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

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CALADRIUS BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware 22-2343568

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

**110 Allen Road
Second Floor
Basking Ridge, NJ 07920
(908) 842-0100**

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

**David J. Mazzo
President and Chief Executive Officer
Caladrius Biosciences, Inc.
110 Allen Road
Second Floor
Basking Ridge, NJ 07920
(908) 842-0100**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
**Jeffrey P. Schultz, Esq.
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Chrysler Center, 666 Third Avenue
New York, NY 10017
Tel: (212) 935-3000**

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

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock, \$0.001 par value	932,204	\$3,766,104.16	\$436.49
Total	932,204	\$3,766,104.16	\$436.49

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement shall be deemed to cover additional securities that may be offered or issued to prevent dilution resulting from splits, dividends or similar transactions.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) promulgated under the Securities Act of 1933, as amended, based on the average of the high and low sales prices of the common stock on The NASDAQ Capital Market on September 1, 2017 (\$4.04), which date is within five days prior to the initial filing of this registration statement.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

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

PRELIMINARY PROSPECTUS, SUBJECT TO COMPLETION, DATED SEPTEMBER 5, 2017

CALADRIUS BIOSCIENCES, INC.

932,204 Shares of Common Stock

This prospectus relates to the proposed resale or other disposition of up to 932,204 shares of Caladrius Biosciences, Inc. common stock, \$0.001 par value per share, by the selling stockholders identified in this prospectus. We are not selling any shares of common stock under this prospectus and will not receive any of the proceeds from the sale or other disposition of common stock by the selling stockholders.

The selling stockholders or their pledgees, assignees or successors-in-interest may offer and sell or otherwise dispose of the shares of common stock described in this prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholders will bear all commissions and discounts, if any, attributable to the sales of shares. We will bear all other costs, expenses and fees in connection with the registration of the shares. See “Plan of Distribution” beginning on page 10 for more information about how the selling stockholders may sell or dispose of their shares of common stock.

Our common stock is listed on The NASDAQ Capital Market, under the symbol “CLBS.” On September 1, 2017, the last reported sale price of our common stock on The NASDAQ Capital Market was \$3.97 per share.

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described on page 7 of this prospectus under the caption “Risk Factors” and in the documents incorporated by reference into this prospectus.

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

The date of this prospectus is _____.

TABLE OF CONTENTS

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	1
ABOUT THIS PROSPECTUS	2
PROSPECTUS SUMMARY	3
RISK FACTORS	7
USE OF PROCEEDS	8
SELLING STOCKHOLDERS	9
PLAN OF DISTRIBUTION	9
LEGAL MATTERS	12
EXPERTS	12
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	12
WHERE YOU CAN FIND MORE INFORMATION	13

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995, as well as historical information. When used in this prospectus, statements that are not statements of current or historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words “plan,” “intend,” “may,” “will,” “expect,” “believe,” “could,” “anticipate,” “estimate,” “continue” or similar expressions or other variations or comparable terminology are intended to identify such forward-looking statements, although some forward-looking statements are expressed differently. We remind readers that forward-looking statements are merely predictions and therefore inherently subject to uncertainties and other factors and involve known and unknown risks that could cause the actual results, performance, levels of activity or our achievements or industry results, to be materially different from any future results, performance, levels of activity or our achievements or industry results expressed or implied by such forward-looking statements. Factors that could cause our actual results to differ materially from anticipated results expressed or implied by forward-looking statements include, among others:

- 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;
- our ability to integrate our acquired businesses successfully and grow such acquired businesses as anticipated;
- whether a market is established for our cell-based products and services and our ability to capture a meaningful share of this market;
- scientific and medical developments beyond our control;
- our ability to obtain and maintain, as applicable, appropriate governmental licenses, accreditations or certifications or 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 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; and
- our ability to satisfy our obligations under our loan agreement.

