. ⁽¹⁹⁾	65,355	*	65,355	—	

Less than 1%.

(1) Moshe Arkin, as the Director of Arkin Bio Ventures GP GP Ltd, the General Partner of Arkin Bio Capital General Partner Limited Partnership, which is the General Partner of Arkin Bio Capital LP, has voting, investment and dispositive power over the shares held by Arkin Bio Capital LP. The address of Arkin Bio Capital LP is Hamenofim 11 Herzliya, Building B, Israel.

(2) Bukwang Pharmaceutical Co., Ltd. is an affiliate of OCI Holdings Company Ltd., a publicly traded company. As a major shareholder, OCI Holdings Company Ltd. may be deemed to have beneficial ownership over the shares held by Bukwang Pharmaceutical Co., Ltd. The address of Bukwang Pharmaceutical Co., Ltd. is 7, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea.

(3) Neil L. Cohen, as the Special Member of CFAM 2017 LLC has voting, investment and dispositive power over the shares held by CFAM 2017 LLC. The address of CFAM 2017 LLC is 909 Third Avenue, 15th Fl, New York, NY 10022, United States.

- (4) Consists of 2,745,001 shares of our common stock held by Citadel Multi-Strategy Equities Master Fund Ltd. ("CEMF"). Citadel Advisors LLC ("Citadel Advisors") is the Portfolio Manager of CEMF. Citadel Advisors Holdings LP ("CAH") is the Sole Member of Citadel Advisors. Citadel GP LLC ("CGP") is the General Partner of CAH. Kenneth Griffin owns a controlling interest in CGP. Mr. Griffin, as the owner of a controlling interest in CGP, may be deemed to have shared power to vote or direct the vote of, and/or shared power to dispose or to direct the disposition of, the shares held by CEMF. This response is not and shall not be construed as an admission that Mr. Griffin or any of the Citadel related entities listed above is the beneficial owner of any securities of the Company other than the securities actually owned by such person (if any). The address of CEMF is c/o Citadel Enterprise Americas, Southeast Financial Center, 200 S. Biscayne Blvd., Suite 3300, Miami, FL 33131.
- (5) The column titled "Shares of Common Stock" under "Securities Beneficially Owned Prior to Offering" consists of (i) 5,795,032 shares of common stock received as consideration in connection with the Merger and (ii) 6,114,309 shares of common stock purchased on the Nasdaq Global Select Market prior to and after the Merger. Xiangmin Cui, as the Manager of the Sole General Partner of Decheng Capital Global Life Sciences Fund IV, L.P., has voting, investment and dispositive power over the shares held by Decheng Capital Global Life Sciences Fund IV, L.P. Prior to the Company's acquisition of ImmPACT, Xiangmin Cui, while a Managing Director at Decheng Capital Global Life Sciences Fund IV, L.P., was an ImmPACT Board Member and Nomination Governance Committee Member for the period of January 2022 through October 2024. The address of Decheng Capital Global Life Sciences Fund IV, L.P. is 3000 Sand Hill Road, #2-110, Menlo Park, CA 94025, United States.

