

PROSPECTUS SUPPLEMENT
(To Prospectus dated June 16, 2022)**4,273,505 Shares of Common Stock****Warrants to Purchase 4,273,505 Shares of Common Stock**

We are offering 4,273,505 shares of our common stock, par value \$0.001 per share, and accompanying warrants to purchase 4,273,505 shares of our common stock. Each share of common stock is being offered and sold together with an accompanying warrant to purchase one share of common stock at a combined offering price of \$4.68. This prospectus supplement also relates to the offering of the shares of our common stock issuable upon the exercise of such warrants.

The shares of common stock and the accompanying warrants are immediately separable and will be issued separately, but can only be purchased together in this offering. Each warrant will have an exercise price per share of common stock equal to \$4.68 and will be exercisable from the date of issuance and will expire on the date that is three years after the date of issuance, subject to a call provision and certain other limitations described herein.

Our common stock is listed on the Nasdaq Capital Market under the symbol "ALRN." On April 30, 2024, the closing price of our common stock, as reported on the Nasdaq Capital Market, was \$4.55 per share. There is no established public trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants on The Nasdaq Capital Market or any other national securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the warrants will be limited.

We are a "smaller reporting company" as that term is defined under the federal securities laws, and, as such, have elected to rely on certain reduced public company disclosure requirements. See "Prospectus Supplement Summary—Implications of Being a Smaller Reporting Company."

Investing in our securities involves significant risk. See "[Risk Factors](#)" on page S-9 of this prospectus supplement and the documents incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

| | Per Share and Accompanying Warrant | Total |
|---|---|------------------|
| Public offering price | \$ 4.6800 | \$20,000,003.400 |
| Underwriting discounts and commissions(1) | \$ 0.3276 | \$ 1,400,000.238 |
| Proceeds, before expenses, to us | \$ 4.3524 | \$18,600,003.162 |

(1) Underwriting discounts and commissions do not include the reimbursement of certain expenses of the underwriter we have agreed to pay. See "Underwriting" for a description of the compensation payable to the underwriter.

This offering is being underwritten on a firm commitment basis.

The underwriter expects to deliver the shares of common stock and the warrants against payment on or about May 3, 2024.

*Sole Bookrunner***Titan Partners Group**
a division of American Capital Partners

The date of this prospectus supplement is May 1, 2024.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein and therein. The second part, the accompanying prospectus provides more general information. Generally, when we refer to this prospectus supplement, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference herein or therein filed prior to the date of this prospectus supplement, you should rely on the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

We have not, and the underwriter has not, authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus supplement, in the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriter take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

We are offering to sell, and seeking offers to buy, securities only in jurisdictions where offers and sales are permitted. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation of an offer in such jurisdiction. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein and in any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the date of those respective documents. It is important for you to read and consider all information contained in this prospectus supplement and in the accompanying prospectus, including the documents incorporated by reference herein and therein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you in the sections entitled “Where You Can Find More Information” and “Incorporation by Reference” in this prospectus supplement and in the accompanying prospectus.

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, nor may this prospectus supplement, accompanying prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement and accompanying prospectus outside the United States. This prospectus supplement

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and accompanying prospectus do not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement and accompanying prospectus by any person in any jurisdiction in which such an offer or a solicitation is unlawful.

Unless the context otherwise indicates, references in this prospectus supplement to “Aileron,” “we,” “our,” “us” and “the Company” refer, collectively, to Aileron Therapeutics, Inc. and our consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein contain forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management and expected market growth are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

These forward-looking statements include, among other things, statements about:

- our plans to develop and commercialize LTI-03 and LTI-01, including the potential benefits thereof;
- the timing and expectation of the results of the Phase 1b clinical trial of LTI-03;
- our unproven approach to drug research and development in the area of fibrotic diseases, with a focus on Caveolin-1, or Cav1,-related peptides, and our ability to develop marketable products;
- our ongoing and future clinical trials for LTI-03 and LTI-01, whether conducted by us or by any future collaborators, including our ability to enroll patients in our clinical trials, the timing of initiation of these trials and of the anticipated results;
- the possibility that we may be adversely affected by economic, business, and/or competitive factors, including risks inherent in pharmaceutical research and development, such as: adverse results in our drug discovery, preclinical and clinical development activities, the risk that the results of our preclinical studies and early clinical trials may not be replicated in later clinical trials, and the risk that any of our clinical trials may not commence, continue or be completed on time, or at all;
- our ability to recognize the anticipated benefits of the Lung Acquisition (as defined herein);
- our expectations regarding our ability to fund our operating expenses, our planned activities, and capital expenditure requirements with our cash and cash equivalents;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the rate and degree of market acceptance and clinical utility of any products for which we receive regulatory approval;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our intellectual property position and strategy, and our ability to obtain, maintain and enforce intellectual property rights for our platform and development candidates;
- our ability to identify additional product candidates with significant commercial potential;
- our plans to enter into collaborations for the development and commercialization of LTI-03, LTI-01 and any additional product candidates;
- our reliance on third-party manufacturing and supply vendors;
- potential benefits of any future collaboration;

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- developments relating to our competitors and our industry;
- the impact of government laws and regulations;
- the impact of affiliated stockholders choosing to act together; and
- the use of proceeds from this offering.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein, particularly in the “Risk Factors” sections of these documents, that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures or investments that we may make or enter into.

You should read this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

This prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein include or incorporate by reference statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement and the accompanying prospectus and in the documents we incorporate by reference herein and therein. This summary does not contain all of the information you should consider before investing in our securities. You should read this entire prospectus supplement and the accompanying prospectus carefully, especially the risks of investing in our securities discussed under “Risk Factors” on page S-9 of this prospectus supplement, in the accompanying prospectus and in the documents incorporated by reference herein and therein, along with our financial statements and notes to those financial statements and the other information incorporated by reference in this prospectus supplement and the accompanying prospectus.

Overview

We are a clinical stage biopharmaceutical company focused on developing novel therapies for the treatment of orphan pulmonary and fibrosis indications with no approved or limited effective treatments. We currently have two product candidates in clinical development, LTI-03 and LTI-01, and multiple candidates in preclinical development focused on fibrosis indications. Our pipeline includes:

- LTI-03, a peptide, for which we are currently recruiting patients for a Phase 1b dose-ranging, placebo-controlled safety, tolerability, and pharmacodynamic biomarker activity trial in development for the treatment of idiopathic pulmonary fibrosis, or IPF, that has demonstrated the ability to protect healthy lung epithelial cells and reduce pro-fibrotic signaling;
- LTI-01, a proenzyme that completed a Phase 2a dose-ranging, placebo-controlled trial and a Phase 1b safety, tolerability and proof of mechanism trial in LPE patients, an indication that has no approved drug treatment; and
- preclinical programs targeting cystic fibrosis and a peptide program focused on the Cav1 protein for systemic fibrosis indications.

On October 31, 2023, we acquired Lung Therapeutics, Inc., or Lung, pursuant to an Agreement and Plan of Merger, or the Lung Acquisition Agreement. Following our acquisition of Lung, or the Lung Acquisition, the business conducted by Lung became our primary business and we shifted our operating disease focus to advancing a pipeline of first-in-class medicines to address significant unmet medical needs in orphan pulmonary and fibrosis indications.

LTI-03

LTI-03 is a novel peptide drug, the sequence of which is derived from the endogenous protein Cav1, that protects lung epithelial cells and inhibits multiple pro-fibrotic pathways in IPF patients. IPF is a progressive, fatal, age-associated lung disease with a median survival from diagnosis of two to five years. There are approximately 100,000 people living with IPF in the U.S. LTI-03 has been granted Orphan Drug Designation in the U.S. for the treatment of IPF.

We completed a randomized, double-blind, placebo-controlled, Phase 1a clinical trial of LTI-03 in healthy volunteers in the UK. The primary objective of this trial was to determine the safety and tolerability of single and multiple ascending doses, SAD and MAD, respectively, of inhaled LTI-03. The secondary objective was to evaluate the pharmacokinetics of SAD and MAD daily doses for 14 days of inhaled LTI-03.

We are conducting a Phase 1b clinical trial evaluating the safety and tolerability of inhaled LTI-03 in patients diagnosed with IPF. The trial of LTI-03 is a randomized, double-blind, placebo-controlled, Phase 1b

clinical trial of LTI-03 in IPF patients, which is being conducted at 11 centers in the United States, the United Kingdom, Belgium, Germany and Australia. We plan to enroll a total of 24 patients. In the trial, these patients have a bronchoscopy at a baseline screening followed by either LTI-03 or placebo twice a day for 14 days. On day 14, shortly after the final dose, patients receive a second bronchoscopy and are monitored thereafter for seven days. In cohort 1, patients in the active arm inhaled a single 2.5 mg capsule of LTI-03 twice daily. In cohort 2, patients will receive two 2.5 mg capsules of LTI-03 for inhalation twice daily.

LTI-01

LTI-01 is a single chain urokinase plasminogen activator for the treatment of loculated pleural effusion, or LPE. Pleural effusion is defined by the build-up of fluid in the pleural cavity, predominantly resulting from pneumonia, and is considered loculated when fibrinous scar tissue forms, trapping the fluid and preventing drainage. LPE is an orphan disorder for which there are no currently approved therapeutics. LPEs are a frequent complication of pneumonia and develop from pockets of infected fluid, known as a complicated parapneumonic effusion, or CPE, or if pus is present, known as an empyema. LPEs can result in pain, shortness of breath and can rapidly lead to sepsis and death. CPE and empyema can be serious clinical problems which are associated with mortality of approximately 20%. Effective drainage of infected pleural effusions is essential for treatment. We believe over 60,000 cases of LPE associated with CPE and empyema are estimated to occur annually in the U.S. alone, and based upon our market research, over half of these patients are receiving off-label, intrapleural fibrinolytic therapy, which is the use of clot busting drugs injected locally into the pleural cavity to treat the LPEs. LTI-01 has been granted Orphan Drug Designation in the U.S. and EU for treatment of empyema and Fast Track Designation in the U.S. for the investigation of LTI-01 for the treatment of infected, non-draining pleural effusion.

We completed a randomized, double-blind, placebo-controlled, Phase 2a clinical trial that was conducted at 36 centers in the U.S. to evaluate LTI-01 in patients with infected, non-draining pleural effusions. The primary endpoint in the trial was treatment failure, defined as death or referral to surgery by checklist within seven days from commencement of dosing. Secondary endpoints included length of hospital stay, incidence of bleeding and pain and volume of pleural fluid drainage. Based on the results of this trial, we expect to investigate LTI-01 in an additional Phase 2 dose-ranging, placebo-controlled clinical trial with a lower dose to establish efficacy and safety.

We completed a first-in-human, open-label, dose escalation Phase 1b safety, tolerability and proof of mechanism trial of LTI-01 in 14 LPE patients presenting with pneumonia and CPE or empyema.

Preclinical Programs

We have multiple programs in preclinical development. We are developing LTI-05, an epithelial sodium channel inhibitor, in lead optimization for the treatment of patients with cystic fibrosis, who do not respond to treatment with cystic fibrosis transmembrane conductance regulator modulators.

Recent Developments

Lung Acquisition and November 2023 Private Placement

At the closing of the Lung Acquisition, we issued to the stockholders of Lung 344,345 shares of our common stock and 19,903 shares of our newly designated Series X Non-Voting Convertible Preferred Stock, or the Series X Preferred Stock. Each share of Series X Preferred Stock is convertible into 1,000 shares of common stock. In addition, we assumed all Lung stock options and all warrants exercisable for Lung common stock immediately outstanding prior to the closing of the Lung Acquisition, each subject to adjustment pursuant to the terms of the Lung Acquisition Agreement.

Immediately following the closing of the Lung Acquisition, we entered into a Stock and Warrant Purchase Agreement, or the Purchase Agreement, with a group of accredited investors, pursuant to which we issued and sold (i) an aggregate of 4,707 shares of Series X Preferred Stock, and (ii) warrants to purchase up to an aggregate of 2,353,500 shares of common stock, or the Warrant Shares, for an aggregate purchase price of approximately \$18.4 million, which included the conversion of certain convertible promissory notes in the aggregate principal amount of approximately \$1.6 million issued by Lung to one investor prior to the closing of the Lung Acquisition at a 10% discount to the per share price of the Series X Preferred Stock.

Conversion of Series X Preferred Stock

On February 28, 2024, our stockholders approved the issuance, in accordance with Nasdaq Listing Rule 5635(a), of shares of common stock upon conversion of our outstanding Series X Preferred Stock. On March 5, 2024, 11,957 shares of Series X Preferred Stock automatically converted into 11,957,000 shares of common stock. The remaining 12,653 shares of Series X Preferred Stock (which are convertible into 12,653,000 shares of common stock) will remain convertible at the option of the holder thereof, subject to certain beneficial ownership limitations.

Cash Balance as of March 31, 2024

Although we have not finalized our full financial results for the quarter ended March 31, 2024, we estimate that we had approximately \$12.0 million in cash and cash equivalents as of March 31, 2024.