The factors discussed herein, including those risks described in “Item 1A. Risk Factors” of our Annual Report on Form 10-K and in our other periodic filings with the SEC, which are available for review at www.sec.gov under “Search for Company Filings,” could cause actual results and developments to be materially different from those expressed or implied by such statements. All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date they were made. Except as required by law, we undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”) pursuant to which the selling stockholders named herein may, from time to time, offer and sell or otherwise dispose of the securities covered by this prospectus. You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or securities are sold or otherwise disposed of on a later date. It is important for you to read and consider all information contained in this prospectus, including the Information Incorporated by Reference herein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under the captions “Where You Can Find More Information” and “Incorporation of Information by Reference” in this prospectus.

Neither we nor the selling stockholders have authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any of our securities other than the securities covered hereby, nor does this prospectus constitute an offer to sell or the solicitation of an offer to buy any securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about, and to observe, any restrictions as to the offering and the distribution of this prospectus applicable to those jurisdictions.

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 in the accompanying prospectus 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.

Unless the context otherwise requires, references in this prospectus to “Caladrius,” the “Company,” “we,” “us,” and “our” refer to Caladrius Biosciences, Inc.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed financial statements, notes to the financial statements and other information incorporated by reference from our other filings with the SEC. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

Overview

Caladrius Biosciences, Inc. (“we,” “us,” “our,” “Caladrius” or the “Company”) is a company developing cellular therapeutics to treat certain diseases. We leverage specialized cell therapy clinical development expertise to select and develop early-stage cell therapy candidates with the intention of partnering these candidates post proof-of-concept in humans. Our current lead product candidate, CLBS03, is an autologous polyclonal regulatory T cell (“Treg”) clinical phase 2 therapy targeting children aged 8-17 with recent-onset type 1 diabetes mellitus (“T1D”).

Immunomodulation (Treg Technology)

We are developing strategically, through the utilization of our core clinical development expertise, a product candidate (CLBS03) that is an innovative therapy for T1D. This therapy is based on a proprietary platform technology for immunomodulation. We have selected as an initial target the unmet medical need of patients who are newly diagnosed with T1D, most of whom will be under the age of 18. This program is based on the use of Tregs to treat diseases caused by imbalances in an individual's immune system. This novel approach seeks to restore immune balance by enhancing Treg number and function. Tregs are a natural part of the human immune system and regulate the activity of effector T cells; the cells that are responsible for protecting the body from pathogens and foreign antigens. When Tregs function properly, only harmful foreign materials are attacked by effector T cells. In autoimmune disease, however, it is thought that deficient Treg activity and numbers permit the effector T cells to attack the body's own beneficial cells. In the case of T1D, the beta cells in the pancreas are attacked thereby reducing and/or eliminating over time the patient's ability to produce insulin. Insulin is necessary to regulate sugar metabolism and maintain proper sugar levels in the blood. Inconsistent or unnatural insulin levels can lead to many complications, including blindness, vascular disease and, if no insulin supplement is provided, even death. There are currently no curative treatments, only lifelong insulin therapy, which therapy often does not prevent serious co-morbidities. Two Phase 1 clinical trials of this technology in T1D demonstrated safety and tolerance, feasibility of manufacturing, an implied durability of effect as well as an early indication of potential therapeutic effect through the preservation of beta cell function. In the first quarter of 2016, we commenced patient enrollment in the first of two cohorts in The Sanford Project: T-Rex Study, a Phase 2 prospective, randomized, placebo-controlled, double-blind clinical trial (the “TRex Study”) to evaluate the safety and efficacy of CLBS03 in adolescents with recent onset T1D. In October 2016, we received a satisfactory safety evaluation by our independent Data Safety Monitoring Board based on safety data then available from the first 19 patients enrolled in the trial. A subsequent interim analysis of early therapeutic effect is planned after approximately 50% of patients reach the six-month follow-up milestone, which analysis is expected in late 2017 or early 2018. We entered into a strategic collaboration with Sanford Research to support the execution of this trial. Sanford Research is a U.S.-based non-profit research organization that supports an emerging translational research center focused on finding a cure for T1D. On February 23, 2017, the California Institute for Regenerative Medicine (“CIRM”) awarded us funds of up to \$12.2 million to support the T-Rex Study. The funding will be based upon the achievement of certain milestones related to the proportion of subjects enrolled in California, as well as manufacturing and development costs incurred in California. We received \$5.7 million in initial funding on May 4, 2017. CLBS03 has been granted Fast Track and orphan drug designations from the U.S. Food and Drug Administration (“FDA”) as well as Advanced Therapeutic Medicinal Product (“ATMP”) classification from the European Medicines Agency (“EMA”).