- (6) Simon S Zhang, as the Manager of Excellent Capital LLC, has voting, investment and dispositive power over the shares held by Excellent Capital LLC. The address of Excellent Capital LLC is 18575 Jamboree Road, Suite 330, Irvine, CA 92612, United States.
- (7) The column titled "Shares of Common Stock" under "Securities Beneficially Owned Prior to Offering" consists of (i) 4,225,547 shares of common stock received as consideration in connection with the Merger and (ii) 3,907,500 shares of common stock purchased on the Nasdaq Global Select Market prior to the Merger, held with J.P. Morgan Securities LLC, each held directly by Foresite Capital Fund V, L.P. ("Fund V"). Foresite Capital Management V, LLC ("FCM V") is the General Partner of Fund V and may be deemed to have sole voting and dispositive power of the shares held by Fund V. James Tananbaum is the Sole Managing Member of FCM V and may be deemed to have sole voting and dispositive power over the shares held by Fund V. Each of FCM V and Dr. Tananbaum disclaims beneficial ownership of such shares except to the extent of their respective pecuniary interests therein. Prior to the Company's acquisition of ImmPACT, Cindy Xiong, a Partner at Foresite Capital Management, LLC, was an ImmPACT Director from January 14, 2022 through October 31, 2024. The business address of Dr. Tananbaum, Fund V, and FCM V is 900 Larkspur Landing Circle, Suite 150, Larkspur, CA 94939.
- (8) The column titled "Shares of Common Stock" under "Securities Beneficially Owned Prior to Offering" consists of (i) 1,569,488 shares of common stock received as consideration in connection with the Merger and (ii) 1,451,358 shares of common stock purchased on the Nasdaq Global Select Market prior to the Merger, held with J.P. Morgan Securities LLC, each held directly by Foresite Capital Opportunity Fund V, L.P. ("Opportunity Fund V"). Foresite Capital Opportunity Management V, LLC ("FCOM V") is the general partner of Opportunity Fund V and may be deemed to have sole voting and dispositive power over the shares held by Opportunity Fund V. Dr. Tananbaum is the sole Managing Member of FCOM V and may be deemed to have sole voting and dispositive power over the shares held by Opportunity Fund V. Each of FCOM V and Dr. Tananbaum disclaims beneficial ownership of such shares except to the extent of their respective pecuniary interests therein. Prior to the Company's acquisition of ImmPACT, Cindy Xiong, a Partner at Foresite Capital Management, LLC, was an ImmPACT Director from January 14, 2022 through October 31, 2024. The business address of Dr. Tananbaum, Opportunity Fund V, and FCOM V is 900 Larkspur Landing Circle, Suite 150, Larkspur, CA 94939.
- (9) Handok Inc. is a publicly traded company listed on the Korea Exchange. Y&S International Co., Ltd. as the majority shareholder of Handock Inc., may be deemed to have voting, investment and dispositive power over the shares held by Handok Inc. The majority shareholder of Y&S International Co., Ltd., Kim, Daniel Dong Han, is a related party to Handok Inc.'s Chief Executive Officer, Kim Young-jin. The address of Handok Inc. is 132, Teheran-ro, Gangnam-gu, Seoul, 06235, Republic of Korea.
- (10) Peter Choi, as the Chief Executive Officer of Hayan I, L.P., has voting, investment and dispositive power over the shares held by Hayan I, L.P. The address of Hayan I, L.P. is 601 Gateway Blvd, Suite 360, South San Francisco, CA 94080, United States.
- (11) Johnson & Johnson Innovation JJDC, Inc. (JJDC) is a wholly-owned subsidiary of Johnson & Johnson, a publicly traded company (NYSE: JNJ). As a result, Johnson & Johnson may be deemed to indirectly beneficially own the shares directly beneficially owned by JJDC. The address of JJDC is 410 George Street, New Brunswick, NJ 08901, United States.
- (12) Jonathan Jonas, as the Manager of JVC CPF LLC, has voting, investment and dispositive power over the shares held by JVC CPF LLC. The address of JVC CPF LLC is 650 Dundee Road, Suite 380, Northbrook, IL 60062, United States.
- (13) Novartis Bioventures Ltd. is an indirect, wholly-owned subsidiary of Novartis AG. As the indirect parent of Novartis Bioventures Ltd., Novartis AG may be deemed to beneficially own the reported securities. Prior to the Company's acquisition of ImmPACT, Michal Silverberg, an employee of Novartis Services, Inc., an affiliate of Novartis Bioventures Ltd., was an ImmPACT Director for the period of May 2020 to October 2024. The Board of Directors of Novartis Bioventures Ltd. has sole voting and investment control and power over securities held by Novartis Bioventures Ltd. None of the members of its Board of Directors has individual voting or investment power with respect to such securities and each disclaims beneficial ownership of such securities. Ms. Silverberg disclaims beneficial ownership of the securities held by Novartis Bioventures Ltd., except to the extent of her pecuniary interest arising as a result of her

employment by an affiliate of Novartis Bioventures Ltd. The business address of Novartis Bioventures Ltd. and Novartis AG is Lichtstrasse 35, 4056 Basel, Switzerland.