The estimated cash figure above is based on preliminary information and represents management's estimates as of the date of this prospectus supplement, is subject to completion of our financial closing procedures and does not present all necessary information for a complete understanding of our financial condition as of March 31, 2024, or our results of operations for the quarter ended March 31, 2024. Our independent registered public accounting firm has not conducted a review of, and does not express an opinion or any other form of assurance with respect to, this preliminary estimate. As a result, prospective investors should exercise caution in relying on this information. This preliminary financial information should not be viewed as a substitute for full quarterly financial statements prepared in accordance with United States generally accepted accounting principles and reviewed by our independent registered public accounting firm.

Data from Cohort 1 of Phase 1b Clinical Trial of LTI-03

On May 1, 2024, we announced positive data from cohort 1 of our ongoing Phase 1b clinical trial evaluating the safety and tolerability of inhaled LTI-03 in patients diagnosed with IPF.

Of the twelve patients enrolled in cohort 1 of the trial, three were randomized to the placebo arm and nine to the active arm. In addition to the safety and tolerability of LTI-03, in the trial, various biomarkers relating to epithelial damage, fibrosis and inflammation in blood cells were assessed. The eight biomarkers that we evaluated in cohort 1 included: thymic stromal lymphopoietin (TSLP), galectin-7 (GAL-7), interleukin-11 (IL-11), collagen 1 alpha chain (Col-1 α 1), phosphorylated SMAD2/3 (pSMAD2/3/tSMAD2/3), phosphorylated AKT kinase (pAKT), soluble (sol) receptor for advanced glycation end-products (solRAGE), and CXC chemokine 7 (CXCL7).

In cohort 1, a positive trend was observed in seven out of the eight biomarkers with data from three biomarkers being statistically significant (based on a one-tailed t-test). The findings from cohort 1 include:

- LTI-03 reduced expression of multiple profibrotic proteins in both pathologic basal-like cells and fibroblasts, with statistically significant decreases observed in three biomarkers — GAL-7 (p=0.0014, SEM 0.901), TSLP (p=0.0223, SEM 5.163) and Col-1 α 1 (p=0.0489, SEM 0.7102) — supporting the potential of LTI-03 to reduce fibrosis, inflammation and associated changes in the lung.

- LTI-03 stimulated production of solRAGE ($p=0.1407$, SEM 0.3269), a factor indicative of type I epithelial cell health that is a critically important aspect of IPF and has gone largely unaddressed.
- LTI-03 did not induce inflammation in peripheral blood mononuclear cells as measured by pAKT ($p=0.358$, SEM 11.32).

LTI-03 was generally well-tolerated with no serious adverse events reported.

The Phase 1b trial is ongoing, with topline results from the high-dose cohort 2 expected in the third quarter of 2024.

Risks Related to our Business

Our business, financial condition, results of operations, future growth prospects and common stock price are subject to numerous risks and uncertainties that you should be aware of before making an investment decision, as more fully described under the heading “Risk Factors” and elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents incorporated by reference herein and therein, including our Annual Report on Form 10-K for the year ended December 31, 2023. These risks include, but are not limited to, the following:

- Our business is highly dependent on the success of our product candidates, LTI-03 and LTI-01, and any other product candidates that we advance into clinical development. Our approach to drug research and development in the area of fibrotic diseases, with a focus on Caveolin-1-related peptides, is unproven and may not result in marketable products. All of our product candidates will require significant additional development before we may be able to seek regulatory approval for and launch a product commercially.
- We will require substantial additional capital to finance our operations. Our cash and cash equivalents are not sufficient to enable us to complete the development and commercialization of LTI-03 and LTI-01. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our clinical and research and development programs, future commercialization efforts or other operations.
- Our acquisition of Lung and its business may increase stockholder value in our company and we may not be able to realize the anticipated benefits of the acquisition.
- We have identified material weaknesses in our internal control over financial reporting and may identify additional material weaknesses in the future or fail to maintain an effective system of internal control over financial reporting, which may result in material misstatements of our financial statements or cause us to fail to meet our periodic reporting obligations.
- We have incurred significant net losses since inception and we expect to continue to incur significant net losses for the foreseeable future and do not expect to achieve or maintain profitability. Even if we are able to develop and commercialize our product candidates, we may never generate revenues that are significant or large enough to achieve profitability.
- We have identified conditions that raise substantial doubt about our ability to continue as a going concern.
- The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, interim results of a clinical trial do not necessarily predict final results and the results of our clinical trials may not satisfy the requirements of the U.S. Food and Drug Administration or comparable foreign regulatory authorities.

- We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of LTI-03, LTI-01 or any other product candidates.
- Our ongoing and future clinical trials may reveal significant adverse events or unexpected drug-drug interactions not seen in our preclinical studies or earlier clinical studies and may result in a safety profile that could delay or prevent regulatory approval or market acceptance of any of our product candidates.
- Clinical development involves a lengthy, complex and expensive process, with an uncertain outcome.
- Even if we complete the necessary preclinical studies and clinical trials, the regulatory approval process is expensive, time-consuming and uncertain and may prevent us, or any future collaborators, from obtaining approvals for the commercialization of LTI-03, LTI-01 or any other product candidate that we may develop. As a result, we cannot predict when or if, and in which territories or for which indications, we, or any future collaborators, will obtain regulatory approval to commercialize LTI-03, LTI-01 or any other product candidate that we may develop.
- We have never obtained regulatory approval for a product candidate and we may be unable to obtain, or may be delayed in obtaining, regulatory approval for any product candidate. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our products, we may not be able to generate product revenue.
- Even if a product candidate we develop receives regulatory approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.
- Even if we receive regulatory approval of any product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates, if approved.
- We rely on third parties to conduct certain aspects of our clinical trials and preclinical studies. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval of or commercialize any potential product candidates.
- Because we rely on third-party manufacturing and supply vendors, our supply of research and development, preclinical and clinical development materials may become limited or interrupted or may not be of satisfactory quantity or quality.
- We have entered into a collaboration agreement with Taiho Pharmaceutical Co., Ltd. for the development of LTI-01 and may in the future seek to enter into collaborations with third parties for the development and commercialization of other product candidates. If we fail to enter into such collaborations, or our collaborations are not successful, we may be unable to continue development of such product candidates, we would not receive any contemplated milestone payments or royalties, and we could fail to capitalize on the market potential of such product candidates.
- Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.
- We are currently party to license or other collaboration agreements that impose certain obligations on us, and we may enter into additional license or collaboration agreements in the future. If we fail to comply with our obligations under such present or future agreements with third parties, we could lose license rights that may be important to our business.

- Assuming the conversion of all outstanding Series X Preferred Stock and the exercise of outstanding warrants to purchase shares of our common stock, there is a concentration of ownership of our outstanding common stock by one group of affiliated stockholders. If this group chooses to act together, it could exert substantial influence over our business, and the interests of this group may conflict with those of other stockholders.

Our Corporate Information

We were incorporated under the laws of the State of Delaware on August 6, 2001 under the name Renegade Therapeutics, Inc. We changed our name to Aileron Therapeutics, Inc. on February 5, 2007.

Our principal executive office is located at 12407 N. Mopac Expy., Suite 250, #390, Austin, Texas 78758, and our telephone number is (737) 802-1989. Our website address is www.aileronrx.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus supplement or the accompanying prospectus. We have included our website address in this prospectus supplement and the accompanying prospectus solely as an inactive textual reference.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company,” meaning that the market value of our stock held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during our most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million. We may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. For so long as we remain a smaller reporting company, we are permitted and intend to rely on exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies.

THE OFFERING

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| Common stock offered by us | 4,273,505 shares. |
| Warrants offered by us | <p>Warrants to purchase 4,273,505 shares of our common stock. Each warrant will have an exercise price of \$4.68 per share of common stock and will be exercisable until the date that is three years after the date of issuance, subject to a call provision and certain other limitations described herein. See “Description of Securities We Are Offering — Warrants” on page S-17 of this prospectus supplement for additional information.</p> <p>This prospectus supplement also relates to the offering of shares of common stock issuable upon exercise of the warrants issued in this offering. The shares of common stock and the accompanying warrants, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.</p> |
| Common stock to be outstanding immediately following this offering | 21,141,985 shares, assuming no exercise of the warrants included in this offering. |
| Use of proceeds | <p>We estimate that the net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$17.9 million, and excluding the proceeds, if any, from the exercise of the warrants sold in this offering.</p> <p>We expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, to fund the development and commercialization of our product candidates, including our ongoing Phase 1b clinical trial of LTI-03; and for working capital and other general corporate purposes.</p> <p>See the “Use of Proceeds” section on page S-13 of this prospectus supplement for more information.</p> |
| Risk factors | <p>You should read the “Risk Factors” on page S-9 of this prospectus supplement, as well as those risk factors that are incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of factors to consider carefully before deciding to invest in shares of our securities.</p> <p>There is no established public trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants on The Nasdaq Capital Market or any other national securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the warrants will be limited. See “Description of Securities We Are Offering.”</p> |
| Nasdaq Capital Market symbol | Our common stock is listed on the Nasdaq Capital Market under the symbol “ALRN”. There is no established public trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants on The Nasdaq Capital Market or any other national securities exchange or nationally recognized trading system. |

The number of shares of our common stock to be outstanding after this offering is based on 16,868,480 shares of our common stock outstanding as of April 25, 2024 and excludes:

- 12,653,000 shares of our common stock issuable upon conversion of 12,653 shares of Series X Preferred Stock outstanding as of March 31, 2024;
- 3,079,937 shares of our common stock reserved for issuance upon exercise of outstanding warrants as of March 31, 2024, which consists of (i) 2,353,500 shares reserved for issuance upon exercise of outstanding warrants with an exercise price of \$4.89 per share and (ii) 726,437 shares reserved for issuance upon exercise of outstanding warrants with an exercise price of \$5.66 per share that were assumed in the Lung Acquisition, and which excludes 646,759 shares that were issuable upon the exercise of warrants that expired on April 2, 2024;
- 2,126,972 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2024, at a weighted average exercise price of \$6.54 per share;
- 3,412,623 additional shares of our common stock available for future issuance as of March 31, 2024 under our 2021 Stock Incentive Plan, as amended; and
- 7,500 shares of our common stock available for future issuance as of March 31, 2024 under our 2017 Employee Stock Purchase Plan.

Unless otherwise indicated, all information in this prospectus supplement assumes:

- no exercise of the warrants issued and sold in this offering;
- no conversion of outstanding Series X Preferred Stock;
- no exercise of the warrants or options or described above; and
- no exercise of the warrants that we are offering in this offering.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information contained in this prospectus supplement, the accompanying prospectus and in our filings with the Securities and Exchange Commission, or the SEC, that we have incorporated by reference herein and therein. If any of these risks actually occur, our business, prospects, operating results and financial condition could suffer materially. In such event, the trading price of our common stock could decline and you might lose all or part of your investment.

Risks Related to this Offering and Ownership of Shares of Our Common Stock or Warrants

A significant portion of our total outstanding shares may be sold into the market at any time, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of stockholders intend to sell shares, could reduce the market price of our common stock. Shares of our common stock may be freely sold in the public market at any time to the extent permitted by Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, or to the extent such shares have already been registered under the Securities Act and are held by non-affiliates of ours.

Concurrently and in connection with the execution of the Lung Acquisition Agreement, our directors and officers as of immediately after the Lung Acquisition, and the directors and officers of the majority stockholder of Lung immediately prior to the Lung Acquisition, entered into lock-up agreements with us, pursuant to which each such director, officer or stockholder is subject to a 180-day lockup on the sale or transfer of shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock (including without limitation, shares of common stock or such other securities which may be deemed to be beneficially owned by each such director, officer or stockholder in accordance with the rules and regulations of the SEC and our securities which may be issued upon exercise of an option to purchase shares of common stock or a warrant to purchase shares of common stock) that were held by each such director, officer or stockholder at the closing of the Lung Acquisition and hereafter owned by each such director, officer or stockholder, including those shares issued in the Lung Acquisition, subject to certain customary exceptions. Upon expiration of this 180-day lockup period on May 1, 2024, these shares became eligible for sale in the public market.

In November 2023, we entered into a Registration Rights Agreement. Pursuant to the Registration Rights Agreement, we filed a resale registration statement with the SEC on January 29, 2024, which was declared effective on February 5, 2024. The shares subject to the resale registration statement no longer constitute restricted securities and may be sold freely in the public markets, subject to lapse on any related contractual restrictions related thereto of any investor and subject to volume limitations applicable to affiliates.

We have also registered all shares of common stock that we may issue under our equity compensation plans, including upon exercise of outstanding options. These shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

Assuming the conversion of all outstanding Series X Preferred Stock and the exercise of outstanding warrants, there is a concentration of ownership of our outstanding common stock by one group of affiliated stockholders. If this group chooses to act together, it could exert substantial influence over our business, and the interests of this group may conflict with those of other stockholders.

As of March 31, 2024, entities and individuals affiliated with Bios Partners, or collectively, the Bios Entities, beneficially owned 9.99% of our outstanding common stock. This ownership percentage does not, due to certain restrictions on conversion and exercisability, take into account the possible issuance of all shares of our common stock upon conversion of the Series X Preferred Stock or upon exercise of the warrants held by the Bios Entities.

