

PROSPECTUS

**CALADRIUS BIOSCIENCES, INC.
2,123,508 SHARES OF COMMON STOCK**

This prospectus relates to the resale of up to 2,123,508 shares of our common stock issuable upon exercise of certain outstanding warrants issued by us in private placement transactions.

These shares will be resold from time to time by the entities listed in the section titled "[Selling Stockholders](#)" beginning on page 7, which we refer to as the selling stockholders. The shares of common stock offered under this prospectus by the selling stockholders are issuable (i) with respect to 1,081,083 shares, upon the exercise of warrants issued in a private placement pursuant to a Securities Purchase Agreement, dated as of April 23, 2020 and (ii) with respect to 1,042,425 shares, upon the exercise of warrants issued in a private placement pursuant to a Securities Purchase Agreement, dated as of May 25, 2020. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of securities by the selling stockholders.

The selling stockholders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how a selling stockholder may sell its shares of common stock in the section titled "[Plan of Distribution](#)" on page 9. We will pay the expenses incurred in registering the securities covered by the prospectus, including legal and accounting fees.

Our common stock is traded on The Nasdaq Capital Market, or Nasdaq, under the symbol "CLBS". On June 29, 2020, the last reported sale price of our common stock was \$1.80 per share.

AN INVESTMENT IN OUR COMMON STOCK INVOLVES RISKS. SEE THE SECTION ENTITLED "[RISK FACTORS](#)" BEGINNING ON PAGE 5.

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 29, 2020

TABLE OF CONTENTS

	Page No.
Prospectus Summary	1
The Offering	4
Risk Factors	5
Special Note Regarding Forward-Looking Statements	5
Use of Proceeds	6
Selling Stockholders	7
Plan of Distribution	9
Description of Our Capital Stock	11
Legal Matters	14
Experts	14
Where You Can Find More Information	14
Incorporation of Certain Documents by Reference	14

You should read this prospectus and any applicable prospectus supplement before making an investment in the securities of Caladrius Biosciences, Inc. See “Where You Can Find More Information” for more information. You should rely only on the information contained in this prospectus or a prospectus supplement. The Company has not authorized anyone to provide you with different information. This document may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that information contained in this prospectus, or in any prospectus supplement, is accurate only as of any date on the front cover of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date. Unless otherwise noted in this prospectus, “Caladrius,” “the Company,” “we,” “us,” “our” and similar terms refer to Caladrius Biosciences, Inc.

Smaller Reporting Company - Scaled Disclosure

Pursuant to Item 10(f) of Regulation S-K promulgated under the Securities Act of 1933, as indicated herein, we have elected to comply with the scaled disclosure requirements applicable to “smaller reporting companies,” including providing two years of audited financial statements.

PROSPECTUS SUMMARY

This summary highlights some information from this prospectus. It may not contain all the information important to making an investment decision. You should read the following summary together with the more detailed information regarding our Company and the securities being sold in this offering, including "Risk Factors" and other information incorporated by reference herein.

Overview

Caladrius Biosciences, Inc. ("we," "us," "our," "Caladrius" or the "Company") is a clinical-stage biopharmaceutical company dedicated to the development and commercialization of cellular therapies designed to reverse disease and/or promote the regeneration of damaged tissue. We are developing first-in-class therapeutic products that are based on the characteristics of naturally occurring CD34+ cells and their ability to stimulate the growth of new microvasculature. Our technology leverages these cells using formulations unique to each medical indication and uses them to enable the body's natural repair mechanisms.

Our leadership team has decades of collective biopharmaceutical development experience and world-recognized scientific achievement in the field of cardiovascular disease, among other therapeutic areas. Our goal is to develop and commercialize products that address important unmet medical needs based on a broad and versatile portfolio of candidates. Our current product candidates include CLBS119, an emergent CD34+ stem cell therapy responding to the COVID-19 pandemic and the potentially permanent damage it inflicts on the lungs of many patients, as well as three other developmental treatments for ischemic diseases based on our CD34+ cell therapy platform: CLBS12, recipient of SAKIGAKE designation and eligible for early conditional approval in Japan for the treatment of critical limb ischemia ("CLI") based on the results of an ongoing clinical trial; CLBS16, the subject of a recently completed positive Phase 2 clinical trial in the U.S. for the treatment of coronary microvascular dysfunction ("CMD"); and CLBS14, a Regenerative Medicine Advanced Therapy ("RMAT") designated therapy for which we have finalized with the U.S. Food and Drug Administration (the "FDA") a protocol for a Phase 3 confirmatory trial in subjects with no-option refractory disabling angina ("NORDA").