- (14) Shares are held of record by OrbiMed Israel Partners II, L.P. ("OIP II"). OrbiMed Israel GP II, L.P. ("Israel GP II") is the General Partner of OIP II, and OrbiMed Advisors Israel II Limited ("Advisors Israel II") is the General Partner of Israel GP II. Advisors Israel II and Israel GP II may be deemed to have shared voting and investment power over the securities held by OIP II, and each of, Advisors Israel II and Israel GP II may be deemed to directly or indirectly, including by reason of their mutual affiliation, be the beneficial owners of the shares held by OIP II. Advisors Israel II exercises this investment power through an investment committee comprised of Carl L. Gordon, Erez Chimovits, and David P. Bonita, each of whom disclaims beneficial ownership of the shares held by OIP II. Prior to the Company's acquisition of ImmPACT, Erez Chimovits, an employee at OrbiMed Advisors LLC, was an ImmPACT Director. Anat Nursella, an employee at OrbiMed Advisors LLC, was also previously the Chief Financial Officer of ImmPACT until 2022. The address of OrbiMed Israel Partners II, L.P. is 601 Lexington Avenue, 54th Floor, New York, NY 10022, United States.
- (15) Bruce Edward Roberts, Ted (Byung Chan) Moon, Yaron Breski and Assaf Keret, as the Board of Directors of RMGP Bio-Pharma General Partner Ltd., which is the General Partner of RMGP Bio-Pharma Investments L.P., which is the General Partner of RMGP Bio-Pharma Investment Fund, L.P., have voting, investment and dispositive power over the shares held by RMGP Bio-Pharma Investment Fund L.P. The address of RMGP Bio-Pharma Investment Fund L.P. is 9 Yehuda Halevi St, Tel Aviv, Israel.
- (16) Takeda Ventures, Inc. is a wholly-owned, indirect subsidiary of Takeda Pharmaceutical Company Limited, a publicly traded company. Takeda Pharmaceutical Company Limited has ultimate voting, investment and dispositive power over the shares held by Takeda Ventures, Inc. Miles Gerson, Global Head of Takeda Ventures, Inc., served as a Director on ImmPACT's Board until January 2022. The address of Takeda Ventures, Inc. is 500 Kendall Street, Cambridge, MA 02142, United States.
- (17) Thomas Antunez, as Chief Financial Officer of Torrey Coast Ventures LLC, and Alan Braynin, as Chief Executive Officer of Torrey Coast Ventures LLC, have voting, investment and dispositive power over the shares held by Torrey Coast Ventures LLC. The address of Torrey Coast Ventures LLC is 5930 Cornerstone Court W. Ste 240, San Diego, CA 92121, United States.
- (18) Each of venBio Global Strategic GP IV, LLC, the General Partner of venBio Global Strategic Fund IV, L.P., and Corey Goodman and Robert Adelman, as Members of venBio Global Strategic GP IV, LLC, may be deemed to share voting, investment and dispositive power over the shares held by venBio Global Strategic Fund IV, L.P. Prior to the Company's acquisition of ImmPACT, Richard Gaster, a Managing Partner at venBio Partners, LLC, was an ImmPACT Director for the period of January 2022 through October 2024. The address of venBio Global Strategic Fund IV, L.P. is 1700 Owens Street Suite 595, San Francisco, CA 94158, United States.
- (19) Kim, Daniel Dong Han, as the majority shareholder of Y&S International Co., Ltd., has voting, investment and dispositive power over the shares held by Y&S International Co., Ltd. The address of Y&S International Co., Ltd. is 4F, 132, Teheran-ro, Gangnam-gu, Seoul, 06235, Republic of Korea.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee, depositary or warrant agent maintain for this purpose as the "holders" of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as "indirect holders" of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary's book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its participants. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own such security directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in "street name." Securities held by an investor in street name will be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor will hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depositary will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any applicable trustee or depositary will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Whether and how the legal holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in an applicable prospectus supplement, DTC will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under the section titled "*Special Situations When a Global Security Will Be Terminated*" in this prospectus. As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If a prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities

The rights of an indirect holder relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in a global security;
- we and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in a global security, nor do we or any applicable trustee supervise the depositary in any way;
- the depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When a Global Security Will Be Terminated

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks, brokers or other financial institutions to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

Unless we provide otherwise in an applicable prospectus supplement, the global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- · if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

Any applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by such applicable prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

PLAN OF DISTRIBUTION FOR SHARES OFFERED BY SELLING STOCKHOLDERS

We are registering for resale by the selling stockholders up to 37,499,981 shares of common stock. The selling stockholders, which as used herein include donees, pledgees, transferees, distributees or other successors-in-interest selling shares of our common stock or interests in our common stock received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer may, from time to time, sell, transfer, distribute or otherwise dispose of certain of their shares of common stock or interests in our common stock on any stock exchange, market or trading facility on which shares of our common stock are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of their shares of common stock or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- one or more underwritten offerings;
- block trades in which the broker-dealer will attempt to sell the shares of common stock as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its accounts;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- distributions to their members, partners or shareholders;
- short sales effected after the date of the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- in-market transactions, including transactions on a national securities exchange or quotations service or over-the-counter market;
- directly to one or more purchasers;
- through agents;
- through agreements with broker-dealers, who may agree with the selling stockholders to sell a specified number of such shares of common stock at a stipulated price per share; and
- a combination of any such methods of sale.

The selling stockholders may, from time to time, pledge or grant a security interest in some shares of our common stock owned by them and, if a selling stockholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell such shares of common stock from time to time, under this prospectus, or under an amendment or supplement to this prospectus amending the list of the selling stockholders to include the pledgee, transferee or other successors in interest as the selling stockholders under this prospectus. The selling stockholders also may transfer shares of our common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of shares of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in

short sales of our common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge shares of our common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities that require the delivery to such broker-dealer or other financial institution of shares of our common stock offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of shares of our common stock offered by them will be the purchase price of such shares of our common stock less discounts or commissions, if any. The selling stockholders reserve the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of shares of our common stock to be made directly or through agents. We will not receive any of the proceeds from any offering by the selling stockholders.

At the time a particular offering of securities is made, a prospectus supplement, if required, will be distributed, which will set forth the name of the selling stockholders, the aggregate amount of securities being offered and the terms of the offering, including, to the extent required, (1) the name or names of any underwriters, broker-dealers or agents, (2) any discounts, commissions and other terms constituting compensation from the selling stockholders and (3) any discounts, commissions or concessions allowed or reallowed to be paid to broker-dealers. We may suspend the sale of securities by the selling stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

The selling stockholders also may in the future resell a portion of our common stock in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule, or pursuant to other available exemptions from the registration requirements of the Securities Act.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of shares of our common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of shares of our common stock or warrants may be underwriting discounts and commissions under the Securities Act. If any selling stockholder is an "underwriter" within the meaning of Section 2(11) of the Securities Act, then the selling stockholder will be subject to the prospectus delivery requirements of the Securities Act. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us and the selling stockholder, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

To the extent required, our common stock to be sold, the purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable discounts, commissions, concessions or other compensation with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

To facilitate the offering of shares of our common stock offered by the selling stockholders, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock. This may include over-allotments or short sales, which involve the sale by persons participating in the offering of more shares of common stock than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of our common stock by bidding for or purchasing shares of common stock in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if shares of

common stock sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

Under the Registration Rights Agreement, we have agreed to indemnify the selling stockholders party thereto against certain liabilities that they may incur in connection with the sale of the securities registered hereunder, including liabilities under the Securities Act. In addition, we and the selling stockholders may agree to indemnify any underwriter, broker-dealer or agent against certain liabilities related to the selling of the securities, including liabilities arising under the Securities Act.