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The Certificate of Designation for the Series X Preferred Stock provides that any holder of Series X Preferred Stock will not have a right to convert, subject to certain exceptions, the Series X Preferred Stock for our common stock if, as a result of such conversion, the holder, together with its affiliates and other attribution parties, would hold 19.99% of the total number of shares of our common stock then outstanding, subject to decrease upon written notice by the holder. Similarly, under the terms of the warrants, a holder shall not have the right to exercise any portion of any warrant, to the extent that after giving effect to such exercise, the holder (together with its affiliates and any other persons acting as a group together with the holder or any of its affiliates), would beneficially own in excess of a percentage elected by the holder up to 19.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the warrants.

Assuming the conversion of all outstanding Series X Preferred Stock and the exercise of all outstanding warrants, options and any other rights to acquire our common stock, and without giving effect to the shares sold in this offering and the foregoing beneficial ownership limitations on Series X Preferred Stock and the warrants, the Bios Entities would, as of April 12, 2024, own 45.8% of our common stock on a fully diluted basis.

If any of the Bios Entities acted together, they could be able to exert substantial influence over our business. Additionally, the interests of the Bios Entities may be different from or conflict with the interests of our other stockholders. This concentration of voting power with the Bios Entities could delay, defer, or prevent a change of control, entrench our management and the board of directors, or delay or prevent a merger, consolidation, takeover, or other business combination involving us on terms that other stockholders may desire. In addition, conflicts of interest could arise in the future between us, on the one hand, and the Bios Entities, on the other hand, concerning potential competitive business activities, business opportunities, the issuance of additional securities and other matters.

We have broad discretion in the use of our available cash and cash equivalents, including the net proceeds from this offering, and may not use them effectively.

Our management has broad discretion in the use of our available cash and cash equivalents, including the net proceeds from this offering, and could spend those resources in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could cause the price of our common stock to decline and delay the development of our product candidates. We may invest our available cash and cash equivalents, including the net proceeds from this offering, pending their use in a manner that does not produce income or that loses value.

If you purchase shares of common stock and warrants in this offering, you will suffer immediate and substantial dilution of your investment. In addition, we may issue additional equity in the future, which may result in additional dilution to you.

The combined offering price of our common stock and accompanying warrants is substantially higher than the net tangible book value per share of our outstanding common stock. Therefore, if you purchase securities in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on a combined offering price of \$4.68 per share of common stock and accompanying warrant (and assuming no exercise of the warrants being offered in this offering and that the warrants are classified as and accounted for as equity), you will experience immediate and substantial dilution of \$3.77 per share, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to this offering and the combined offering price. See “Dilution” in this prospectus supplement for a detailed discussion of the dilution you will incur if you purchase securities in this offering.

In addition to this offering, subject to market conditions and other factors, we may pursue additional equity financings in the future, including future public offerings or future private placements of equity securities or securities convertible into or exchangeable for equity securities at prices that may be higher or lower than the price per share of common stock paid by you in this offering. Further, the exercise of outstanding options or

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warrants could result in further dilution to investors and any additional shares issued in connection with acquisitions will result in dilution to investors. In addition, the market price of our common stock could fall as a result of resales of any of these shares of common stock due to an increased number of shares available for sale in the market.

The price of our common stock is volatile and has fluctuated substantially, which could result in substantial losses for purchasers of our common stock and warrants in this offering.

The price of our common stock has been, and is likely to continue to be, volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. During the period from November 1, 2023 to April 30, 2024, the closing price of our common stock on the Nasdaq Capital Market ranged from a high of \$6.93 per share to a low of \$1.15 per share. The stock market in general and the market for smaller biopharmaceutical companies in particular have experienced extreme volatility that in some instances may have been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock (or the common stock issuable upon exercise of the warrants) at or above the public offering price and you may lose some or all of your investment.

We do not anticipate paying any cash dividends on our capital stock in the foreseeable future. Accordingly, stockholders must rely on capital appreciation, if any, for any return on their investment.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

There is no public market for the warrants being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to list the warrants on The Nasdaq Capital Market or any other national securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the warrants will be limited.

In certain circumstances, we may call the warrants for redemption.

We may call all or any portion of the warrants for cancellation at a price of \$0.001 per warrant share during the ten trading day period after the date that is 30 days following the public announcement by us of the top-line results from the Phase 1b clinical trial of LTI-03 in patients with idiopathic pulmonary fibrosis, including a statement that there were no drug-related adverse events that resulted in a discontinuation of the trial, upon written notice of redemption; provided that we may only issue a call notice if the volume-weighted average price of our shares of common stock exceeds the exercise price of the warrants on the trading day immediately prior to the date we deliver the call notice. The right to exercise will be forfeited unless the warrants are exercised prior to 6:30 p.m. on the 10th trading day after the date of the call notice. On and after the call date, a holder of warrants will have no further rights except to receive the call price for such holder's warrants upon surrender of such warrants.

If we call the warrants for cancellation, that could force you to (i) exercise your warrants and pay the exercise price therefor at a time when it may be disadvantageous for you to do so, (ii) sell your warrants at the then-current market price when you might otherwise wish to hold your warrants or (iii) accept the nominal redemption price which, at the time the outstanding warrants are called for redemption, is likely to be substantially less than the market value of your warrants. Furthermore, the exercise price must be paid in cash at the time of exercise unless the condition for "cashless" exercise is satisfied pursuant to the terms of the warrants. As a result, you would be unable to benefit from owning the warrants being called. A call notice may also result in our common stock price becoming more volatile and being subject to greater selling pressure which could result in declines in the market price for our common stock.

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Holders of the warrants will have no rights as common stockholders unless and until such holders exercise their warrants for shares of our common stock.

Unless and until holders of the warrants exercise such warrants and acquire shares of our common stock, such holders will have no rights with respect to the shares of our common stock underlying such warrants, except for the right to participate in certain dividends and distributions. Upon exercise of the warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

The warrants are speculative in nature.

The holders of the warrants may exercise their right to acquire the common stock and pay an exercise price per share equal to \$4.68, subject to certain adjustments, prior to three years from the date of issuance, after which date any such unexercised warrants will expire and have no further value. Moreover, following this offering, the market value of the warrants, if any, is uncertain and there can be no assurance that the market value of such warrants will equal or exceed their imputed offering price. There can be no assurance that the market price of the common stock will ever equal or exceed the exercise price of the warrants, and consequently, it may not ever be profitable for holders of such warrant to exercise them.

We may not receive any additional funds upon the exercise of the warrants.

Each warrant may be exercised by way of a cashless exercise if at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of, the shares underlying the warrant.

USE OF PROCEEDS

We estimate that the net proceeds we will receive from our issuance and sale of 4,273,505 shares of our common stock and accompanying warrants to purchase 4,273,505 shares of our common stock in this offering will be approximately \$17.9 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the warrants sold in this offering. If all of the warrants sold in this offering were to be exercised in cash at their exercise price, we would receive additional gross proceeds of approximately \$20.0 million.

We estimate that we had cash and cash equivalents of \$12.0 million as of March 31, 2024. We expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, to fund the development and commercialization of our product candidates, including our ongoing Phase 1b clinical trial of LTI-03; and for working capital and other general corporate purposes.

The estimated cash figure above is based on preliminary information and represents management's estimates as of the date of this prospectus supplement, is subject to completion of our financial closing procedures and does not present all necessary information for a complete understanding of our financial condition as of March 31, 2024, or our results of operations for the quarter ended March 31, 2024. Our independent registered public accounting firm has not conducted a review of, and does not express an opinion or any other form of assurance with respect to, this preliminary estimate. As a result, prospective investors should exercise caution in relying on this information. This preliminary financial information should not be viewed as a substitute for full quarterly financial statements prepared in accordance with United States generally accepted accounting principles and reviewed by our independent registered public accounting firm.

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our planned operating expenses and capital expenditure requirements through the second quarter of 2025. However, the expected net proceeds from this offering, together with our existing cash and cash equivalents, will not be sufficient for us to fund the development and commercialization of LTI-03 and LTI-01 through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of LTI-03 and LTI-01, including to conduct any future clinical trials after the completion of our ongoing trials. We have based our estimates on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. See "Risk Factors" on page S-9 of this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein for a discussion of the risks affecting our business that could have an adverse effect on our available capital resources.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from our clinical trials, the timing of regulatory submissions and the outcome of regulatory reviews, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We have no current agreements, commitments or understandings for any material acquisitions or licenses of any third-party products, businesses or technologies.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. Any future determination to pay cash dividends will be made at the discretion of our board of directors and will depend on restrictions and other factors our board of directors may deem relevant. Investors should not purchase our common stock, or our warrants, which are exercisable for shares of our common stock, with the expectation of receiving cash dividends.

DILUTION

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

Our historical net tangible book value as of December 31, 2023, was \$12.8 million, or \$2.61 per share of our common stock. Our historical net tangible book value is the amount of our total tangible assets less our total liabilities. Historical net tangible book value per share represents our historical net tangible book value divided by the 4,885,512 shares of our common stock outstanding as of December 31, 2023.

Our pro forma net tangible book value as of December 31, 2023 was \$12.8 million, or \$0.43 per share of our common stock. Pro forma net tangible book value is the amount of our total tangible assets less our total liabilities, after giving effect to (i) the conversion of 11,957 shares Series X Preferred Stock into 11,957,000 shares of common stock on March 5, 2024 and (ii) the assumed conversion of all remaining outstanding shares of Series X Preferred Stock into 12,653,000 shares of our common stock without regard to the beneficial ownership limitations applicable to shares of our Series X Preferred Stock in this prospectus supplement. Each share of Series X Preferred Stock is convertible into 1,000 shares of common stock at any time at the option of the holder thereof, subject to certain limitations, including that a holder of Series X Preferred Stock is prohibited from converting shares of Series X Preferred Stock into shares of common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (to be established by the holder between 4.99% and 19.99%) of the total number of shares of common stock issued and outstanding immediately after giving effect to such conversion. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of December 31, 2023, after giving effect to the pro forma adjustments described above.

After giving further effect to our issuance and sale of 4,273,505 shares of our common stock and accompanying warrants to purchase 4,273,505 shares of our common stock in this offering at the combined public offering price of \$4.68, after deducting underwriting discounts and commissions and estimated offering expenses payable by us (and assuming no exercise of the warrants offered hereby and that the warrants are classified and accounted for as equity), our pro forma as adjusted net tangible book value as of December 31, 2023 would have been \$30.8 million, or \$0.91 per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of \$0.48 to existing stockholders and immediate dilution of \$3.77 in pro forma as adjusted net tangible book value per share to new investors participating in this offering. Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the public offering price per share paid by new investors. The following table illustrates this calculation on a per share basis:

| | | | |
|--|--|----|--------|
| Combined public offering price per share of common stock and accompanying warrant | | \$ | 4.68 |
| Historical net tangible book value per share as of December 31, 2023 | | \$ | 2.61 |
| Decrease in historical net tangible book value per share attributable to the pro forma adjustments described above | | | (2.18) |
| Pro forma net tangible book value per share as of December 31, 2023 | | | 0.43 |
| Increase in pro forma as adjusted net tangible book value per share attributable to new investors participating in this offering | | | 0.48 |
| Pro forma as adjusted net tangible book value per share after this offering | | \$ | 0.91 |
| Dilution per share to new investors participating in this offering | | \$ | 3.77 |

The table and discussion above exclude:

- 3,726,696 shares of our common stock reserved for issuance upon exercise of outstanding warrants, which consists of (i) 2,353,500 shares reserved for issuance upon exercise of outstanding warrants with

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an exercise price of \$4.89 per share, (ii) 726,437 shares reserved for issuance upon exercise of outstanding warrants with an exercise price of \$5.66 per share that were assumed in the Lung Acquisition and (iii) 646,759 shares reserved for issuance upon exercise of outstanding warrants with an exercise price of \$40.00 per share that expired on April 2, 2024;

- 2,212,102 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2023, at a weighted average exercise price of \$7.42 per share;
- 840,254 additional shares of our common stock available for future issuance as of December 31, 2023 under our 2021 Stock Incentive Plan (including the 3,000,000 additional shares of our common stock that were reserved for issuance under such plan as of February 28, 2024), as amended; and
- 7,500 shares of our common stock available for future issuance as of December 31, 2023 under our 2017 Employee Stock Purchase Plan.

To the extent that we issue additional shares of common stock in the future, whether upon the exercise of outstanding warrants or options or otherwise, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. In addition, the number of shares outstanding immediately after this offering does not include shares of common stock that we may offer and sell in the future pursuant to the Capital on Demand™ Sales Agreement, or sales agreement, with JonesTrading Institutional Services LLC and William Blair & Company, L.L.C. After the expiration or waiver of the lock-up period applicable to us and described under the section of this prospectus supplement entitled “Underwriting,” we may offer and sell shares of our common stock having an aggregate offering price of up to approximately \$14.0 million from time to time in “at-the-market” offerings to a prospectus relating to the sales agreement. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities may result in further dilution to our stockholders.

DESCRIPTION OF SECURITIES WE ARE OFFERING

The following is a brief summary of certain terms and conditions of the common stock and warrants being offered in this offering. The following description is subject in all respects to the provisions contained in instruments governing the applicable security.