Ischemic Repair (CD34 Cell Technology)

Our CD34 cell technology has led to the development of therapeutic 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 blood vessels and thereby increase blood flow to the impacted area. We believe that conditions caused by underlying ischemic injury can be improved through our CD34 cell technology, including critical limb ischemia (“CLI”). Published reports in *Circulation Cardiovascular Interventions*, *Atherosclerosis*, *Stem Cells and Circulation Journal*, provide preliminary evidence that CD34 cell therapy is safe and can exert significant therapeutic effects in patients with CLI, a condition in which blood flow to the legs is severely impaired, causing pain and non-healing ulcers and, ultimately, potentially resulting in the need for amputation. Our Clinical Trial Notification for a pivotal Phase 2 trial investigating CLBS12 (a candidate for CLI) was submitted to the Japanese Pharmaceutical and Medical Device Agency (“PMDA”).

and was cleared to proceed. The protocol design was agreed with PMDA and, if successful, could provide the basis for conditional approval under Japan's favorable regenerative medicine law. We are seeking to collaborate on CLBS12 with development and/or manufacturing partners. Furthermore, we submitted grant applications in an effort to seek non-dilutive financing to investigate the CD34 technology for additional clinical indications in the United States and expect to learn the results of those applications in 2017.

We intend to develop this platform if capital becomes available through grants, partnerships or licensing, as well as using reasonable amounts of our own capital, and hope to initiate trial enrollment in late 2017 or early 2018.

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. These include additional indications for our Treg product, additional indications for our CD34 cell technology and a platform using tumor cell/dendritic cell technology for immuno-oncology application. The immuno-oncology program has the benefit of promising Phase 2 clinical data and applicability to multiple indications. In 2016, we completed multiple out-licensing agreements for this and other technology platforms in an effort to monetize non-core assets.

Our current long-term strategy focuses on advancing cell-based therapies to the market and assisting patients suffering from life-threatening medical conditions. We believe that we are positioned to realize potentially meaningful value increases within our own proprietary pipeline based on demonstration of proof-of-concept in man as well as process and manufacturing advancements.

Recent Developments

Private Placement

In concurrent private placements, on September 14, 2016, the Company entered into Securities Purchase Agreements (each a "Private Placement Purchase Agreement" and, collectively, the "Private Placement Purchase Agreements") each a "Private Placement Purchase Agreement" and, collectively, the "Private Placement Purchase Agreements") with certain accredited investors (the "Investors") with whom it had a substantive, pre-existing relationship, including certain existing stockholders, for the sale by the Company of an aggregate of 2,330,509 shares of Common Stock, at a purchase price of \$4.72 per share. The investments were to be placed in two tranches: (i) \$6.6 million upon an initial closing (the "Initial Closing"), and (ii) \$4.4 million in a second closing (the "Second Closing") when certain conditions, including the enrollment of 70 subjects in the Company's Phase 2 CLBS03 clinical trial were met. The Initial Closing was closed on September 14, 2016 and the Second Closing was closed on August 29, 2017.

In connection with the private placements we entered into a Registration Rights Agreement on September 14, 2016, with each of the Investors (the "Registration Rights Agreement"), which requires us to file a registration statement with the SEC, covering the resale of the shares of common stock issued in the private placement, and use our commercially reasonable efforts to cause such registration statement to be declared effective by the SEC within 90 days of the Initial Closing (or 120 days in the event such registration statement is reviewed by the SEC). Failure to do so or meet various other deadlines set forth in the Registration Rights Agreement will give rise to liquidated damages of 1% per month, up to a maximum of 3% so long as the event giving rise to the damages remains uncured, all as set forth in the Registration Rights Agreement. This registration statement is being filed in connection with our obligations under the Registration Rights Agreement with respect to the sale of an aggregate of 932,204 shares of our common stock issued to the Investors in the Second Closing.