Under the Registration Rights Agreement, we have agreed to maintain the effectiveness of this registration statement until all securities covered by the Registration Rights Agreement have been sold under this registration statement, have been transferred without restrictive legends, may be sold under Rule 144 under the Securities Act or are no longer outstanding.

Selling stockholders may use this prospectus in connection with resales of shares of our common stock. This prospectus and any accompanying prospectus supplement will identify the selling stockholders, the terms of our common stock and any material relationships between us and the selling stockholders. Selling stockholders may be deemed to be underwriters under the Securities Act in connection with shares of our common stock they resell and any profits on the sales may be deemed to be underwriting discounts and commissions under the Securities Act. Unless otherwise set forth in a prospectus supplement, the selling stockholders will receive all of the net proceeds from the resale of shares of our common stock.

A selling stockholder that is an entity may elect to make an in-kind distribution of common stock to its members, partners or shareholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or shareholders would thereby receive freely tradable shares of common stock pursuant to the distribution through a registration statement.

We are required to pay all fees and expenses incident to the registration of shares of our common stock to be offered and sold pursuant to this prospectus.

Orderly Disposition Restrictions

Pursuant to the Registration Rights Agreement, each selling stockholder may not sell more than ten (10%) of the average daily trading volume of our common stock over the five (5) business day period ending on the business day immediately prior to the date of the proposed sale, other than pursuant to a block trade or other disposition through a market participant designated by us.

LEGAL MATTERS

Skadden, Arps, Slate, Meagher & Flom LLP will pass upon the validity of the securities offered by this prospectus.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth or incorporated by reference in such registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <u>http://www.sec.gov</u>.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (Commission File No. 001-40502):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on February 28, 2024;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024, June 30, 2024 and September 2024, filed with the SEC on May 6, 2024, August 7, 2024 and November 7, 2024, respectively;
- our Current Reports on Form 8-K, filed with the SEC on June 14, 2024, June 26, 2024, October 24, 2024 and October 31, 2024, respectively, in each case other than information furnished under Item 2.02 or 7.01 of Form 8-K;
- the portions of the Definitive Proxy Statement on <u>Schedule 14A</u>, filed with the SEC on April 22, 2024, that are incorporated by reference into our Annual Report on <u>Form 10-K</u> for the fiscal year ended December 31, 2023; and
- the description of our common stock in Exhibit 4.3 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus, which will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings update and supplement the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later-filed document modify or replace such earlier statements. We will furnish without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request, a copy of any or all of the documents incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You should direct any requests for documents to:

LYELL IMMUNOPHARMA, INC. Attn: Chief Financial Officer 201 Haskins Way South San Francisco, CA 94080 (650) 695-0677

PART II INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an estimate of the fees and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the issuance and distribution of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

		Amount
SEC registration fee	\$:	5,396.77
Accounting fees and expenses	\$	20,000
Legal fees and expenses	\$	*
Transfer agent and registrar fees and expenses	\$	*
Printing and miscellaneous fees and expenses	\$	7,000
Total	\$	*

* Estimated expenses not presently known.

Item 15. Indemnification of Directors and Executive Officers

Section 145 of the Delaware General Corporation Law, 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 Restated Certificate permits indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our Bylaws that 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 Delaware General Corporation Law.

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 Exchange Act, that might be incurred by any director or officer in his capacity as such. 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.