Our authorized capital stock consists of 100,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share, of which 34,847 shares of preferred stock are designated the “Series X of Series X Non-Voting Convertible Preferred Stock,” or the Series X Preferred Stock.

Common Stock

The material terms and provisions of our common stock are described under the heading “Description of Capital Stock” in the accompanying prospectus.

Warrants

The following is a summary of the material terms and provisions of the warrants to purchase shares of common stock that are being offered hereby. This summary is subject to and qualified in its entirety by the form of common stock warrant, which has been provided to the investors in this offering and will be filed with the SEC as an exhibit to a Current Report on Form 8-K and incorporated by reference into the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of common stock warrant for a complete description of the terms and conditions of the warrants.

Pursuant to a warrant agency agreement between us and Computershare, Inc., as warrant agent, the warrants will be issued in book-entry form and shall initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC. The warrants will be issued separately from the shares of common stock offered hereby, and may be transferred separately immediately thereafter.

Term

The warrants will be immediately exercisable and may be exercised until the third anniversary of the issuance date.

Exercise Price

The warrants offered hereby will have an exercise price of \$4.68 per share. The exercise prices and numbers of shares of common stock issuable upon exercise are subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock.

Exercisability

The warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of such holder’s warrants to the extent that the holder would own more than 4.99% of our outstanding common stock immediately after exercise, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder’s warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants. Purchasers in this offering may also elect prior to the issuance of warrants to have the initial exercise limitation set at 9.99% of our outstanding common stock. Further, such warrants may not be exercised to the extent that such exercise would result in a holder and its affiliates beneficially owning more than

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9.99% of the outstanding common stock or outstanding voting power of the Company (including shares of common stock issuable upon exercise of the warrants held by them).

Cashless Exercise

If, at the time a holder exercises its warrants, a registration statement registering the issuance of the shares of common stock underlying the warrants under the Securities Act, is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the warrant.

Fundamental Transactions

In the event of any fundamental transaction, as described in the warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the warrant is exercisable immediately prior to such event.

Call Feature

The warrants are callable by us during the ten trading day period after the date that is 30 days following the public announcement by us of the top-line results from the Phase 1b clinical trial of LTI-03 in patients with idiopathic pulmonary fibrosis, including a statement that there were no drug-related adverse events that resulted in a discontinuation of the trial, or the Trigger Date. Subject to certain exceptions, in the event that the warrants are outstanding, if, after the Trigger Date, then we may, within ten trading days of the Trigger Date, upon notice, or a Call Notice, call for cancellation of the warrants for which a notice of exercise has not yet been delivered for consideration equal to \$0.001 per warrant share; provided that we may only deliver such Call Notice if the volume-weighted average price of our shares of common stock exceeds the exercise price of the warrants on the trading day immediately prior to the date we deliver the Call Notice. Any warrant subject to such Call Notice for which a notice of exercise shall not have been received by the Call Date (as hereinafter defined) will be canceled at 6:30 p.m. (New York City time) on the tenth trading day after the date we send the Call Notice, such date and time, the Call Date.

Fractional Shares

No fractional shares of common stock will be issued upon the exercise of the warrants. Rather, the number of shares of common stock to be issued will, at our election, either be rounded up to the nearest whole number or we will pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

Trading Market

There is no established trading market for any of the warrants, and we do not expect a market to develop. We do not intend to apply for a listing for any of the warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the warrants will be limited.

Rights as a Stockholder

Except as otherwise provided in the warrants or by virtue of the holders' ownership of shares of our common stock, the holders of warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until such warrant holders exercise their warrants.

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Waivers and Amendments

No term of the warrants may be amended or waived without the written consent of the holder of such warrant.

MATERIAL U.S. TAX CONSIDERATIONS FOR HOLDERS OF COMMON STOCK OR WARRANTS

The following is a discussion of the material U.S. federal income and estate tax considerations relating to ownership and disposition of shares of our common stock or warrants acquired in this offering. This discussion is for informational purposes only and is not tax advice. Accordingly, all prospective holders of our common stock or warrants should consult their own tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock or warrants. For purposes of this discussion, a “U.S. holder” means a beneficial owner (other than a partnership or other entity or arrangement classified as a partnership for U.S. federal income tax purposes) of our common stock or warrants who is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation or any other organization taxable as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if (1) a U.S. court is able to exercise primary supervision over the trust’s administration and one or more U.S. persons has the authority to control all of the trust’s substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

A “Non-U.S. holder” is, for U.S. federal income tax purposes, a beneficial owner of our common stock or warrants who is not a U.S. holder or a partnership or other pass-through entity for U.S. federal income tax purposes.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus supplement, and all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any change could alter the tax consequences to holders described in this prospectus supplement. In addition, there can be no assurance that the IRS will not challenge one or more of the tax consequences described herein or that any such challenge would not be sustained by a court. We assume in this discussion that each holder holds shares of our common stock or warrants as a capital asset (generally, property held for investment).

This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to a particular holder in light of that holder’s individual circumstances nor does it address any aspects of U.S. state, local or non-U.S. taxation, the alternative minimum tax provisions of the Code or the Medicare tax on net investment income. This discussion also does not consider any specific facts or circumstances that may apply to a holder and does not address the special tax rules applicable to particular holders, such as:

- insurance companies;
- tax-exempt organizations;
- financial institutions;
- brokers or dealers in securities;
- pension plans;
- controlled foreign corporations;
- passive foreign investment companies;

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- owners that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- certain U.S. expatriates.

In addition, this discussion does not address the tax treatment of partnerships or persons who hold our common stock or warrants through partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes. A partner in a partnership or other pass-through entity that will hold our common stock or warrants should consult his, her or its own tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock or warrants through a partnership or other pass-through entity, as applicable.

Allocation of Purchase Price to Common Stock and Warrants

For U.S. federal income tax purposes, a holder's acquisition of the warrants and common stock should be treated as the acquisition of an "investment unit" consisting of one share of common stock and a warrant to acquire one share of our common stock, subject to adjustment. The purchase price for each investment unit will be allocated between these two components in proportion to their relative fair market values at the time the unit is purchased by the holder. This allocation of the purchase price for each unit will establish the holder's initial tax basis for U.S. federal income tax purposes in the share of common stock and the warrant included in each unit. The separation of the share of common stock and the warrant included in each unit should not be a taxable event for U.S. federal income tax purposes. Each holder should consult his, her or its own tax advisor regarding the allocation of the purchase price for a unit.

Tax Considerations Applicable to U.S. Holders

Exercise and Expiration of Warrants

In general, a U.S. holder will not recognize gain or loss for U.S. federal income tax purposes upon exercise of a warrant. The U.S. holder will take a tax basis in the shares acquired on the exercise of a warrant equal to the exercise price of the warrant, increased by the U.S. holder's adjusted tax basis in the warrant exercised (as determined pursuant to the rules discussed above). The U.S. holder's holding period in the shares of our common stock acquired on exercise of the warrant will begin on the date of exercise of the warrant (or possibly, the day after), and will not include any period for which the U.S. holder held the warrant.

In certain limited circumstances, a U.S. holder may be permitted to undertake a cashless exercise of warrants into our common stock. The U.S. federal income tax treatment of a cashless exercise of warrants into our common stock is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a warrant described in the preceding paragraph. U.S. holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of warrants, including with respect to their holding period and tax basis in the shares of common stock acquired on the exercise of warrants.

The lapse or expiration of a warrant will be treated as if the U.S. holder sold or exchanged the warrant and recognized a loss in an amount equal to the U.S. holder's tax basis in the warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the warrant is held for more than one year. The deductibility of capital losses is subject to limitations.

Certain Adjustments to and Distributions on the Warrants

Under Section 305 of the Code, an adjustment to (or failure to adjust) the number of shares of common stock issued on the exercise of the warrants, or an adjustment to (or failure to adjust) the exercise price of the warrants, may be treated as a constructive distribution to a U.S. holder of the warrants if, and to the extent that, such adjustment (or failure to adjust) has the effect of increasing such U.S. holder's proportionate interest in our "earnings and profits" or assets, as determined under U.S. federal income tax principles, depending on the

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circumstances of such adjustment. An adjustment made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution in cash or other property to the holders of warrants. In certain circumstances, if we were to make a distribution in cash or other property with respect to our common stock after the issuance of the warrants, then we may make a corresponding distribution to a warrant holder. The taxation of a distribution received with respect to a warrant is unclear. It is possible such a distribution would be treated as a distribution (or constructive distribution), although other treatments are possible. U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to and distributions on the warrants.

Distributions on Our Common Stock

As discussed under “Dividend Policy” above, we do not expect to make cash dividends to holders of our common stock in the foreseeable future. Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants.”

Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants

Upon a sale, exchange or other taxable disposition of our common stock or warrants (other than by exercise), a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between the amount of cash and the fair market value of any property received upon the sale, exchange or other taxable disposition and the U.S. holder’s adjusted tax basis in the common stock or warrants, as applicable. Capital gain or loss will constitute long-term capital gain or loss if the U.S. holder’s holding period for the common stock or warrants, as applicable, exceeds one year. Long-term capital gains recognized by certain non-corporate U.S. holders, including individuals, generally will be subject to reduced rates of U.S. federal income tax. The deductibility of capital losses is subject to certain limitations. U.S. holders who recognize losses with respect to a sale, exchange or other taxable disposition of our common stock or warrants should consult their own tax advisors regarding the tax treatment of such losses.

Information Reporting and Backup Withholding

Information reporting requirements generally will apply to distributions (including constructive distributions) on the common stock or warrants and to the proceeds of a sale or other disposition of common stock or warrants paid by us to a U.S. holder unless such U.S. holder is an exempt recipient from backup withholding, such as C corporations and certain tax-exempt organizations. Backup withholding will apply to those payments if the U.S. holder fails to provide the holder’s taxpayer identification number, or certification of exempt status, or if the holder otherwise fails to comply with applicable requirements to establish an exemption. Backup withholding is not an additional tax. Rather, any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against the U.S. holder’s U.S. federal income tax liability provided the required information is timely furnished to the IRS. U.S. holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption.

Tax Considerations Applicable To Non-U.S. Holders

Exercise and Expiration of Warrants

In general, a Non-U.S. holder will not be subject to U.S. federal income tax on the exercise of the warrants into shares of common stock. The U.S. federal income tax treatment of a cashless exercise of warrants into our common stock is unclear. A Non-U.S. holder should consult his, her, or its own tax advisor regarding the U.S. federal income tax consequences of a cashless exercise of warrants.

The expiration or lapse of a warrant will be treated as if the Non-U.S. holder sold or exchanged the warrant and recognized a capital loss equal to the Non-U.S. holder's tax basis in the warrant. However, a Non-U.S. holder will not be able to utilize a loss recognized upon expiration or lapse of a warrant against the Non-U.S. holder's U.S. federal income tax liability unless the loss is effectively connected with the Non-U.S. holder's conduct of a trade or business within the United States (and, if an income tax treaty applies, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. holder in the United States) or is treated as a U.S.-source loss and the Non-U.S. holder is present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met.

Certain Adjustments to and Distributions on the Common Stock Warrants

As described under “—Tax Considerations Applicable to U.S. Holders—Certain Adjustments to and Distributions on the Warrants”, an adjustment to the warrants could result in a constructive distribution to a Non-U.S. holder, which would be treated as described under “Distributions on our Common Stock” below, and the tax treatment of a distribution on a warrant is unclear. Any resulting withholding tax attributable to deemed dividends would be collected from other amounts payable or distributable to the Non-U.S. holder. Non-U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to and distributions on the warrants.

Distributions on Our Common Stock

As discussed under “Dividend Policy” above, we do not expect to make cash dividends to holders of our common stock in the foreseeable future. Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the Non-U.S. holder's investment, up to such holder's tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants.” Any such distributions will also be subject to the discussion below under the section titled “FATCA.”

Dividends paid to a Non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a Non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the Non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the Non-U.S. holder satisfies applicable certification and disclosure requirements (generally including provision of a valid IRS Form W-8ECI (or applicable successor form) certifying that the dividends are effectively connected with the Non-U.S. holder's conduct of a trade or business within the United States). However, such U.S. effectively connected income, net of specified deductions and credits, is generally taxed at the same U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a Non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

A Non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy applicable certification and other requirements. A Non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing the required information with the IRS. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants

In general, a Non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale, exchange or other taxable disposition of shares of our common stock or warrants unless:

- the gain is effectively connected with the Non-U.S. holder's conduct of a trade or business within the United States and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained by such Non-U.S. holder in the United States, in which case the Non-U.S. holder generally will be taxed on a net income basis at the U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the Non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" also may apply;
- the Non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the taxable disposition and certain other conditions are met, in which case the Non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the net gain derived from the taxable disposition, which may be offset by certain U.S.-source capital losses of the Non-U.S. holder provided the Non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses, if any; or
- we are, or have been, at any time during the five-year period preceding such taxable disposition (or the Non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market and the Non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the five-year period ending on the date of the taxable disposition or the period that the Non-U.S. holder held our common stock. Special rules may apply to a holder of warrants. Non-U.S. holders are urged to consult their own tax advisors regarding the application of these rules to warrants. If we are determined to be a U.S. real property holding corporation and the foregoing exception does not apply, then the Non-U.S. holder generally will be taxed on its net gain derived from the disposition at the U.S. federal income tax rates applicable to United States persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

U.S. Federal Estate Tax

Shares of our common stock that are owned or treated as owned at the time of death by an individual who is not a citizen or resident of the United States, as specifically defined for U.S. federal estate tax purposes, are considered U.S. situs assets and will be included in the individual's gross estate for U.S. federal estate tax purposes. Such shares, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise. The foregoing may also apply to warrants.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions (including constructive distributions) on our common stock or warrants and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Generally, a Non-U.S. holder will comply with such

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procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable Form W-8) or otherwise meets the documentary evidence requirements for establishing that it is not a United States person or otherwise establishes an exemption. Dividends paid to Non-U.S. holders subject to U.S. withholding tax, as described above in “Distributions on Our Common Stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock or warrants by a Non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a Non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the Non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a Non-U.S. holder can be refunded or credited against the Non-U.S. holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose a U.S. federal withholding tax at a rate of 30% on payments of dividends on, or gross proceeds from the sale or other disposition of, our common stock or warrants paid to foreign entities, unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA.