Corporate Information

We were 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 on our website is not incorporated by reference into this prospectus.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, as well as other documents we file with the SEC, are available free of charge through the Investors section of our website as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The public can obtain documents that we file with the SEC at www.sec.gov.

This prospectus includes the following trademarks, service marks and trade names owned by us: Caladrius®, Amorcyte®, Athelos™, and PCT, LLC™. These trademarks, service marks and trade names are the property of Caladrius and its affiliates. This prospectus also includes other trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and traded names included herein are the property of their respective owners.

THE OFFERING

This prospectus relates to the resale of 932,204 shares of our common stock, all of which are outstanding shares of common stock held by the selling stockholders. See “Selling Stockholders.”

The selling stockholders may offer to sell the shares being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. Our common stock is listed on The NASDAQ Capital Market under the symbol “CLBS.”

We have agreed to register the offer and sale of the common stock to satisfy registration rights we have granted to the selling stockholders. We will not receive any proceeds from the sale or other disposition of the common stock by the selling stockholders.

RISK FACTORS

Please carefully consider the risk factors described in our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. Additional risks and uncertainties not presently known to us or that we deem currently immaterial may also impair our business operations or adversely affect our results of operations or financial condition.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of shares of our common stock in this offering. The selling stockholders will receive all of the proceeds from this offering.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, fees and expenses of our counsel, certain expenses of counsel to the selling stockholders and our independent registered public accounting firm.

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those previously issued to the selling stockholders. For additional information regarding the issuances of those shares of common stock, see “Prospectus Summary-Private Placement” above. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock by each of the selling stockholders. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of the shares of common stock, as of September 5, 2017. The third column lists the shares of common stock being offered by this prospectus by the selling stockholders.

In accordance with the terms of a registration rights agreement with the selling stockholders, this prospectus generally covers the resale of the sum of the number of shares of common stock issued to the selling stockholders on or about August 29, 2017 pursuant to securities purchase agreements dated as of September 14, 2016. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

<u>Name of Selling stockholder</u>	<u>Number of Shares of Common Stock Beneficially Owned Prior to Offering</u>	<u>Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus</u>	<u>Number of Shares of Common Stock Beneficially Owned After Offering (1)</u>
Sanford Health (2)	1,059,322	423,729	635,593
IEA Private Investments LTD (3)	1,052,837	254,237	798,600
Jerilyn Holdings Limited (4)	423,729	169,492	254,237
Union Clinic Partners (5)	211,865	84,746	127,119

- (1) Assumes that all shares being registered in this prospectus are resold to third parties and that with respect to a particular selling stockholder, such selling stockholder sells all shares of common stock registered under this prospectus held by such selling stockholder.
- (2) Sanford may be deemed to beneficially own such shares. The address for Sanford Health is 1305 W. 18th Street, Sioux Falls, South Dakota 57105.
- (3) Includes warrants to purchase 85,922 shares of common stock exercisable within 60 days of September 5, 2017. Amy Wu Yee and Mark Siao Hing Pu may be deemed to beneficially own such shares. The address for IEA Private Investments LTD is c/o IEA Private Investments LTD, 3003A, ONE Exchange Square, 8 Connaught Place, Central, Hong Kong.
- (4) Song Yu Nu may be deemed to beneficially own such shares. The address for Jerilyn Holdings Limited is Suite 1005, Tower #2, No. 189 Nan Dan Road, Shanghai, China, 200030.
- (5) Rui Wang and Wei Ji may be deemed to beneficially own such shares. The address for Union Clinic Partners Incorporated is 3/F Zhongfang Building, No. 19 Jianguomennei Ave., Dongcheng, Beijing, China 100005.