Item 16. Exhibits

EXHIBIT INDEX

Exhibit <u>Number</u>	Exhibit Description	Form	File Number	Exhibit/ Appendix Reference	Filing Date	Filed Herewith
2.1	Agreement and Plan of Merger, dated as of October 24, 2024, by and among ImmPACT Bio USA Inc., Lyell Immunopharma, Inc., Inspire Merger Sub Inc. and WT Representative LLC, solely in its capacity as the Representative	8-K	001-40502	2.1	October 24, 2024	
3.1	Amended and Restated Certificate of Incorporation	S-8	333-257249	4.1	June 21, 2021	
3.2	Amended and Restated Bylaws	10-Q	001-40502	3.2	November 7, 2023	
4.1	Form of Common Stock Certificate	S-1/A	333-256470	4.1	June 9, 2021	
4.2	Amended and Restated Investors' Rights Agreement, dated as of March 5, 2020, by and among Lyell Immunopharma, Inc. and certain of its stockholders	S-1	333-256470	4.2	May 25, 2021	
4.3	Registration Rights Agreement, dated as of October 31, 2024, by and among Lyell Immunopharma, Inc., each of the Sellers Party thereto and WT Representative LLC, solely in its capacity as the Representative of the Sellers	8-K	001-40502	10.1	October 31, 2024	
5.1	Opinion of Skadden, Arps, Slate, Meagher & Flom LLP					Х
23.1	Consent of Independent Registered Public Accounting Firm					Х
23.2	<u>Consent of Skadden, Arps, Slate, Meagher & Flom LLP</u> (See Exhibit 5.1)					Х
24.1	Power of Attorney (See signature page)					Х
107	<u>Filing Fee Table</u>					Х
		11.2				

Item 17. Undertakings

The undersigned registrant hereby undertakes:

- 1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- 2. That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- 3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- 4. That, for the purpose of determining liability under the Securities Act to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*; that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any

statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- 5. That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- 6. That, for the purpose of determining any liability of the registrant under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC 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.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this 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 November 29, 2024.

LYELL IMMUNOPHARMA, INC.

By: /s/ Lynn Seely

Lynn Seely, M.D. President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Lynn Seely and Charles Newton, and each of them, as true and lawful attorneys-in-fact and agents, with full powers of substitution and resubstitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, and generally to do all such things in their names and behalf in their capacities as officers and directors to enable Lyell Immunopharma, Inc. to comply with the provisions of the Securities Act, and all requirements of the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Lynn Seely Lynn Seely, M.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	November 29, 2024
/s/ Charles Newton Charles Newton	Chief Financial Officer (Principal Financial and Accounting Officer)	November 29, 2024
/s/ Richard D. Klausner Richard D. Klausner, M.D.	Chair of the Board of Directors	November 29, 2024
/s/ Otis Brawley Otis Brawley, M.D.	Director	November 29, 2024
/s/ Catherine Friedman Catherine Friedman	Director	November 29, 2024
/s/ Elizabeth Nabel Elizabeth Nabel, M.D.	Director	November 29, 2024
/s/ Robert Nelsen Robert Nelsen	Director	November 29, 2024
/s/ Sumant Ramachandra Sumant Ramachandra, M.D., Ph.D.	Director	November 29, 2024
/s/ William Rieflin William Rieflin	Director	November 29, 2024

SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP ONE MANHATTAN WEST NEW YORK, NY 10001