Withholding under FATCA generally will apply to payments of dividends (including constructive dividends) on our common stock or warrants. While withholding under FATCA may apply to payments of gross proceeds from a sale or other disposition of our common stock or warrants, under proposed U.S. Treasury Regulations, withholding on payments of gross proceeds is not required. Although such regulations are not final, applicable withholding agents may rely on the proposed regulations until final regulations are issued.

If withholding under FATCA is required on any payment related to our common stock or warrants, investors not otherwise subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) on such payment may be required to seek a refund or credit from the IRS. An intergovernmental agreement between the United States and an applicable foreign country may modify these rules. Non-U.S. holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our common stock or warrants and the entities through which they hold our common stock or warrants.

The preceding discussion of material U.S. federal tax considerations is for informational purposes only. It is not legal or tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock or warrants, including the consequences of any proposed changes in applicable laws.

UNDERWRITING

We intend to enter into an underwriting agreement with Titan Partners Group LLC, a division of American Capital Partners, LLC, or the underwriter, with respect to the securities subject to this offering.

Subject to certain conditions, we have agreed to sell to the underwriter such securities listed next to its name in the below table at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement.

| Underwriter | Number of Shares of Common Stock | Number of Accompanying Warrants to Purchase Shares of Common Stock |
|--|--|--|
| Titan Partners Group LLC, a division of American Capital Partners, LLC | 4,273,505 | 4,273,505 |
| Total | 4,273,505 | 4,273,505 |

The underwriting agreement provides that the obligation of the underwriter to purchase the securities offered by this prospectus supplement and the accompanying prospectus is subject to certain conditions. The underwriter is obligated to purchase all of the securities offered hereby. The underwriter is offering the securities, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, and other conditions contained in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Discounts, Commissions and Expenses

The underwriter proposes to offer the shares of common stock and accompanying warrants purchased pursuant to the underwriting agreement to the public at the combined offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$0.3276 per share of common stock and accompanying warrant. After this offering, the combined offering price and concession may be changed by the underwriter. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement.

In connection with the sale of the securities to be purchased by the underwriter, the underwriter will be deemed to have received compensation in the form of underwriting commissions and discounts. The underwriting commissions and discounts will be 7.0% of the gross proceeds of this offering, or \$0.3276 per share of common stock and accompanying warrant, based on the combined offering price per share of common stock and accompanying warrant set forth on the cover page of this prospectus supplement.

We will also be responsible for and will pay all expenses relating to the offering, including without limitation, legal expenses incurred by the underwriter in connection with the offering up to a maximum amount of \$150,000 from this offering. We estimate that our total offering expenses for this offering, net of the underwriting discounts and commissions, will be approximately \$625,000.

The following table summarizes the underwriting discounts and commissions and proceeds, before expenses, to us:

| | Per Share and Accompanying Warrant | Total |
|---|--|-----------------|
| Public offering price | \$ 4.6800 | \$20,000,003.40 |
| Underwriting discounts and commissions (7.0%) | \$ 0.3276 | \$1,400,000.238 |
| Proceeds to us, before fees and expenses | \$ 4.3254 | \$18,613,060.36 |

We estimate the total underwriting discounts and expenses payable by us for this offering to be approximately \$2 million, which amount includes (i) the underwriting discount of approximately \$1.4 million, (ii) legal expenses incurred by the underwriter in connection with the offering of \$150,000 and (iii) other

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estimated Company expenses of approximately \$500,000 which includes legal, accounting, printing costs and various fees associated with the registration of our securities.

Upon any exercise for cash of the warrants issued in this offering that occurs following delivery of a Call Notice, we will request that the underwriter engage in permitted solicitation activities and, when such services are so provided, we will be required to pay the underwriter a commission equal to 7.0% of the aggregate gross proceeds received upon the exercise of such warrants if and to the extent that such commission is not prohibited under the rules of the Financial Industry Regulatory Authority, including Rule 5110(g)(10).

In addition, Brookline Capital Markets, LLC provided financial advisory services in connection with this offering and received an advisory fee from the underwriting discount as compensation for such services.

Indemnification

We have also agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act and to contribute to payments that the underwriter may be required to make in respect of those liabilities.

Lock-Up Agreements

We have agreed that, for a period of forty-five (45) days after the close of this offering, without the prior written consent of the underwriter, and subject to certain exceptions, neither we nor any of our subsidiaries shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of our common stock or common stock equivalents or file any registration statement or amendment or supplement thereto, other than this prospectus supplement or a registration statement on Form S-8.

In addition, each of our directors and officers has entered into a lock-up agreement with the underwriter. Under the lock-up agreements, without the prior written consent of the underwriter, the foregoing persons may not offer, sell, contract to sell, grant, lend, hypothecate, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition, whether by actual disposition or effective economic disposition due to cash settlement or otherwise, by such person or any affiliate or any person in privity with such person), directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, for a period of forty-five (45) days from the date of this prospectus supplement. These restrictions on future dispositions by our directors and executive officers are subject to certain exceptions for transfers of beneficially owned shares, including, but not limited to, transfers (i) as a bona fide gift or gifts, (ii) to any immediate family member or to any trust for the direct or indirect benefit of such person or the immediate family of the transferor; (iii) to any corporation, partnership, limited liability company, or other business entity, all of the equity holders of which consist of the transferor and/or the immediate family of the transferor; (iv) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (a) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the transferor or (b) in the form of a distribution to limited partners, limited liability company members or stockholders of the transferor; (v) if the undersigned is a trust, to the beneficiary of such trust, (vi) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the transferor, (vii) by operation of law, such as pursuant to qualified domestic order or in connection with a divorce settlement, and (viii) as part of a sale of securities acquired in this offering or acquired in open market transactions after the completion of the offering, (ix) pursuant to any bona fide third-party tender offer, merger, consolidation or other similar transaction or series of transactions approved by the board of directors of the Company and made with or offered after this offering to all holders of our share capital resulting in the transfer to a person or group of affiliated persons of voting share capital representing more than 50% of the outstanding voting share capital of our company (or the surviving entity) immediately following such transaction, or (x) pursuant to a contract, instruction or plan designed to meet the requirements of Rule 10b5-1, or a 10b5-1 Plan, under the Exchange Act, including durable automatic sale instructions for sell-to-cover transactions; provided that such 10b5-1 Plan was established prior to this offering and such 10b5-1 Plan will not be amended or otherwise modified during the forty-five (45) day period.

Electronic Distribution

This prospectus supplement and the accompanying prospectus may be made available in electronic format on websites or through other online services maintained by the underwriter or by its affiliates. In those cases, prospective investors may view offering terms online and prospective investors may be allowed to place orders online. Other than this prospectus supplement and the accompanying prospectus in electronic format, the information on the underwriter's website or our website and any information contained in any other websites maintained by the underwriter or by us is not part of this prospectus supplement, the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus form a part, has not been approved and/or endorsed by us or the underwriter in its capacity as the underwriter, and should not be relied upon by investors.

Passive Market Making

In connection with this offering, the underwriter and selling group members may also engage in passive market making transactions in our common stock. Passive market making consists of displaying bids limited by the prices of independent market makers and effecting purchases limited by those prices in response to order flow. Rule 103 of Regulation M promulgated by the SEC limits the amount of net purchases that each passive market maker may make and the displayed size of each bid. Passive market making may stabilize the market price of the shares of common stock at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Nasdaq Capital Market Listing

Our common stock trades on The Nasdaq Capital Market under the symbol "ALRN." On April 30, 2024, the last reported sale price of our common stock was \$4.55 per share. There is no established public trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants on The Nasdaq Capital Market, any other national securities exchange or any nationally recognized trading system.

Price Stabilization, Short Positions and Penalty Bids

In connection with the offering, the underwriter may engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions.
- Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our shares of common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus supplement is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the securities under this prospectus supplement is only made to persons to whom it is lawful to offer the securities without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus supplement is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the securities sold to the offeree within 12 months after its transfer to the offeree under this prospectus supplement.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws. Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor. Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriter is not required to comply with the disclosure requirements of NI33-105 regarding underwriter conflicts of interest in connection with this offering.

Cayman Islands

No invitation, whether directly or indirectly, may be made to the public in the Cayman Islands to subscribe for our securities.

European Economic Area - Belgium, Germany, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of securities will be made pursuant to an exemption under the Directive 2003/71/EC, the Prospectus Directive, as implemented in Member States of the European Economic Area (each, a Relevant Member State), from the requirement to produce a prospectus for offers of securities.

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An offer to the public of securities has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statements);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive) subject to obtaining the prior consent of us or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code Monétaire et Financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des marchés financiers (“AMF”). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the securities have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to be distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-1 to D.411-3, D.744-1, D.754-1 ;and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified investors (cercle restreint d’investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1; and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the securities cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005, or the Prospectus Regulations. The securities have not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(1) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The securities offered by this prospectus supplement have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such securities been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with the offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the securities being offered. Any resale in Israel, directly or indirectly, to the public of the securities offered by this prospectus supplement is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the securities in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Società e la Borsa, “CONSOB” pursuant to the Italian securities legislation and, accordingly, no offering material relating to the securities may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 (“Decree No. 58”), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no.58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 (“Regulation no. 11971”) as amended (“Qualified Investors”); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the securities or distribution of any offer document relating to the securities in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the securities in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such securities being declared null and void and in the liability of the entity transferring the securities for any damages suffered by the investors.

Japan

The securities have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the “FIEL”) pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the securities may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the securities have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to be distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of securities in Portugal are limited to persons who are “qualified investors” (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the securities be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of securities in Sweden is limited to persons who are “qualified investors” (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the securities have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor have we received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the securities within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. No services relating to the securities, including the receipt of applications and/or the allotment or redemption of such shares, may be rendered within the United Arab Emirates by us.

No offer or invitation to subscribe for securities is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Conduct Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended (“FSMA”) has been published or is intended to be published in respect of the securities. This document is issued on a confidential basis to “qualified investors” (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the securities may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the securities has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to us.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 (“FPO”), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together “relevant persons”). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the securities offered hereby is being passed upon for us by Wilmer Cutler Pickering Hale and Dorr LLP. Goodwin Procter LLP is acting as counsel for the underwriter in connection with this offering.

EXPERTS

The financial statements of Aileron Therapeutics, Inc. as of December 31, 2023 and for the year ended December 31, 2023, have been audited by Marcum LLP, an independent registered public accounting firm, as set forth in their report (which contains an explanatory paragraph relating to substantial doubt about the ability of Aileron Therapeutics, Inc. to continue as a going concern as described in Note 1 to the financial statements), and are incorporated by reference in this prospectus supplement and in the registration statement of which this prospectus is a part have been so incorporated in reliance on such report given upon such firm as experts in auditing and accounting.

The financial statements of Aileron Therapeutics, Inc. as of December 31, 2022 and for the year then ended incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2023 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The financial statements of Lung Therapeutics, Inc. as of December 31, 2022 and 2021, and for each of the two years in the period ended December 31, 2022, incorporated by reference in this Prospectus, have been audited by Deloitte & Touche LLP, an independent auditor, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

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 <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at www.aileronrx.com. Our website is not a part of this prospectus supplement or the accompanying prospectus and is not incorporated by reference herein or therein.

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement and the accompanying prospectus omit some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information on us and the securities we are offering. Statements in this prospectus supplement and the accompanying prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements. You can obtain a copy of the registration statement from the SEC's Internet site.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus supplement and the accompanying prospectus is considered to be part of this prospectus supplement and the accompanying prospectus. Because we are incorporating by reference future filings with the SEC, those future filings may modify or supersede some of the information included or incorporated in this prospectus supplement and the accompanying prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement, the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement and the accompanying prospectus incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed), until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, as filed with the SEC on April 15, 2024, as amended by our Annual Report on [Form 10-K/A](#) for the fiscal year ended December 31, 2023, filed with the SEC on April 29, 2024;
- Current Reports on Form 8-K, as filed with the SEC on [October 31, 2023](#), [January 10, 2024](#), [January 25, 2024](#), [January 29, 2024](#), [February 13, 2024](#), [February 29, 2024](#), [March 1, 2024](#), [March 15, 2024](#) (other than Item 7.01), [March 29, 2024](#) and May 1, 2024 and our Current Report on [Form 8-K/A](#) filed with the SEC on January 11, 2024; and
- The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed on June 23, 2017, as the description therein has been updated and superseded by the description of our capital stock contained in [Exhibit 4.2](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as filed with the SEC on April 15, 2024, and including any amendments or reports filed for the purpose of updating such description.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have "furnished" to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus supplement.