Ischemic Repair (CD34 Cell Technology)

The CD34+ cell was discovered as a result of the deliberate search for a stem cell capable of stimulating the development and/or repair of blood vessels. All tissues in the body maintain their function by replacing cells over time. In addition to the maintenance function, the body must also be capable of building new blood vessels after injury. A CD34+ cell is a stem cell that has the ability to stimulate new blood vessel formation. No other native cell discovered to date has demonstrated this same capability.

Our proprietary CD34+ cell technology has led to the development of therapeutic product candidates designed to address diseases and conditions caused by ischemia. Ischemia occurs when the supply of oxygenated blood to healthy tissue is restricted. Through the administration of CD34+ cells, we seek to promote the development and formation of new microvasculature and thereby increase blood flow to the impacted area. We believe that a number of conditions caused by underlying ischemic injury can be improved through our CD34+ cell technology, including but not limited to, CLI, CMD, NORDA and COVID-19 induced lung damage.

CLBS119 for Treatment of COVID -19 Induced Lung Damage

COVID-19 appears to damage the vasculature of the lungs and we believe that repair of that vasculature will prove necessary for patients to achieve a full recovery. Survivors of COVID-19 often remain debilitated even after leaving the hospital due to the damage caused to their lungs, and while many developmental therapies responding to the COVID-19 pandemic are appropriately targeting the SARS-CoV-2 virus itself or the symptoms of the acute phase of the illness, we are aware of no therapy that has demonstrated the ability to repair COVID-19 induced lung damage. With consistent clinical and pre-clinical evidence that CD34+ cells can repair multiple organs, including models of severe lung inflammation, we sought and received FDA authorization for our investigational new drug ("IND") application for the study of CLBS119, a CD34+ cell therapy for repair of COVID-19 induced lung damage. The planned study will target patients with severe SARS-CoV-2 infection who, after ventilatory support due to respiratory failure, had otherwise recovered but remained debilitated due to persistent pulmonary damage.

CLBS12 for Treatment of Critical Limb Ischemia

Our open-label, registration-eligible study of CLBS12 in Japan for the treatment of critical limb ischemia ("CLI"), a disease with no currently available approved therapy and a higher mortality rate than all cancers except that of lung cancer, has shown strong results to date. The initial responses observed in the subjects who have reached an endpoint in this open label study are consistent with a positive therapeutic effect and safety profile as reported by previously published clinical trials in Japan. Although the study's enrollment, which had been targeted for completion this year, has been slowed by the pandemic's impact

in Japan, we are encouraged by the patient pre-screening pipeline that has been identified and hope to conclude the trial enrollment rapidly once the coronavirus abates. While the final outcome of the trial will depend on all data from all subjects, data from the concluded Buerger's Disease cohort and the data to date in the no-option CLI cohort remain very encouraging.

CLBS16 for Treatment of Coronary Microvascular Dysfunction

In 2017, with the assistance of a \$1.9 million grant from the National Institutes of Health (Award Number R44HL135889), we initiated our program for CLBS16 for the treatment of coronary microvascular dysfunction ("CMD"), a disease that potentially afflicts annually millions of patients with no current treatment options. That study, titled ESCaPE-CMD, was a Phase 2 proof-of-concept study that enrolled patients at the Mayo Clinic in Rochester, MN and Cedars-Sinai Medical Center in Los Angeles, CA. In June 2019, we announced the completion of enrollment in this study. Results of the first 17 of 20 patients enrolled in this trial who reached 6-month follow-up were presented as a rapid fire oral presentation on November 16, 2019 at the annual meeting of the American Heart Association in Philadelphia, PA by one of the principal investigators, Dr. Noel Bairey Merz, FACC, FAHA, FESC, the director of the Barbra Streisand Women's Heart Center at Cedars-Sinai in Los Angeles, CA. That data set showed a positive therapeutic effect with a statistically significant improvement in angina frequency, coronary flow reserve, Canadian Cardiovascular Society Angina Class and Seattle Questionnaire score, as well as an acceptable safety profile. The full data from that study was presented at the SCAI 2020 Scientific Sessions Virtual Conference on May 14, 2020 and we now expect to initiate the next CMD trial, a Phase 2b study, in the fall of 2020.

CLBS14 for Treatment of No Option Refractory Disabling Angina (NORDA)

We acquired the rights to data and regulatory filings for a CD34+ cell therapy program for refractory angina that had been advanced to Phase 3 by a previous sponsor.