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. The selling stockholders may use one or more of the following methods when disposing of the shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers, dealers or underwriters that may act solely as agents;
- 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;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended, or Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-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 shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealers(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledges or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

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

The selling stockholders and any broker-dealers or agents that are involved in selling the shares 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 shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act and the rules of the Financial Industry Regulatory Authority (FINRA).

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Securities and Exchange Act during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

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

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act or otherwise.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the date on which all securities under such Registration Statement have been disposed of by the holder in accordance with such Registration Statement, have been previously sold in accordance with Rule 144, or after a Registration Statement registering the resale of such securities has been effective for three consecutive years, if such securities are or become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144.

LEGAL MATTERS

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York, will pass upon the validity of the 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.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement and any prospectus supplement filed hereafter, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in “Where You Can Find More Information.” The documents we are incorporating by reference are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on March 17, 2017,
- our Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2017 filed on May 15, 2017 and for the fiscal quarter ended June 30, 2017 filed on August 10, 2017;
- our Current Reports on Form 8-K filed on January 6, 2017, March 17, 2017 (two reports), March 22, 2017, March 23, 2017, March 30, 2017, and May 17, 2017 (two reports) (excluding any information deemed furnished pursuant to Item 2.02 or Item 7.01 of any Current Report on Form 8-K);
- our Definitive Proxy Statements on Schedule 14A filed with the SEC on March 17, 2017, March 20, 2017, April 11, 2017, April 27, 2017 (two reports), May 1, 2017, May 5, 2017, and May 9, 2017;
- our Registration Statement on Form S-8 filed on June 9, 2017;
- the description of our common stock contained in our Registration Statement on Form 8-A, filed on August 2, 2013, pursuant to Section 12(b) of the Exchange Act; and
- all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents;

Unless otherwise noted, the SEC file number for each of the documents listed above is 001-33650.

In addition, all reports and other documents filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this

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

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting: Caladrius Biosciences, Inc., 110 Allen Road, 2nd Floor, Basking Ridge, NJ 07920, telephone (908) 842-0100, Attn: Corporate Secretary.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's web site at <http://www.sec.gov>.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the registration statement, including the exhibits and schedules, without charge, at the public reference room or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

We also maintain a website at www.caladrius.com, through which you can access our SEC filings. The information set forth on, or accessible from, our website is not part of this prospectus.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an itemization of the various expenses, all of which we will pay, in connection with the issuance and distribution of the securities being registered. All of the amounts shown are estimated except the SEC Registration Fee.

SEC Registration Fee	\$	436.49
Legal Fees and Expenses		15,000.00
Accounting Fees and Expenses		20,000.00
Miscellaneous		5,000.00
Total	\$	<u>40,436.49</u>

Item 15. Indemnification of Directors and Officers

We are incorporated under the laws of the State of Delaware. Under the General Corporation Law of the State of Delaware (the "Delaware GCL"), a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), by reason of the fact that he or she is or was our director, officer, employee or agent, or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to our best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

In addition, the Delaware GCL also provides that we also may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in our right to procure a judgment in our favor by reason of the fact that he or she is or was our director, officer, employee or agent, or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to our best interests. However, in such an action by or on our behalf, no indemnification may be made in respect of any claim, issue or matter as to which the person is adjudged liable to us unless and only to the extent that the court determines that, despite the adjudication of liability but in view of all the circumstances, the person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper.

Our certificate of incorporation is consistent with the Delaware GCL. Each of our directors, officers, employees and agents will be indemnified to the extent permitted by the Delaware GCL. We also maintain insurance on behalf of our directors and officers against liabilities asserted against such persons and incurred by such persons in such capacities, whether or not we would have the power to indemnify such persons under the Delaware GCL.

We have entered into indemnification agreements with our Chief Executive Officer, President and Chief Financial Officer, and certain other employees and each of our directors pursuant to which we have agreed to indemnify such party to the full extent permitted by law, subject to certain exceptions, if such party becomes subject to an action because such party is a our director, officer, employee, agent or fiduciary.