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You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Aileron Therapeutics, Inc.
12407 N. Mopac Expy. Suite 250 #390
Austin, Texas 78758
(737) 802-1989

S-36

PROSPECTUS

\$150,000,000



Aileron Therapeutics, Inc.

**DEBT SECURITIES
COMMON STOCK
PREFERRED STOCK
UNITS
WARRANTS**

We may offer and sell securities from time to time in one or more offerings of up to \$150,000,000 in aggregate offering price. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on The Nasdaq Capital Market under the symbol "ALRN."

As of June 7, 2022, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$49,683,002, which we calculated based on 90,823,597 shares of outstanding common stock as of June 3, 2022, of which 73,604,447 shares were held by non-affiliates, and a price per share of \$0.675, which was the closing price of our common stock on April 8, 2022. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell, pursuant to the registration statement of which this prospectus forms a part, securities with a value exceeding one-third of the aggregate market value of our outstanding common stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our outstanding common stock held by non-affiliates remains below \$75.0 million. During the 12 calendar months prior to and including the date of this prospectus, we have not offered or sold any securities pursuant to General Instruction I.B.6 of Form S-3.

Investing in these securities involves certain risks. See "Risk Factors" included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.

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 June 16, 2022.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the “SEC,” utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and the accompanying prospectus supplement together with the additional information described under the heading “Where You Can Find More Information” appearing below.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus or such accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to “we,” “our” and “us” refer, collectively, to Aileron Therapeutics, Inc., a Delaware corporation.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described in this prospectus and any accompanying prospectus supplement, including the risk factors set forth in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and other filings we make with the SEC from time to time, which are incorporated by reference herein, before making an investment decision pursuant to this prospectus and any accompanying prospectus supplement relating to a specific offering.

Our business, financial condition and results of operations could be materially and adversely affected by any or all of these risks or by additional risks and uncertainties not presently known to us or that we currently deem immaterial that may adversely affect us in the future.

WHERE YOU CAN FIND MORE INFORMATION

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 <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <https://www.aileronrx.com/>. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings and the exhibits attached thereto. You should review the complete document to evaluate these statements.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-38130) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed.

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2021, filed with the SEC on March 28, 2022, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our [definitive proxy statement](#) for the 2022 Annual Meeting of Stockholders filed with the SEC on April 29, 2022;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2022, filed with the SEC on May 5, 2022;
- Our Current Reports on Form 8-K filed with the SEC on [January 5, 2022](#), [April 29, 2022](#) and [June 7, 2022](#); and
- The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed on June 23, 2017, as the description therein has been updated and superseded by the description of our capital stock contained in [Exhibit 4.2](#) to our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021, as filed with the SEC on March 28, 2022, and including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

Aileron Therapeutics, Inc.
285 Summer Street, Unit 101
Boston, MA 02210
(617) 995-0900

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and the information incorporated by reference in this prospectus contain certain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act, that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained or incorporated by reference in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management and expected market growth are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements in this prospectus, particularly in the “Risk Factors” section, that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures or investments that we may make or enter into.

You should read this prospectus and the documents that we reference herein and have filed or incorporated by reference hereto completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

AILERON THERAPEUTICS, INC.

Aileron is a clinical stage chemoprotection oncology company focused on developing medicines to make chemotherapy safer and thereby more effective to save more patients' lives. ALRN-6924, our first-in-class MDM2/MDMX dual inhibitor, is designed to activate p53, which in turn upregulates p21, a known inhibitor of the cell replication cycle. ALRN-6924 is the only reported chemoprotective agent in clinical development to employ a biomarker strategy, in which we exclusively focus on treating patients with p53-mutated cancers. Our targeted strategy is designed to selectively protect multiple healthy cell types throughout the body from chemotherapy without protecting cancer cells. As a result, healthy cells are spared from chemotherapeutic destruction while chemotherapy continues to kill cancer cells. By reducing or eliminating multiple chemotherapy-induced side effects, ALRN-6924 may improve patients' quality of life and help them better tolerate chemotherapy. Enhanced tolerability may result in fewer dose reductions or delays of chemotherapy and the potential for improved efficacy. Our vision is to bring chemoprotection against multiple toxicities to all patients with p53-mutated cancer regardless of type of cancer or chemotherapy.

Our principal executive offices are located at 285 Summer Street, Unit 101, Boston, MA 02210, and our telephone number is (617) 995-0900.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include working capital and capital expenditures, research and development expenses, including clinical trial costs, general and administrative expenses, potential acquisition of, or investment in, companies, technologies, products or assets that complement our business, and repayment and refinancing of debt. We may temporarily invest the net proceeds in investment-grade, interest-bearing securities until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of the net proceeds of any offering.

DESCRIPTION OF DEBT SECURITIES

The following description summarizes the general terms and provisions of the debt securities that Aileron may offer and sell from time to time. We will describe the specific terms of the debt securities offered through that prospectus supplement, as well as any general terms and provisions described in this section that will not apply to those debt securities. As used in this “Description of Debt Securities” the term “debt securities,” means the senior and subordinated debt securities that we issue and the trustee authenticates and delivers under the applicable indenture. When we refer to “the Company,” “we,” “our,” and “us” in this section, we mean Aileron Therapeutics, Inc., excluding, unless the context otherwise requires or as otherwise expressly stated, its subsidiaries.

We may issue senior debt securities from time to time, in one or more series under a senior indenture to be entered into between us and a senior trustee to be named in a prospectus supplement, which we refer to as the senior trustee. We may issue subordinated debt securities from time to time, in one or more series under a subordinated indenture to be entered into between us and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. The forms of senior indenture and subordinated indenture are filed as exhibits to the registration statement of which this prospectus forms a part. Together, the senior indenture and the subordinated indenture are referred to as the indentures and, together, the senior trustee and the subordinated trustee are referred to as the trustees. This prospectus briefly outlines some of the provisions of the indentures. The following summary of the material provisions of the indentures is qualified in its entirety by the provisions of the indentures, including definitions of certain terms used in the indentures. Wherever we refer to particular sections or defined terms of the indentures, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review the indentures that are filed as exhibits to the registration statement of which this prospectus forms a part for additional information.

None of the indentures will limit the amount of debt securities that we may issue. The applicable indenture will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by us and may be payable in any currency or currency unit designated by us or in amounts determined by reference to an index.

General

The senior debt securities will constitute our unsubordinated general obligations and will rank pari passu with our other unsubordinated obligations. The subordinated debt securities will constitute our subordinated general obligations and will be junior in right of payment to our senior indebtedness (including senior debt securities), as described under the heading “—Certain Terms of the Subordinated Debt Securities—Subordination.” The debt securities will be structurally subordinated to all existing and future indebtedness and other liabilities of our subsidiaries unless such subsidiaries expressly guarantee such debt securities.

The debt securities will be our unsecured obligations unless otherwise specified in the applicable prospectus supplement. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations.

The applicable prospectus supplement and/or free writing prospectus will include any additional or different terms of the debt securities being offered, including the following terms:

- the title and type of the debt securities;
- whether the debt securities will be senior or subordinated debt securities, and, with respect to debt securities issued under the subordinated indenture the terms on which they are subordinated;
- the aggregate principal amount of the debt securities;
- the price or prices at which we will sell the debt securities;

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- the maturity date or dates of the debt securities and the right, if any, to extend such date or dates;
- the rate or rates, if any, per year, at which the debt securities will bear interest, or the method of determining such rate or rates;
- the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the manner of determination of such interest payment dates and the related record dates;
- the right, if any, to extend the interest payment periods and the duration of that extension;
- the manner of paying principal and interest and the place or places where principal and interest will be payable;
- the denominations of the debt securities if other than \$2,000 or multiples of \$1,000;
- provisions for a sinking fund, purchase fund or other analogous fund, if any;
- any redemption dates, prices, obligations and restrictions on the debt securities;
- the currency, currencies or currency units in which the debt securities will be denominated and the currency, currencies or currency units in which principal and interest, if any, on the debt securities may be payable;
- any conversion or exchange features of the debt securities;
- whether and upon what terms the debt securities may be defeased;
- any events of default or covenants in addition to or in lieu of those set forth in the indenture;
- whether the debt securities will be issued in definitive or global form or in definitive form only upon satisfaction of certain conditions;
- whether the debt securities will be guaranteed as to payment or performance;
- whether the debt securities will be secured by any collateral and, if so, a general description of the collateral and the terms and provisions of such collateral, security, pledge or other related agreements;
- any material tax implications of the debt securities; and
- any other material terms of the debt securities.

When we refer to “principal” in this section with reference to the debt securities, we are also referring to “premium, if any.”

We may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement.

We will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the indenture.

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Debt securities may bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (original issue discount securities) may be sold at a discount below their stated principal amount. U.S. federal income tax considerations applicable to any such discounted debt securities or to certain debt securities issued at par which are treated as having been issued at a discount for U.S. federal income tax purposes will be described in the applicable prospectus supplement.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked and certain related tax considerations will be set forth in the applicable prospectus supplement.

Certain Terms of the Senior Debt Securities

Covenants

Unless we indicate otherwise in a prospectus supplement, the senior debt securities will not contain any financial or restrictive covenants, including covenants restricting either us or any of our subsidiaries from incurring, issuing, assuming or guaranteeing any indebtedness secured by a lien on any of our or our subsidiaries' property or capital stock, or restricting either us or any of our subsidiaries from entering into sale and leaseback transactions.

Consolidation, Merger and Sale of Assets

Unless we indicate otherwise in a prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to any person, in either case, unless:

- the successor entity, if any, is a U.S. corporation, limited liability company, partnership or trust (subject to certain exceptions provided for in the senior indenture);
- the successor entity assumes our obligations on the senior debt securities and under the senior indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- certain other conditions are met.

No Protection in the Event of a Change in Control

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any provisions that may afford holders of the senior debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

Events of Default

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the following are events of default under the senior indenture for any series of senior debt securities:

- failure to pay interest on any senior debt securities of such series when due and payable, if that default continues for a period of 90 days (or such other period as may be specified for such series);
- failure to pay principal on the senior debt securities of such series when due and payable whether at maturity, upon redemption, by declaration or otherwise (and, if specified for such series, the continuance of such failure for a specified period);
- default in the performance of or breach of any of our covenants or agreements in the senior indenture applicable to senior debt securities of such series, other than a covenant breach which is specifically dealt with elsewhere in the senior indenture, and that default or breach continues for a period of 90 days after we receive written notice from the trustee or from the holders of 25% or more in aggregate principal amount of the senior debt securities of such series;
- certain events of bankruptcy or insolvency, whether or not voluntary; and
- any other event of default provided for in such series of senior debt securities as may be specified in the applicable prospectus supplement.

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the default by us under any other debt, including any other series of our debt securities, is not a default under the senior indenture.

If an event of default other than an event of default specified in the fourth bullet point above occurs with respect to a series of senior debt securities and is continuing under the senior indenture, then, and in each such case, either the trustee or the holders of not less than 25% in aggregate principal amount of such series then outstanding under the senior indenture (each such series voting as a separate class) by written notice to us and to the trustee, if such notice is given by the holders, may, and the trustee at the request of such holders shall, declare the principal amount of and accrued interest on such series of senior debt securities to be immediately due and payable, and upon this declaration, the same shall become immediately due and payable.

If an event of default specified in the fourth bullet point above occurs with respect to us and is continuing, the entire principal amount of and accrued interest, if any, on each series of senior debt securities then outstanding shall become immediately due and payable.

Unless otherwise specified in the prospectus supplement relating to a series of senior debt securities originally issued at a discount, the amount due upon acceleration shall include only the original issue price of the senior debt securities, the amount of original issue discount accrued to the date of acceleration and accrued interest, if any.

Upon certain conditions, declarations of acceleration may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of all the senior debt securities of such series affected by the default, each series voting as a separate class. Furthermore, subject to various provisions in the senior indenture, the holders of a majority in aggregate principal amount of a series of senior debt securities, by notice to the trustee, may waive an existing default or event of default with respect to such senior debt securities and its consequences, except a default in the payment of principal of or interest on such senior debt securities or in respect of a covenant or provision of the senior indenture which cannot be modified or amended without the consent of the holders of each such senior debt security. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such senior debt securities shall be deemed to have been cured, for every purpose of the senior indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto.