Based on the clinical evidence from the completed studies that a single administration of CLBS14 reduces mortality, improves angina and increases exercise capacity in patients with otherwise untreatable angina, this product received Regenerative Medicine Advanced Therapy ("RMAT") designation from the FDA. Working closely with the FDA, we have finalized the design of a confirmatory Phase 3 trial which, in combination with previously filed Phase 1, 2 and 3 data, will be considered for the registration of CLBS14. Notably, this study design includes a 6-month primary endpoint and, with the benefit of the RMAT designation, the biologics license application ("BLA"), once submitted, should receive a 6-month review. We have substantially completed the preparatory work for initiation of this trial. We will not, however, commence enrollment of patients until sufficient capital is acquired and dedicated to this program such that we have confidence that we can fund the trial uninterrupted through completion.

Additional Out-licensing Opportunities

Our broad intellectual property portfolio of cell therapy assets includes notable programs available for out-licensing in order to continue their clinical development. Our current long-term strategy focuses on advancing our therapies through development with the ultimate objective of obtaining market authorizations and entering commercialization, either alone or with partners, to provide treatment options to patients suffering from life-threatening medical conditions. We believe that we are well-positioned to realize potentially meaningful value increases within our own proprietary pipeline if we are successful in advancing our product candidates to their next significant development milestones.

Coronavirus Considerations

In December 2019, a novel strain of coronavirus (SARS-CoV-2), which causes COVID-19, was reported to have surfaced in China. In March 2020, the World Health Organization declared the outbreak of COVID-19 to be a pandemic, and the world's economies began to experience pronounced effects. While the disruption is currently expected to be temporary, there is uncertainty around the extent and duration, and any future related financial impact cannot be reasonably estimated at this time.

Corporate Information

We incorporated in 1980 as a Delaware corporation and our principal executive offices are located at 110 Allen Road, Second Floor, Basking Ridge, NJ 07920. Our telephone number is (908) 842-0100 and our corporate website address is www.caladrius.com. We include our website address in this prospectus only as an inactive textual reference and do not intend it to be an active link to our website. The information contained on, connected to or that can be accessed via our website is not part of this prospectus.

Summary of Risk Factors

Our business is subject to a number of risks and uncertainties that you should understand before making an investment decision. Risks are discussed more fully in the section entitled "Risk Factors" following this prospectus summary. These risks

include, but are not limited to, the following:

- We have a history of net losses and our future profitability is uncertain.
- We may be required to raise additional funds to finance our operations; we may not be able to do so when necessary, and/or the terms of any financings may not be advantageous to us.
- Our success may be dependent on the timely and successful continued development and commercialization of our product candidates, and delays or difficulties may result in significant harm to our business prospects.
- We are subject to extensive regulation by the FDA and other regulatory agencies in the United States and abroad, and the failure to receive regulatory approvals or failure to comply with regulation would likely have a material and adverse effect on our business and prospects.
- We may be unable to obtain or maintain patent protection for our products and product candidates, which could have a material adverse effect on our business.
- The issuance of additional shares of our common stock in connection with future securities offerings, pursuant to our at-the-market sales agreement or our equity line of credit or in connection with the exercise of outstanding warrants may cause dilution to our existing stockholders.
- Our stock price may be extremely volatile, and our stockholders could lose a significant part of their investment.

Registered Direct Offerings of Common Stock and Concurrent Private Placements of Warrants

April 2020 Registered Direct Offering and Concurrent Private Placement

On April 23, 2020, we entered into a Securities Purchase Agreement (the “April 2020 Purchase Agreement”) with certain investors named therein, pursuant to which we agreed to issue and sell, in a registered direct offering directly to the investors (the “April 2020 Registered Offering”), an aggregate of 2,162,166 shares of common stock, par value \$0.001 per share, of the Company, at a purchase price of \$2.3125 per share. In addition, in a concurrent private placement, we agreed to sell and issue to the investors in the April 2020 Registered Offering unregistered warrants to purchase up to an aggregate of 1,081,083 shares of common stock (the “April 2020 Warrants”). Each April 2020 Warrant is exercisable for one share of common stock and features an exercise price equal to \$2.25 per share. The April 2020 Warrants are exercisable immediately upon issuance and will expire five and one-half years from the issuance date. The April 2020 Warrants and the shares of our common stock issuable from time to time upon the exercise of the April 2020 Warrants were not registered under the Securities Act of 1933, as amended (the “Securities Act”), were not offered pursuant to a registration statement and were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder. Shares of common stock underlying the April 2020 Warrants are being registered for resale by the selling stockholders pursuant to the Registration Statement of which this prospectus forms a part.