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FIRM/AFFILIATE

CHICAGO HOUSTON LOS ANGELES PALO ALTO WASHINGTON, D.C. WILMINGTON

> BEIJING BRUSSELS FRANKFURT HONG KONG LONDON MUNICH PARIS SÃO PAULO SEOUL SHANGHAI SINGAPORE TOKYO TORONTO

November 29, 2024

Lyell Immunopharma, Inc. 201 Haskins Way South San Francisco, CA 94080

Re: Lyell Immunopharma, Inc. Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as special United States counsel to Lyell Immunopharma, Inc., a Delaware corporation (the "<u>Company</u>"), in connection with the resale by the selling stockholders identified on <u>Schedule A</u> hereto (the "<u>Selling Stockholders</u>") of up to 37,499,981 shares (the "<u>Shares</u>") of the Company's common stock, par value \$0.0001 per share (the "<u>Common Stock</u>"), issued as part of the merger consideration pursuant to the Agreement and Plan of Merger, dated as of October 24, 2024 (the "<u>Merger Agreement</u>"), by and among the Company, ImmPACT Bio USA Inc., a Delaware corporation ("<u>ImmPACT Bio</u>"), Inspire Merger Sub Inc., a Delaware corporation and an indirect, wholly owned subsidiary of the Company ("<u>Merger Sub</u>"), and WT Representative LLC, a Delaware limited liability company, solely in its capacity as the representative, agent and attorney-in-fact of ImmPACT Bio securityholders (the "<u>Representative</u>"), pursuant to which the Company acquired ImmPACT Bio through the merger of Merger Sub with and into ImmPACT Bio, with ImmPACT Bio surviving the Merger as the surviving entity and the Company's indirect, wholly owned subsidiary.

Lyell Immunopharma, Inc. November 29, 2024 Page 2

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act of 1933 (the "Securities Act").

In rendering the opinion stated herein, we have examined and relied upon the following:

(a) the registration statement on Form S-3 of the Company relating to the Shares filed on the date hereof with the Securities and Exchange Commission (the "<u>Commission</u>") under the Securities Act allowing for delayed offerings pursuant to Rule 415 of the General Rules and Regulations under the Securities Act (the "<u>Rules and Regulations</u>") (such registration statement being hereinafter referred to as the "<u>Registration Statement</u>");

(b) the preliminary prospectus, dated as of the date hereof, which forms a part of and is included in the Registration Statement;

(c) an executed copy of the Meger Agreement;

(d) a specimen certificate evidencing the Common Stock in the form of Exhibit 4.1 to the Registration Statement;

(e) an executed copy of a certificate of Matthew Lang, Chief Business Officer, Chief Legal Officer and Corporate Secretary of the Company, as of the date hereof (the "Secretary's Certificate");

(f) a copy of certain resolutions of the Board of Directors of the Company adopted on October 22, 2024, certified pursuant to the Secretary's Certificate;

(g) a copy of the Company's Amended and Restated Certificate of Incorporation, as in effect as of the date of the issuance of the Shares and as of the date hereof, certified by the Secretary of State of the State of Delaware as of November 27, 2024, and certified pursuant to the Secretary's Certificate (the "<u>Amended and Restated Certificate of Incorporation</u>"); and

(h) a copy of the Company's Amended and Restated Bylaws, as in effect as of the date of issuance of the Shares and as of the date hereof, and certified pursuant to the Secretary's Certificate (the "<u>Amended and Restated Bylaws</u>").

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and the Selling Stockholders and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company and the Selling Stockholders and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinion stated below.

In our examination, we have assumed the genuineness of all signatures, including electronic signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photocopied copies, and the

Lyell Immunopharma, Inc. November 29, 2024 Page 3

authenticity of the originals of such copies. With respect to our opinion set forth below, we have assumed that (i) the Company received the consideration for the Shares set forth in the Merger Agreement and the applicable board resolutions and (ii) the issuance of the Shares has been registered in the Company's share registry. As to any facts relevant to the opinion stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and the Selling Stockholders and others and of public officials, including the facts and conclusions set forth in the Secretary's Certificate and the factual representations and warranties set forth in the Merger Agreement.

We do not express any opinion with respect to the laws of any jurisdiction other than the General Corporation Law of the State of Delaware (the "DGCL").

Based upon the foregoing and subject to the qualifications and assumptions stated herein, we are of the opinion that, the Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and have been validly issued and are fully paid and nonassessable.