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The holders of a majority in aggregate principal amount of a series of senior debt securities may direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to such senior debt securities. However, the trustee may refuse to follow any direction that conflicts with law or the senior indenture, that may involve the trustee in personal liability or that the trustee determines in good faith may be unduly prejudicial to the rights of holders of such series of senior debt securities not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such series of senior debt securities. A holder may not pursue any remedy with respect to the senior indenture or any series of senior debt securities unless:

- the holder gives the trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of senior debt securities make a written request to the trustee to pursue the remedy in respect of such event of default;
- the requesting holder or holders offer the trustee indemnity satisfactory to the trustee against any costs, liability or expense;
- the trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of senior debt securities do not give the trustee a direction that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of a senior debt security to receive payment of the principal of and interest, if any, on such senior debt security in accordance with the terms of such debt security, or to bring suit for the enforcement of any such payment in accordance with the terms of such debt security, on or after the due date for the senior debt securities, which right shall not be impaired or affected without the consent of the holder.

The senior indenture requires certain of our officers to certify, on or before a fixed date in each year in which any senior debt security is outstanding, as to their knowledge of our compliance with all covenants, agreements and conditions under the senior indenture.

Satisfaction and Discharge

We can satisfy and discharge our obligations to holders of any series of debt securities if:

- we pay or cause to be paid, as and when due and payable, the principal of and any interest on all senior debt securities of such series outstanding under the senior indenture; or
- all senior debt securities of such series have become due and payable or will become due and payable within one year (or are to be called for redemption within one year) and we deposit in trust a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.

Under current U.S. federal income tax law, the deposit and our legal release from the debt securities would be treated as though we took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to us. Purchasers of the debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. federal income tax law.

Defeasance

Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and discharge and covenant defeasance will apply to any series of debt securities issued under the indentures.

Legal Defeasance

We can legally release ourselves from any payment or other obligations on the debt securities of any series (called “legal defeasance”) if certain conditions are met, including the following:

- We deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.
- There is a change in current U.S. federal income tax law or an IRS ruling that lets us make the above deposit without causing you to be taxed on the debt securities any differently than if we did not make the deposit and instead repaid the debt securities ourselves when due. Under current U.S. federal income tax law, the deposit and our legal release from the debt securities would be treated as though we took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to us.
- We deliver to the trustee a legal opinion of our counsel confirming the tax law change or ruling described above.

If we accomplish legal defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to us for repayment in the event of any shortfall.

Covenant Defeasance

Without any change of current U.S. federal tax law, we can make the same type of deposit described above and be released from some of the covenants in the debt securities (called “covenant defeasance”). In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the debt securities. In order to achieve covenant defeasance, we must do the following (among other things):

- deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.
- deliver to the trustee a legal opinion of our counsel confirming that under current U.S. federal income tax law we may make the above deposit without causing you to be taxed on the debt securities any differently than if we did not make the deposit and instead repaid the debt securities ourselves when due.

If we accomplish covenant defeasance, you could still look to us for repayment of the debt securities if there were a shortfall in the trust deposit. In fact, if one of the events of default occurred (such as our bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the events causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver

We and the trustee may amend or supplement the senior indenture or the senior debt securities without the consent of any holder:

- to convey, transfer, assign, mortgage or pledge any assets as security for the senior debt securities of one or more series;
- to evidence the succession of a corporation, limited liability company, partnership or trust to us, and the assumption by such successor of our covenants, agreements and obligations under the senior indenture or to otherwise comply with the covenant relating to mergers, consolidations and sales of assets;
- to comply with the requirements of the SEC in order to effect or maintain the qualification of the senior indenture under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default;
- to cure any ambiguity, defect or inconsistency in the senior indenture or in any supplemental indenture or to conform the senior indenture or the senior debt securities to the description of senior debt securities of such series set forth in this prospectus or any applicable prospectus supplement;
- to provide for or add guarantors with respect to the senior debt securities of any series;
- to establish the form or forms or terms of the senior debt securities as permitted by the senior indenture;
- to evidence and provide for the acceptance of appointment under the senior indenture by a successor trustee, or to make such changes as shall be necessary to provide for or facilitate the administration of the trusts in the senior indenture by more than one trustee;
- to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms, purposes of issue, authentication and delivery of any series of senior debt securities;
- to make any change to the senior debt securities of any series so long as no senior debt securities of such series are outstanding; or
- to make any change that does not adversely affect the rights of any holder in any material respect.

Other amendments and modifications of the senior indenture or the senior debt securities issued may be made, and our compliance with any provision of the senior indenture with respect to any series of senior debt securities may be waived, with the consent of the holders of a majority of the aggregate principal amount of the outstanding senior debt securities of all series affected by the amendment or modification (voting together as a single class); provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- extends the final maturity of any senior debt securities of such series;
- reduces the principal amount of any senior debt securities of such series;
- reduces the rate or extends the time of payment of interest on any senior debt securities of such series;
- reduces the amount payable upon the redemption of any senior debt securities of such series;
- changes the currency of payment of principal of or interest on any senior debt securities of such series;
- reduces the principal amount of original issue discount securities payable upon acceleration of maturity or the amount provable in bankruptcy;
- waives an uncured default in the payment of principal of or interest on the senior debt securities (except in the case of a rescission of acceleration as described above);

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- changes the provisions relating to the waiver of past defaults or changes or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment or conversion of any senior debt securities of such series on or after the due date therefor;
- modifies any of the provisions of these restrictions on amendments and modifications, except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the holder of each senior debt security of such series affected by the modification;
- adversely affects the right to convert or exchange senior debt securities into common stock, other securities or property in accordance with the terms of the senior debt securities; or
- reduces the above-stated percentage of outstanding senior debt securities of such series whose holders must consent to a supplemental indenture or modifies, amends or waives certain provisions of or defaults under the senior indenture.

It shall not be necessary for the holders to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if the holders' consent approves the substance thereof. After an amendment, supplement or waiver of the senior indenture in accordance with the provisions described in this section becomes effective, the trustee must give to the holders affected thereby certain notice briefly describing the amendment, supplement or waiver. Any failure by the trustee to give such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amendment, supplemental indenture or waiver.

Notice of Redemption

Notice of any redemption of senior debt securities will be mailed at least 10 days but not more than 60 days before the redemption date to each holder of senior debt securities of a series to be redeemed. Any notice may, at our discretion, be subject to the satisfaction or waiver of one or more conditions precedent. In that case, such notice shall state the nature of such condition precedent. If we elect to redeem a portion but not all of such senior debt securities, the trustee will select the senior debt securities to be redeemed in a manner that complies with applicable legal and stock exchange requirements, if any. Interest on such debt securities or portions of senior debt securities will cease to accrue on and after the date fixed for redemption, unless we default in the payment of such redemption price and accrued interest with respect to any such senior debt security or portion thereof.

If any date of redemption of any senior debt security is not a business day, then payment of principal and interest may be made on the next succeeding business day with the same force and effect as if made on the nominal date of redemption and no interest will accrue for the period after such nominal date.

Conversion Rights

We will describe the terms upon which senior debt securities may be convertible into our common stock or other securities in a prospectus supplement. These terms will include the type of securities the senior debt securities are convertible into, the conversion price or manner of calculation thereof, the conversion period, provisions as to whether conversion will be at our option or the option of the holders, the events requiring an adjustment of the conversion price and provisions affecting conversion in the event of the redemption of the senior debt securities and any restrictions on conversion. They may also include provisions adjusting the number of shares of our common stock or other securities issuable upon conversion.

No Personal Liability of Incorporators, Stockholders, Officers, or Directors

The senior indenture provides that no recourse shall be had under any obligation, covenant or agreement of ours in the senior indenture or any supplemental indenture, or in any of the senior debt securities or because of the creation of any indebtedness represented thereby, against any of our incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the senior debt securities, waives and releases all such liability.

Concerning the Trustee

The senior indenture provides that, except during the continuance of an event of default, the trustee will not be liable except for the performance of such duties as are specifically set forth in the senior indenture. If an event of default has occurred and is continuing, the trustee will exercise such rights and powers vested in it under the senior indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The senior indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the trustee thereunder, should it become a creditor of ours or any of our subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

We may have normal banking relationships with the senior trustee in the ordinary course of business.

Unclaimed Funds

All funds deposited with the trustee or any paying agent for the payment of principal, premium, interest or additional amounts in respect of the senior debt securities that remain unclaimed for two years after the date upon which such principal, premium or interest became due and payable will be repaid to us. Thereafter, any right of any holder of senior debt securities to such funds shall be enforceable only against us, and the trustee and paying agents will have no liability therefor.

Governing Law

The senior indenture and the senior debt securities will be governed by, and construed in accordance with, the internal laws of the State of New York.

Certain Terms of the Subordinated Debt Securities

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination

The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of our senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our senior indebtedness, we may not make any payment of principal or interest on the subordinated debt securities (except for certain sinking fund payments). In addition, upon any payment or distribution of our assets upon any dissolution, winding-up, liquidation or reorganization, the payment of the principal and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our senior indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

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The term “senior indebtedness” of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

- all of the indebtedness of that person for money borrowed;
- all of the indebtedness of that person evidenced by notes, debentures, bonds or other securities sold by that person for money;
- all of the lease obligations that are capitalized on the books of that person in accordance with generally accepted accounting principles;
- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and
- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, renewal, extension or refunding, the instrument creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. Our senior debt securities constitute senior indebtedness for purposes of the subordinated debt indenture.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only and therefore is not complete. This description is based upon, and is qualified by reference to, our certificate of incorporation and our bylaws, each as amended from time to time, and by applicable provisions of Delaware corporate law. You should read our certificate of incorporation and bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

Our authorized capital stock consists of 300,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share. The following description of our capital stock and provisions of our certificate of incorporation and amended and restated by-laws are summaries and are qualified by reference to our certificate of incorporation and by-laws. Copies of these documents are filed with the SEC as exhibits to our registration statement of which this prospectus forms a part. As of June 3, 2022, 90,823,597 shares of common stock were outstanding and no shares of preferred stock were outstanding.

Common Stock

Voting Rights. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders will be determined by a plurality of the votes cast by the stockholders entitled to vote on the election. Any matter other than the election of directors to be voted upon by the stockholders will be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter, except when a different vote is required by law, our certificate of incorporation or our bylaws.

Dividends. Holders of our common stock are entitled to receive proportionately any dividends as may be declared and paid on our common stock from funds lawfully available therefore as and when determined by our board of directors, subject to any preferential dividend rights of outstanding preferred stock.

Liquidation and Dissolution. In the event of our liquidation or dissolution, the holders of our common stock are entitled to receive proportionately all assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock.

Other Rights. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of 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 and issue in the future. Outstanding shares of our common stock are non-assessable. Holders of our common stock are not, and will not be, subject to any liability as stockholders.

Listing on The Nasdaq Capital Market. Our common stock is listed on The Nasdaq Capital Market under the symbol “ALRN.”

Transfer Agent and Registrar. The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

Preferred Stock

Under the terms of our certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock. The issuance of preferred stock could impede the completion of a merger, tender offer, or other takeover attempt.

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Our board of directors will make any determination to issue preferred shares based upon its judgment as to the best interests of our stockholders. Our directors, in so acting, could issue preferred stock having terms that could discourage an acquisition attempt through which an acquirer may be able to change the composition of our board of directors, including a tender offer or other transaction that some, or a majority, of our stockholders might believe to be in their best interests or in which stockholders might receive a premium for their stock over the then-current market price of the stock.

The preferred stock has the terms described below unless otherwise provided in the prospectus supplement relating to a particular series of preferred stock. You should read the prospectus supplement relating to the particular series of preferred stock being offered for specific terms, including:

- the designation and stated value per share of the preferred stock and the number of shares offered;
- the amount of liquidation preference per share;
- the price at which the preferred stock will be issued;
- the dividend rate, or method of calculation of dividends, the dates on which dividends will be payable, whether dividends will be cumulative or noncumulative and, if cumulative, the dates from which dividends will commence to accumulate;
- any redemption or sinking fund provisions;
- if other than the currency of the United States, the currency or currencies including composite currencies in which the preferred stock is denominated and/or in which payments will or may be payable;
- any conversion provisions; and
- any other rights, preferences, privileges, limitations and restrictions on the preferred stock.

The preferred stock will, when issued, be fully paid and non-assessable. Unless otherwise specified in the prospectus supplement, each series of preferred stock will rank equally as to dividends and liquidation rights in all respects with each other series of preferred stock. The rights of holders of shares of each series of preferred stock will be subordinate to those of our general creditors.

Rank. Unless otherwise specified in the prospectus supplement, the preferred stock will, with respect to dividend rights and rights upon our liquidation, dissolution or winding up of our affairs, rank:

- senior to our common stock and to all equity securities ranking junior to such preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs;
- on a parity with all equity securities issued by us, the terms of which specifically provide that such equity securities rank on a parity with the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs; and
- junior to all equity securities issued by us, the terms of which specifically provide that such equity securities rank senior to the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs.

The term “equity securities” does not include convertible debt securities.

Dividends. Holders of the preferred stock of each series will be entitled to receive, when, as and if declared by our board of directors, cash dividends at such rates and on such dates described in the prospectus supplement. Different series of preferred stock may be entitled to dividends at different rates or based on different methods of calculation. The dividend rate may be fixed or variable or both. Dividends will be payable to the holders of record as they appear on our stock books on record dates fixed by our board of directors, as specified in the applicable prospectus supplement.