We received approximately \$4,500,000 net proceeds from the April 2020 Registered Offering and concurrent private placement. The offering closed on April 27, 2020.

May 2020 Registered Direct Offering and Concurrent Private Placement

On May 25, 2020, we entered into a Securities Purchase Agreement (the “May 2020 Purchase Agreement” and, together with the April 2020 Purchase Agreement, the “Purchase Agreements”) with certain investors named therein, pursuant to which we agreed to issue and sell, in a registered direct offering directly to the investors (the “May 2020 Registered Offering”), an aggregate of 2,084,850 shares of common stock, par value \$0.001 per share, of the Company, at a purchase price of \$2.0625 per share. In addition, in a concurrent private placement, we agreed to sell and issue to the investors in the May 2020 Registered Offering unregistered warrants to purchase up to an aggregate of 1,042,425 shares of common stock (the “May 2020 Warrants” and, together with the April 2020 Warrants, the “Warrants”). Each May 2020 Warrant is exercisable for one share of common stock and features an exercise price equal to \$2.0625 per share. The May 2020 Warrants are exercisable immediately upon issuance and will expire five and one-half years from the issuance date. The May 2020 Warrants and the shares of our common stock issuable from time to time upon the exercise of the May 2020 Warrants were not registered under the Securities Act, were not offered pursuant to a registration statement and were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder. Shares of common stock underlying the May 2020 Warrants are being registered for resale by the selling stockholders pursuant to the Registration Statement of which this prospectus forms a part.

We received approximately \$3,850,000 net proceeds from the May 2020 Registered Offering and concurrent private placement. The offering closed on May 28, 2020.

THE OFFERING

Securities offered by the selling stockholders 2,123,508

Common Stock to be outstanding after this offering, assuming exercise of the Warrants issued pursuant to the Purchase Agreements 17,675,694

Terms of the offering The selling stockholders and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. See "Plan of Distribution."

Use of proceeds We may receive up to approximately \$4,600,000 in aggregate gross proceeds from cash exercises of the Warrants, based on each of the per share exercise price of the Warrants. Any proceeds we receive from the exercise of the Warrants will be used for working capital and general corporate purposes. See "Use of Proceeds."

Risk Factors See "Risk Factors" as well as other information included in this prospectus, for a discussion of factors you should read and consider carefully before investing in our securities.

Trading Market Our common stock is quoted on the Nasdaq Capital Market under the symbol "CLBS."

The number of shares of common stock that will be outstanding after this offering is based on 15,552,141 shares of common stock outstanding as of June 15, 2020 and excludes:

- 1,151,209 shares of our common stock issuable upon exercise of outstanding stock options under our equity incentive plans with exercise prices ranging from \$3.01 to \$174.00 and having a weighted average exercise price of \$14.96 per share;
- 313,442 shares of our common stock issuable upon vesting of outstanding restricted stock units under our equity incentive plans; and
- 30,000 shares of our common stock issuable upon the exercise of outstanding warrants, other than the Warrants issued pursuant to the Purchase Agreements, with an exercise price of \$5.89 per share.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before investing in our securities, you should carefully consider the risks, uncertainties and assumptions contained in this prospectus and discussed under the heading “Risk Factors” included in our most recent Annual Report on Form 10-K for the year ended December 31, 2019 and Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, as revised or supplemented by subsequent filings, which are on file with the SEC and are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. Our business, financial condition, results of operations and future growth prospects could be materially and adversely affected by any of these risks. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus (including the section regarding Management's Discussion and Analysis and Results of Operation) contains forward-looking statements regarding our business, financial condition, results of operations and prospects. Words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates” and similar expressions or variations thereof are intended to identify forward-looking statements, but are not deemed to represent an all-inclusive means of identifying forward-looking statements as denoted in this prospectus. Additionally, statements concerning future matters are forward-looking statements. These statements include, among other things, statements regarding:

- our ability to obtain sufficient capital or strategic business arrangements to fund our operations and expansion plans, including meeting our financial obligations under various licensing and other strategic arrangements, the funding of our clinical trials for product candidates, and the commercialization of the relevant technology;
- our ability to build and maintain the management and human resources infrastructure necessary to support the growth of our business;
- whether a market is established for our cell-based products and services and our ability to capture a meaningful share of this market;
- scientific, regulatory and medical developments beyond our control;
- our ability to obtain and maintain, as applicable, appropriate governmental licenses, accreditations or certifications or to comply with healthcare laws and regulations or any other adverse effect or limitations caused by government regulation of our business;
- whether any of our current or future patent applications result in issued patents, the scope of those patents and our ability to obtain and maintain other rights to technology required or desirable for the conduct of our business; and our ability to commercialize products without infringing upon the claims of third-party patents;
- whether any potential strategic or financial benefits of various licensing agreements will be realized;
- the results of our development activities;
- our ability to complete our other planned clinical trials (or initiate other trials) in accordance with our estimated timelines due to delays associated with enrolling patients due to the novelty of the treatment, the size of the patient population and the need of patients to meet the inclusion criteria of the trial or otherwise;
- the extent to which the COVID-19 coronavirus may impact our business, including our clinical trials and financial condition; and
- other factors discussed in "Risk Factors" in our Annual Report on Form 10-K filed with the Securities and Exchange Commission (the “SEC”) on March 5, 2020.

Although forward-looking statements in this prospectus reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and

outcomes include, without limitation, those specifically addressed under the heading “Risks Factors” above, as well as those discussed elsewhere in this prospectus. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this prospectus. We file reports with the SEC and our electronic filings with the SEC (including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and any amendments to these reports) are available free of charge on the SEC’s website at <http://www.sec.gov>. You can also read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this prospectus, except as required by law. Readers are urged to carefully review and consider the various disclosures made throughout the entirety of this prospectus, which are designed to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of securities by the selling stockholders pursuant to this prospectus. We may receive up to approximately \$4,600,000 in aggregate gross proceeds from cash exercises of the Warrants, based on each of the per share exercise prices of the Warrants. Any proceeds we receive from the exercise of the Warrants will be used for working capital and general corporate purposes, including, but not limited to the clinical advancement of our CD34+ cell technology platform in various cardiac indications.

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those issuable upon the exercise of the Warrants. For additional information regarding the issuance of these securities, see “Prospectus Summary -Registered Direct Offerings of Common Stock and Concurrent Private Placements of Warrants” on page 3 of this prospectus. We are registering the shares of common stock issuable upon exercise of the Warrants in order to permit the selling stockholders to offer the shares for resale from time to time. Except for (i) the ownership of the Warrants, (ii) the transactions contemplated pursuant to the Purchase Agreements and other financings completed by us and (iii) with respect to Lincoln Park Capital Fund, LLC, that certain common stock purchase agreement, dated as of March 13, 2019, by and between us and Lincoln Park Capital Fund, LLC, which provides that we may sell to Lincoln Park Capital Fund, LLC up to \$26 million of shares of our common stock from time to time over a 36-month term, the selling stockholders have not had any material relationship with us within the past three years.

The following table sets forth certain information with respect to each selling stockholder, including (i) the shares of our common stock beneficially owned by the selling stockholder prior to this offering, (ii) the number of shares being offered by the selling stockholder pursuant to this prospectus and (iii) the selling stockholder’s beneficial ownership after completion of this offering. The registration of the shares of common stock issuable to the selling stockholders upon the exercise of the Warrants does not necessarily mean that the selling stockholders will sell all or any of such shares, but the number of shares and percentages set forth in the final two columns below assume that all shares of common stock being offered by the selling stockholders are sold.

The table is based on information supplied to us by the selling stockholders, with beneficial ownership and percentage ownership determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose. In computing the number of shares beneficially owned by a selling stockholder and the percentage ownership of that selling stockholder, shares of common stock subject to warrants held by that selling stockholder that are exercisable within 60 days after June 15, 2020, are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. The percentage of beneficial ownership after this offering is based on 15,552,141 shares of common stock outstanding on June 15, 2020.

This prospectus covers the resale of 2,123,508 shares of our common stock that may be sold or otherwise disposed of by the selling stockholders. Such shares are issuable to the selling stockholders upon the exercise of the Warrants. The Warrants are immediately exercisable upon issuance and expire five and one-half (5.5) years from their initial date of issuance. The April 2020 Warrants have an exercise price of \$2.25 per share and the May 2020 Warrants have an exercise price of \$2.0625 per share. See “Prospectus Summary -Registered Direct Offerings of Common Stock and Concurrent Private Placements of Warrants” above for a complete description of the Warrants. The selling stockholders may sell all, some or none of their shares in this offering, but the number of shares and percentages set forth in the final two columns below assume that all shares of common stock being offered by the selling stockholders are sold. See “Plan of Distribution.”