In addition, in rendering the foregoing opinion we have assumed that, at all applicable times:

(a) the Company's issuance of the Shares did not (i) except to the extent expressly stated in the opinion contained herein, violate any statute to which the Company or such issuance is subject, or (ii) constitute a violation of, or a breach under, or require the consent or approval of any other person under, any agreement or instrument binding on the Company (except that we do not make this assumption with respect to the Amended and Restated Certificate of Incorporation, the Amended and Restated Bylaws or those agreements or instruments expressed to be governed by the laws of the State of New York which are listed in Part II of the Registration Statement or the Company's Annual Report on Form 10-K for the year ended December 31, 2023 although we have assumed compliance with any covenant, restriction or provision with respect to financial ratios or tests or any aspect of the financial condition or results of operations of the Company contained in such agreements or instruments); and

(b) the Company's authorized Common Stock is as set forth in the Amended and Restated Certificate of Incorporation, and we have relied solely on the certified copy thereof issued by the Secretary of State of the State of Delaware and have not made any other inquiries or investigations.

This opinion letter shall be interpreted in accordance with customary practice of United States lawyers who regularly give opinions in transactions of this type.

Lyell Immunopharma, Inc. November 29, 2024 Page 4

We hereby consent to the reference to our firm under the heading "Legal Matters" in the prospectus forming part of the Registration Statement. We also hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations.

Very truly yours,

/s/ Skadden, Arps, Slate, Meagher & Flom LLP

TWG

Schedule A

Selling Stockholder	Total Number of Shares to be Sold
Arkin Bio Capital LP	932,248
Bukwang Pharmaceutical Co., Ltd.	1,410,071
CFAM 2017 LLC	27,232
Citadel Multi-Strategy Equities Master Fund Ltd.	2,745,001
Decheng Capital Global Life Sciences Fund IV, L.P.	5,795,032
Excellent Capital LLC	108,928
Foresite Capital Fund V, L.P.	4,225,547
Foresite Capital Opportunity Fund V, L.P.	1,569,488
Handok Inc.	239,642
Hayan I, L.P.	477,311
Johnson & Johnson Innovation – JJDC, Inc.	823,317
JVC CPF LLC	119,329
Novartis Bioventures Ltd.	3,241,716
OrbiMed Israel Partners II, LP	3,103,623
RMGP Bio-Pharma Investment Fund L.P.	2,633,679
Takeda Ventures, Inc.	823,317
Torrey Coast Ventures, LLC	2,056,955
venBio Global Strategic Fund IV, LP	7,102,190
Y&S International Co., Ltd.	65,355
Total	37,499,981

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of Lyell Immunopharma, Inc. for the registration of 37,499,981 shares of its common stock, and to the incorporation by reference therein of our reports dated February 28, 2024, with respect to the consolidated financial statements of Lyell Immunopharma, Inc., and the effectiveness of internal control over financial reporting of Lyell Immunopharma, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Mateo, California November 29, 2024

Calculation of Filing Fee Tables

Form S-3 (Form Type)

Lyell Immunopharma, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Securities to
				Newly	Register	ed Securities						
Fees to be Paid	Equity	Secondary Offering: Common Stock, par value \$0.0001 per share	457(c)	37,499,981 ⁽¹⁾	0.94 ⁽²⁾	\$35,249,982	0.0001531	\$5,396.77				
Fees Previously Paid	_	—	_	_		_	_	_		_	_	_
				Carr	y Forwar	l Securities						
Carry Forward Securities		_				_	_	_	_			—
	Total Offering Amounts				\$35,249,982		\$5,396.77					
	Total Fo	ees Previously Paid						_				
	Total Fee Offsets							_				
	Net Fee	Due						\$5,396.77				

(1) Estimated in accordance with Rule 457(c) solely for purposes of calculating the registration fee. The proposed maximum offering price per unit and the maximum aggregate offering price are based on the average of the \$1.88 (high) and \$0.98 (low) sales price of the registrant's common stock as reported on the Nasdaq Global Select Market on November 22, 2024, which date is within five business days prior to the filing of this registration statement.

(2) Shares of common stock registered for resale pursuant to this registration statement are shares which are to be offered by the selling securityholders named herein. In the event of a stock split, stock dividend or recapitalization involving the common stock, the number of shares registered shall automatically be adjusted to cover the additional shares of common stock issuable pursuant to Rule 416 under the Securities Act of 1933, as amended.