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Dividends on any series of preferred stock may be cumulative or noncumulative, as described in the applicable prospectus supplement. If our board of directors does not declare a dividend payable on a dividend payment date on any series of noncumulative preferred stock, then the holders of that noncumulative preferred stock will have no right to receive a dividend for that dividend payment date, and we will have no obligation to pay the dividend accrued for that period, whether or not dividends on that series are declared payable on any future dividend payment dates. Dividends on any series of cumulative preferred stock will accrue from the date we initially issue shares of such series or such other date specified in the applicable prospectus supplement.

No dividends may be declared or paid or funds set apart for the payment of any dividends on any parity securities unless full dividends have been paid or set apart for payment on the preferred stock. If full dividends are not paid, the preferred stock will share dividends pro rata with the parity securities.

No dividends may be declared or paid or funds set apart for the payment of dividends on any securities junior to the preferred stock unless full dividends for all dividend periods terminating on or prior to the date of the declaration or payment will have been paid or declared and a sum sufficient for the payment set apart for payment on the preferred stock.

Liquidation Preference. Upon any voluntary or involuntary liquidation, dissolution or winding up of our affairs, then, before we make any distribution or payment to the holders of any common stock or any other class or series of our capital stock ranking junior to the preferred stock in the distribution of assets upon any liquidation, dissolution or winding up of our affairs, the holders of each series of preferred stock shall be entitled to receive out of assets legally available for distribution to stockholders, liquidating distributions in the amount of the liquidation preference per share set forth in the prospectus supplement, plus any accrued and unpaid dividends thereon. Such dividends will not include any accumulation in respect of unpaid noncumulative dividends for prior dividend periods. Unless otherwise specified in the prospectus supplement, after payment of the full amount of their liquidating distributions, the holders of preferred stock will have no right or claim to any of our remaining assets. Upon any such voluntary or involuntary liquidation, dissolution or winding up, if our available assets are insufficient to pay the amount of the liquidating distributions on all outstanding preferred stock and the corresponding amounts payable on all other classes or series of our capital stock ranking on parity with the preferred stock and all other such classes or series of shares of capital stock ranking on parity with the preferred stock in the distribution of assets, then the holders of the preferred stock and all other such classes or series of capital stock ranking on parity with the preferred stock will share ratably in any such distribution of assets in proportion to the full liquidating distributions to which they would otherwise be entitled.

Upon any such liquidation, dissolution or winding up and if we have made liquidating distributions in full to all holders of preferred stock, we will distribute our remaining assets among the holders of any other classes or series of capital stock ranking junior to the preferred stock according to their respective rights and preferences and, in each case, according to their respective number of shares. For such purposes, our consolidation or merger with or into any other corporation, trust or entity, or the sale, lease or conveyance of all or substantially all of our property or assets will not be deemed to constitute a liquidation, dissolution or winding up of our affairs.

Redemption. If so provided in the applicable prospectus supplement, the preferred stock will be subject to mandatory redemption or redemption at our option, as a whole or in part, in each case upon the terms, at the times and at the redemption prices set forth in such prospectus supplement.

The prospectus supplement relating to a series of preferred stock that is subject to mandatory redemption will specify the number of shares of preferred stock that shall be redeemed by us in each year commencing after a date to be specified, at a redemption price per share to be specified, together with an amount equal to all accrued and unpaid dividends thereon to the date of redemption. Unless the shares have a cumulative dividend, such accrued dividends will not include any accumulation in respect of unpaid dividends for prior dividend periods. We may pay the redemption price in cash or other property, as specified in the applicable prospectus supplement. If the redemption price for preferred stock of any series is payable only from the net proceeds of the

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issuance of shares of our capital stock, the terms of such preferred stock may provide that, if no such shares of our capital stock shall have been issued or to the extent the net proceeds from any issuance are insufficient to pay in full the aggregate redemption price then due, such preferred stock shall automatically and mandatorily be converted into the applicable shares of our capital stock pursuant to conversion provisions specified in the applicable prospectus supplement. Notwithstanding the foregoing, we will not redeem any preferred stock of a series unless:

- if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on the preferred stock for all past dividend periods and the then current dividend period; or
- if such series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends for the then current dividend period.

In addition, we will not acquire any preferred stock of a series unless:

- if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on all outstanding shares of such series of preferred stock for all past dividend periods and the then current dividend period; or
- if that series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends on the preferred stock of such series for the then current dividend period.

However, at any time we may purchase or acquire preferred stock of that series (1) pursuant to a purchase or exchange offer made on the same terms to holders of all outstanding preferred stock of such series or (2) by conversion into or exchange for shares of our capital stock ranking junior to the preferred stock of such series as to dividends and upon liquidation.

If fewer than all of the outstanding shares of preferred stock of any series are to be redeemed, we will determine the number of shares that may be redeemed pro rata from the holders of record of such shares in proportion to the number of such shares held or for which redemption is requested by such holder or by any other equitable manner that we determine. Such determination will reflect adjustments to avoid redemption of fractional shares.

Unless otherwise specified in the prospectus supplement, we will mail notice of redemption at least 10 days but not more than 60 days before the redemption date to each holder of record of preferred stock to be redeemed at the address shown on our stock transfer books. Each notice shall state:

- the redemption date;
- the number of shares and series of preferred stock to be redeemed;
- the redemption price;
- the place or places where certificates for such preferred stock are to be surrendered for payment of the redemption price;
- that dividends on the shares to be redeemed will cease to accrue on such redemption date;
- the date on which the holder's conversion rights, if any, as to such shares shall terminate; and
- the specific number of shares to be redeemed from each such holder if fewer than all the shares of any series are to be redeemed.

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If notice of redemption has been given and we have set aside the funds necessary for such redemption in trust for the benefit of the holders of any shares called for redemption, then from and after the redemption date, dividends will cease to accrue on such shares, and all rights of the holders of such shares will terminate, except the right to receive the redemption price.

Voting Rights. Holders of preferred stock will not have any voting rights, except as required by law or as indicated in the applicable prospectus supplement.

Unless otherwise provided for under the terms of any series of preferred stock, no consent or vote of the holders of shares of preferred stock or any series thereof shall be required for any amendment to our certificate of incorporation that would increase the number of authorized shares of preferred stock or the number of authorized shares of any series thereof or decrease the number of authorized shares of preferred stock or the number of authorized shares of any series thereof (but not below the number of authorized shares of preferred stock or such series, as the case may be, then outstanding).

Conversion Rights. The terms and conditions, if any, upon which any series of preferred stock is convertible into shares of our common stock will be set forth in the applicable prospectus supplement relating thereto. Such terms will include the number of shares of common stock into which the shares of preferred stock are convertible, the conversion price, rate or manner of calculation thereof, the conversion period, provisions as to whether conversion will be at our option or at the option of the holders of the preferred stock, the events requiring an adjustment of the conversion price and provisions affecting conversion in the event of the redemption.

Transfer Agent and Registrar. The transfer agent and registrar for the preferred stock will be set forth in the applicable prospectus supplement.

Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects

Certain provisions of our certificate of incorporation and bylaws may have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. Such provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock and may limit the ability of stockholders to remove current management or directors or approve transactions that stockholders may deem to be in their best interest and, therefore, could adversely affect the price of our common stock.

Staggered Board; Removal of Directors. Our certificate of incorporation and bylaws divide our board of directors into three classes with staggered three-year terms. In addition, a director may be removed only for cause and only by the affirmative vote of the holders of at least 75% of the votes that all of our stockholders would be entitled to cast in an annual election of directors. Any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office. The classification of our board of directors and the limitations on the removal of directors and filling of vacancies could make it more difficult for a third party to acquire, or discourage a third party from seeking to acquire, control of our company.

Stockholder Action by Written Consent; Special Meetings. Our certificate of incorporation provides that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of such holders and may not be effected by any consent in writing by such holders. Our certificate of incorporation and bylaws also provide that, except as otherwise required by law, special meetings of our stockholders can only be called by our chairman of the board of directors, our chief executive officer or our board of directors.

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Exclusive Forum Selection. Our certificate of incorporation 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 the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or employees to our company or stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws, or (4) any action asserting a claim against us governed by the internal affairs doctrine. These choice of forum provisions will not apply to claims arising under the Securities Act, the Exchange Act or any other claim for which federal courts have exclusive jurisdiction. Although our certificate of incorporation contains the choice of forum provision described above, it is possible that a court could rule that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

Advance Notice Requirements for Stockholder Proposals. Our bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of persons for election to our board of directors. Stockholders at an annual meeting may consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a stockholder of record on the record date for the meeting who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. These provisions could have the effect of delaying until the next stockholder meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities.

These provisions of Delaware law, our certificate of incorporation and our bylaws may have the effect of deterring hostile takeovers or delaying changes in our control or in our management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and in the policies they implement, and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended 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, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts.

Delaware Business Combination Statute. We are subject to Section 203 of the DGCL ("Section 203"), which prohibits a Delaware corporation from engaging in business combinations with an interested stockholder. An interested stockholder is generally defined as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by such entity or person ("interested stockholder"). Section 203 provides that an interested stockholder may not engage in business combinations with the corporation for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

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In general, Section 203 defines business combinations to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase common stock, preferred stock or debt securities. We may offer warrants separately or together with one or more additional warrants, common stock, preferred stock or debt securities, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the accompanying prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

- the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants are to be sold separately or with other securities as parts of units;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the designation and terms of any equity securities purchasable upon exercise of the warrants;
- the designation, aggregate principal amount, currency and terms of any debt securities that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the preferred stock with which the warrants are issued and, the number of warrants issued with each security;
- if applicable, the date from and after which any warrants issued as part of a unit and the related preferred stock, common stock or debt security will be separately transferable;
- the number of shares of common stock or preferred stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the anti-dilution provisions of, and other provisions for changes to or adjustment in the exercise price of, the warrants, if any;
- any redemption or call provisions; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

DESCRIPTION OF UNITS

We may issue units consisting of one or more of the other securities described in this prospectus in any combination, as described in the applicable prospectus supplement. We may issue units in one or more series, which will be described in the applicable prospectus supplement. The applicable prospectus supplement will also describe the following terms of any units:

- the designation and the terms of the units and of the securities constituting the units including whether and under what circumstances the securities comprising the units may be traded separately;
- the identity of any unit agent for the units, if applicable, and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- any additional terms of the governing unit agreement, if applicable;
- any additional provisions for the issuance, payment, settlement, transfer or exchange of the units or of the debt securities, common stock, preferred stock or warrants constituting the unit; and
- any applicable material U.S. federal income tax consequences.

FORMS OF SECURITIES

Each debt security, warrant and unit will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, warrants or units represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

We may issue the debt securities of a particular series, warrants and units in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a global security may not be transferred except as a whole by and among the depositary for the global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in global securities.

So long as the depositary, or its nominee, is the registered owner of a global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the global security for all purposes under the applicable indenture, warrant or unit agreement. Except as described below, owners of beneficial interests in a global security will not be entitled to have the securities represented by the global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, warrant or unit agreement. Accordingly, each person owning a beneficial interest in a global security must rely on the procedures of the depositary for that global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, warrant or unit agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, warrant or unit

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agreement, the depository for the global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, and interest payments on debt securities, and any payments to holders with respect to warrants or units, represented by a global security registered in the name of a depository or its nominee will be made to the depository or its nominee, as the case may be, as the registered owner of the global security. None of us, or any trustee, warrant agent, unit agent or any other agent of ours, or any agent of any trustee, warrant agent or unit agent will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depository for any of the securities represented by a global security, upon receipt of any payment to holders of principal, premium, interest or other distribution of underlying securities or other property on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that global security as shown on the records of the depository. We also expect that payments by participants to owners of beneficial interests in a global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers or registered in "street name," and will be the responsibility of those participants.

If the depository for any of the securities represented by a global security is at any time unwilling or unable to continue as depository or ceases to be a clearing agency registered under the Exchange Act, and a successor depository registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the global security that had been held by the depository. Any securities issued in definitive form in exchange for a global security will be registered in the name or names that the depository gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depository's instructions will be based upon directions received by the depository from participants with respect to ownership of beneficial interests in the global security that had been held by the depository.

PLAN OF DISTRIBUTION

We may sell securities:

- to or through underwriters;
- to or through brokers or dealers;
- through agents;
- directly to one or more purchasers in negotiated sales or competitively bid transactions; or
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act, and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis.

The distribution of the securities may be effected from time to time in one or more transactions:

- at a fixed price, or prices, which may be changed from time to time;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

- the name of the agent or any underwriters;
- the public offering or purchase price and the proceeds we will receive from the sale of the securities;
- any discounts and commissions to be allowed or re-allowed or paid to the agent or underwriters;
- all other items constituting underwriting compensation;
- any discounts and commissions to be allowed or re-allowed or paid to dealers; and
- any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

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If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Remarketing firms, agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any

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date prior to the second business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than two scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2021, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

4,273,505 Shares of Common Stock
Warrants to Purchase 4,273,505 Shares of Common Stock



PROSPECTUS SUPPLEMENT

Sole Bookrunner

Titan Partners Group
a division of American Capital Partners

The date of this prospectus supplement is May 1, 2024