Selling Security Holder (1)	Number of Shares of Common Stock Beneficially Owned Prior to Offering (2)	Number of Shares of Common Stock Underlying Warrants Offered Hereby (3)	Number of Shares of Common Stock Beneficially Owned After Offering	% of Shares of Common Stock Beneficially Owned After Offering
Empery Asset Master, LTD (4)	255,276	255,276	—	*
Empery Tax Efficient, LP (4)	72,244	72,244	—	*
Empery Tax Efficient III, LP (4)	203,357	203,357	—	*
Armistice Capital Master Fund Ltd. (5)	801,148	801,148	—	*
Lincoln Park Capital Fund LLC (6)	997,341	530,877	466,464	3.0%
Sabby Volatility Warrant Master Fund, Ltd (7)	781,818	260,606	521,212	3.4%

* Represents less than 1%

- (1) This table and the information in the notes below are based upon information supplied by the selling stockholders, including reports and amendments thereto filed with the SEC on Schedule 13D and Schedule 13G.
- (2) The shares of common stock underlying options or warrants are convertible or exercisable within 60 days of June 15, 2020.
- (3) The actual number of shares of common stock offered hereby and included in the registration statement of which this prospectus forms a part includes, in accordance with Rule 416 under the Securities Act, such indeterminate number of additional shares of our common stock as may become issuable in connection with any proportionate adjustment for any stock splits, stock combinations, stock dividends, recapitalizations or similar events with respect to the common stock.
- (4) Empery Asset Management LP, the authorized agent of Empery Asset Master Ltd (“EAM”) has discretionary authority to vote and dispose of the shares held by EAM and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by EAM. EAM, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.

Empery Asset Management LP, the authorized agent of Empery Tax Efficient, LP (“ETE”) has discretionary authority to vote and dispose of the shares held by ETE and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by ETE. ETE, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.

Empery Asset Management LP, the authorized agent of Empery Tax Efficient III, LP (“ETE III”) has discretionary authority to vote and dispose of the shares held by ETE III and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by ETE III. ETE III, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.
- (5) Armistice Capital LLC, the investment manager of Armistice Capital Master Fund Ltd., and Steven Boyd, the managing member of Armistice Capital, LLC, may be deemed to have shared voting and investment power with respect to the securities held by Armistice Capital Master Fund Ltd. Armistice Capital, LLC and Mr. Boyd disclaim beneficial ownership in such shares, except to the extent of his or its pecuniary interest therein.
- (6) Josh Scheinfeld and Jonathan Cope, the principals of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of our common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus supplement filed with the SEC in connection with the transactions contemplated under the Purchase Agreements.
- (7) Hal Mintz may be deemed to be the beneficial owner of all of the shares of our common stock owned by Sabby Volatility Warrant Master Fund, Ltd. Mr. Mintz has sole voting and investment power over the shares being offered under the prospectus supplement filed with the SEC in connection with the transactions contemplated under the Purchase Agreements.

PLAN OF DISTRIBUTION

Each selling stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act of 1933, as amended (the “Securities Act”), if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

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

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

DESCRIPTION OF OUR CAPITAL STOCK

The following is a summary of all material characteristics of our capital stock as set forth in our certificate of incorporation and bylaws, and our outstanding warrants. The summary does not purport to be complete and is qualified in its entirety by reference to our certificate of incorporation and bylaws, which are incorporated by reference as exhibits to this prospectus.

Authorized Capital Stock

Our authorized capital stock consists of 500,000,000 shares of common stock, par value \$0.001 per share and 20,000,000 shares of preferred stock, par value \$0.01 per share.

Common Stock

The holders of our common stock are entitled to one vote per share in the election of directors and on all other matters on which stockholders are entitled or permitted to vote. The holders of our common stock are not entitled to cumulative voting rights. Therefore, holders of a majority of the shares voting for the election of directors can elect all of the directors. Subject to the terms of any outstanding series of preferred stock, the holders of our common stock are entitled to dividends in the amounts and at times as may be declared by the Board of Directors out of funds legally available. Upon liquidation or dissolution, holders of our common stock are entitled to share ratably in all net assets available for distribution to stockholders after payment of any liquidation preferences to holders of our preferred stock. The holders of our common stock have no redemption, conversion or preemptive rights.

As of June 15, 2020, we had 15,552,141 shares of common stock issued and outstanding, exclusive of existing convertible preferred stock, options and warrants.