Item 16. Exhibits

The exhibits to this registration statement are listed in the Exhibit Index to this registration statement, which Exhibit Index is hereby incorporated by reference.

Item 17. Undertakings

- (a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Basking Ridge, State of New Jersey, on September 5, 2017.

CALADRIUS BIOSCIENCES, INC.

By /s/ David J. Mazzo

David J. Mazzo

President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Caladrius Biosciences, Inc., hereby severally constitute and appoint David J. Mazzo and Joseph Talamo, as our true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature		Date
<u>/s/ David J. Mazzo, PhD.</u> David J. Mazzo, PhD.	Director, and President and Chief Executive Officer (Principal Executive Officer)	September 5, 2017
<u>/s/ Joseph Talamo</u> Joseph Talamo	Senior Vice President, and Chief Financial Officer (Principal Financial and Accounting Officer)	September 5, 2017
<u>/s/ Gregory B. Brown, M.D.</u> Gregory B. Brown, M.D.	Chair of the Board of Directors	September 5, 2017
<u>/s/ Steven S. Myers</u> Steven S. Myers	Director	September 5, 2017
.		September 5, 2017
<u>/s/ Steven M. Klosk</u> Steven M. Klosk	Director	September 5, 2017
<u>/s/ Peter Traber</u> Peter Traber	Director	September 5, 2017

EXHIBIT INDEX

Exhibit Number	Description	Incorporated By Reference	Filing Date	SEC File/Reg. Number
4.1	Specimen Certificate for Common Stock.	Form S-3 (Exhibit 4.1)	9/11/2007	333-145988
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.			
23.1	Consent of Grant Thornton LLP			
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in the opinion filed as Exhibit 5.1).			
24.1	Powers of Attorney (included on the signature page of this registration statement).			

Exhibit 5.1

September 5, 2017

Caladrius Biosciences, Inc.
110 Allen Road, Second Floor
Basking Ridge, NJ 07920

Re: Caladrius Biosciences, Inc.

Ladies and Gentlemen:

We have acted as counsel to Caladrius Biosciences, Inc., a Delaware corporation (the "Company"), in connection with the preparation of the Registration Statement on Form S-3 (the "Registration Statement"), filed by the Company with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the offering by certain selling stockholders of the Company named in the Registration Statement (the "Selling Stockholders") of a total of 932,204 shares of common stock of the Company, par value \$0.001 per share ("Common Stock"), issued to the Selling Stockholders (the "Shares") under the terms of a Securities Purchase Agreement dated September 14, 2016 (the "Securities Purchase Agreement").

In such capacity, we have examined the following documents:

- a) the Registration Statement;
- b) the Amended and Restated Certificate of Incorporation and the Amended and Restated By-laws of the Company; and
- c) the Securities Purchase Agreement.

We have also examined such other documents, records and instruments as we have deemed necessary and appropriate for purposes of this opinion.

Our opinion is limited to the General Corporation Law of the State of Delaware and the United States federal laws, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

Based on the foregoing, we are of the opinion that the Shares issued to the Selling Stockholders are validly issued, fully paid and non-assessable, when paid for by the Selling Stockholders and issued by the Company in accordance with the terms of the Securities Purchase Agreement, will be validly issued, fully paid and non-assessable.

In rendering the foregoing opinions, we have assumed (a) the accuracy and truthfulness of all public records of the Company and of all certifications, documents and other proceedings examined by us that have been produced by

officials of the Company acting within the scope of their official capacities, without verifying the accuracy or truthfulness of such representations, and (b) the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act and to reference the firm's name under the caption "Legal Matters" in the Registration Statement, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 16, 2017 with respect to the consolidated financial statements of Caladrius Biosciences, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2016, which are incorporated by reference in this Registration Statement. We consent to the incorporation by reference of the aforementioned report in this Registration Statement and to the use of our name as it appears under the caption “Experts”.

New York, New York
September 5, 2017

New York, New York
September 5, 2017