Preferred Stock

Our Board of Directors has the authority to issue up to 20,000,000 shares of preferred stock with such designations, rights, and preferences as may be determined from time to time by our Board of Directors. Accordingly, our Board of Directors is empowered, without stockholder approval, to issue preferred stock with dividend, liquidation, conversion, voting, or other rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock could have the effect of restricting dividends on our common stock, diluting the voting power of our common stock, impairing the liquidation rights of our common stock, or delaying or preventing a change in control of our company, all without further action by our stockholders.

As of June 15, 2020, there were 10,000 shares of our Series B Convertible Redeemable Preferred Stock, \$0.01 par value per share (“Series B Preferred Stock”), issued and outstanding.

Series B Preferred Stock

The Series B Preferred Stock ranks *pari passu* with our common stock with respect to the payment of dividends and to the distribution of assets upon liquidation, dissolution or winding up.

So long as any shares of the Series B Preferred Stock are outstanding, no dividend shall be declared or paid or set aside for payment or other distribution declared or made upon our common stock or upon any other stock ranking junior to, or on a parity with, the Series B Preferred Stock as to dividends or upon liquidation, dissolution or winding up, unless, in the case of our preferred stock, the same dividend is declared, paid or set aside for payment on all outstanding shares of the Series B Preferred Stock or in the case of our common stock, ten times such dividend per share is declared, paid or set aside for payment on each outstanding share of the Series B Preferred Stock.

Except as otherwise provided by law, each share of the Series B Preferred Stock has the same voting rights as ten shares of our common stock and the holders of the Series B Preferred Stock and the common stock shall vote together as one class on all matters.

The holder of any share of Series B Preferred Stock has the right, at such holder’s option, to convert such share into one one-hundredth of a fully paid and non-assessable share of our common stock, subject to adjustment.

In the event of any voluntary or involuntary dissolution, liquidation or winding up of our Company, after any distribution of assets is made to the holders of any other class or series of stock that ranks prior to the Series B Preferred Stock in respect of

distributions upon the liquidation of the Company, the holder of each share of Series B Preferred Stock then outstanding shall be entitled to be paid out of our assets available for distribution to our stockholders, an amount on a pari passu basis equal to ten times the amount per share distributed to the holders of our common stock. After payment of the full amount of the distribution to which they are entitled, the holders of shares of the Series B Preferred Stock will not be entitled to any further participation in any distribution of assets by the Company.

Shares of Series B Preferred Stock issued and reacquired by us shall have the status of authorized and unissued shares of preferred stock, undesignated as to series, subject to later issuance.

Holders of shares of Series B Preferred Stock are not entitled to any preemptive or subscription rights in respect of any securities of the corporation.

Options and Restricted Stock Units

As of June 15, 2020, we had outstanding options to purchase an aggregate of 1,151,209 shares of our common stock with exercise prices ranging from \$3.01 to \$174.00 per share, with an approximate weighted average exercise price of \$14.96 per share. The shares of our common stock underlying all such options are registered with the SEC.

As of June 15, 2020, we had 313,442 restricted stock units issued and outstanding.

Warrants

Oxford Finance, LLC Warrants

On March 11, 2016, we entered into a Consent and Third Amendment to Loan and Security Agreement (the "Amendment") with Oxford Finance, LLC (the "Lender"). In connection with the Amendment, we issued to the Lender warrants to purchase an aggregate of 30,000 shares of common stock (the "Lender Warrants"), which are exercisable for a period of 7 years from the issuance date at an exercise price of \$5.89 per share. The shares of common stock underlying such warrants have been registered for resale.

April 2020 Warrants and May 2020 Warrants

In the private placement completed concurrently with the April 2020 Registered Offering, we agreed to sell and issue to the investors in the April 2020 Registered Offering unregistered April 2020 Warrants to purchase up to an aggregate of 1,081,083 shares of common stock. Each April 2020 Warrant is exercisable for one share of common stock and features an exercise price equal to \$2.25 per share. The April 2020 Warrants are exercisable immediately upon issuance and will expire five and one-half years from the issuance date. A holder of April 2020 Warrants will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own in excess of either 4.99% of the number of our shares of our common stock outstanding immediately after giving effect to such exercise; provided, however, that upon at least 61 days prior notice to us, a holder may increase or decrease such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding. The April 2020 Warrants and the shares of our common stock issuable from time to time upon the exercise of the April 2020 Warrants were not registered under the Securities Act, were not offered pursuant to a registration statement and were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder. Shares of common stock underlying the April 2020 Warrants are being registered for resale by the selling stockholders pursuant to the Registration Statement of which this prospectus forms a part.

In the private placement completed concurrently with the May 2020 Registered Offering, we agreed to sell and issue to the investors in the May 2020 Registered Offering unregistered May 2020 Warrants to purchase up to an aggregate of 1,042,425 shares of common stock. Each May 2020 Warrant is exercisable for one share of common stock and features an exercise price equal to \$2.0625 per share. The May 2020 Warrants are exercisable immediately upon issuance and will expire five and one-half years from the issuance date. A holder of May 2020 Warrants will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own in excess of either 4.99% of the number of our shares of our common stock outstanding immediately after giving effect to such exercise; provided, however, that upon at least 61 days prior notice to us, a holder may increase or decrease such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding. The May 2020 Warrants and the shares of our common stock issuable from time to time upon the exercise of the May 2020 Warrants were not registered under the Securities Act, were not offered pursuant to a registration statement and were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder. Shares of common stock underlying the May 2020 Warrants are being registered for resale by the selling stockholders pursuant to the Registration Statement of which this prospectus forms a part.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Certificate of Incorporation and Bylaws

Our Amended and Restated Certificate of Incorporation and bylaws contain some provisions that could make our acquisition by means of a tender or exchange offer, a proxy contest or otherwise more difficult. These provisions are summarized below.

Special Meetings. Our bylaws provide that special meetings of our stockholders may, unless otherwise prescribed by law, be called by our Chairman of the Board (if any), our Board of Directors or our Chief Executive Officer and shall be held at such place, on such date and at such time as shall be fixed by our Board of Directors or the person calling the meeting. Business transacted at any special meeting shall be limited to matters relating to the purpose or purposes stated in the notice of the meeting.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our Board of Directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us. The ability to issue preferred stock may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Delaware Anti-Takeover Statute. We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by 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; and
- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, owned 15% or more of a corporation's outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our Board of Directors does not approve in advance. We also anticipate that Section 203 may discourage attempted acquisitions that might result in a premium over the market price for the shares of our common stock held by stockholders.

The provisions of Delaware law, our Amended and Restated Certificate of Incorporation and our bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company, 17 Battery Place, New York, New York 1004.

Nasdaq Capital Market Listing

Our common stock is publicly traded on the Nasdaq Capital Market under the symbol "CLBS."

LEGAL MATTERS

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York, will pass upon the validity of the shares of common stock being offered by this prospectus.

EXPERTS

The audited financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other periodic reports, proxy statements and other information with the SEC. You can read our SEC filings over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Our Internet address is www.caladrius.com. There we make available free of charge, on or through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with the SEC. The information found on our website is not part of this prospectus.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

We are "incorporating by reference" specific documents that we file with the SEC, which means that we can disclose important information to you by referring you to those documents that are considered part of this prospectus. Information that we file subsequently with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below, and any documents that we file with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this prospectus until the termination of the offering of all of the securities registered pursuant to the registration statement of which this prospectus is a part (excluding any portions of such documents that have been "furnished" but not "filed" for purposes of the Exchange Act):

1. Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2019, filed on March 5, 2020.
2. Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2020, filed on May 7, 2020.
3. Current Reports on Form 8-K filed on [April 22, 2020](#), [April 24, 2020](#), and [May 26, 2020](#).
4. The description of our common stock contained in our Form 8-A filed on August 2, 2013.

You may request, and we will provide you with, a copy of these filings, at no cost, by calling us at (908) 842-0100 or by writing to us at the following address:

Caladrius Biosciences, Inc.
110 Allen Road, 2nd Floor
Basking Ridge, NJ 07920
Attn: Todd C. Girolamo

We maintain a website at <http://www.caladrius.com>. You may access our definitive proxy statements on Schedule 14A, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and periodic amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or therein, in any other subsequently filed document that also is or is deemed to be incorporated by reference herein and in this prospectus,

modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified and superseded, to constitute a part of this prospectus.

Any statement made in this prospectus concerning the contents of any contract, agreement or other document is only a summary of the actual contract, agreement or other document. If we have filed or incorporated by reference any contract, agreement or other document as an exhibit to the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement regarding a contract, agreement or other document is qualified by reference to the actual document.

Caladrius Biosciences, Inc.

2,123,508 SHARES OF COMMON STOCK

PROSPECTUS

JUNE 29, 2020