

**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
(State or other jurisdiction of
incorporation or organization)

22-2343568
(I.R.S. Employer
Identification Number)

**110 Allen Road, 2nd Floor
Basking Ridge, NJ 07920
(908) 842-0100**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Todd C. Girolamo, Esq.
SVP, General Counsel and Corporate Secretary
Caladrius Biosciences, Inc.
110 Allen Road, 2nd 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.
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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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee
Common Stock, par value \$0.001 per share	18,750,000 shares	\$2.02	\$37,875,000	\$4,132.16

- (1) This Registration Statement registers (i) 12,500,000 shares of common stock of the Registrant and (ii) 6,250,000 shares of common stock of the Registrant issuable upon the exercise of certain outstanding warrants issued by the Registrant. Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the Registrant's outstanding shares of common stock.
- (2) Estimated in accordance with Rule 457(c) solely for purposes of calculating the registration fee on the basis of the average of the high and low prices of the Registrant's common stock as reported on The Nasdaq Capital Market on January 28, 2021.

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 or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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

SUBJECT TO COMPLETION, DATED JANUARY 29, 2021

PROSPECTUS

CALADRIUS BIOSCIENCES, INC.

18,750,000 Shares of Common Stock

The selling stockholders of Caladrius Biosciences, Inc. ("Caladrius," "we," "us" or the "Company") listed beginning on page 11 of this prospectus may offer and resell under this prospectus (i) up to 12,500,000 shares of our common stock and (ii) up to 6,250,000 shares of our common stock issuable upon exercise of warrants acquired by certain of the selling stockholders under the Purchase Agreement (defined below) (the "Warrants"). The selling stockholders acquired the shares of common stock and the Warrants from us pursuant to a Securities Purchase Agreement (the "Purchase Agreement"), dated January 21, 2021, by and among the Company and the investors listed therein (the "Investors").

We are registering the resale of the shares of common stock covered by this prospectus as required by the Registration Rights Agreement we entered into with the Investors on January 21, 2021. The selling stockholders will receive all of the proceeds from any sales of the shares offered hereby. We will not receive any of the proceeds, but we will incur expenses in connection with the offering. To the extent the Warrants are exercised for cash, if at all, we will receive the exercise price of the Warrants.

The selling stockholders may sell these shares through public or private transactions at market prices prevailing at the time of sale or at negotiated prices. The timing and amount of any sale are within the sole discretion of the selling stockholders. Our registration of the shares of common stock covered by this prospectus does not mean that the selling stockholders will offer or sell any of the shares. For further information regarding the possible methods by which the shares may be distributed, see "Plan of Distribution" beginning on page 14 of this prospectus.

Our common stock is listed on The Nasdaq Capital Market under the symbol "CLBS." The last reported sale price of our common stock on January 28, 2021 was \$2.04 per share.

Investing in our common stock is highly speculative and involves a significant degree of risk. Please consider carefully the specific factors set forth under "Risk Factors" beginning on page 5 of this prospectus and in our filings with the Securities and Exchange Commission.

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

The date of this prospectus is _____, 2021

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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 shares of our common stock 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 shares of common stock 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 documents incorporated by reference therein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under "Where You Can Find Additional Information" and "Information Incorporated by Reference" in this prospectus.

We have not authorized anyone to give any information or to make any representation to you 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 shares of common stock other than the shares of our common stock 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.

Unless we have indicated otherwise, or the context otherwise requires, references in this prospectus to "Caladrius," the "Company," "we," "us" and "our" refer to Caladrius Biosciences, Inc.

PROSPECTUS SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. It does not contain all the information you should consider before investing in our securities. Important information is incorporated by reference into this prospectus. To understand this offering fully, you should read carefully the entire prospectus, including "Risk Factors" and "Special Note Regarding Forward-Looking Statements," together with the additional information described under "Information Incorporated by Reference."

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. The Company is developing first-in-class therapeutics based on the characteristics of naturally occurring CD34+ cells and their ability to stimulate the growth of new microvasculature. The Company's technology leverages these cells to enable the body's natural repair mechanisms using formulations unique to each medical indication.

The Company's leadership team has decades of collective biopharmaceutical development experience and world-recognized scientific achievement in the field of cardiovascular disease, among other therapeutic areas. Its goal is to develop and commercialize products that address important unmet medical needs based on a broad and versatile portfolio of candidates. The Company's current product candidates include HONEDRA[®] (formerly known as CLBS12), recipient of SAKIGAKE designation and eligible for early conditional approval in Japan for the treatment of critical limb ischemia ("CLI") and Buerger's Disease (a subset of CLI with an orphan population) based on the results of an ongoing clinical trial; OLOGO[™] (formerly known as CLBS14), a Regenerative Medicine Advanced Therapy ("RMAT") designated therapy for which the Company remains in discussion with the U.S. Food and Drug Administration (the "FDA") regarding the size and scope of a protocol for a Phase 3 confirmatory trial in subjects with no-option refractory disabling angina ("NORDA"); CLBS16, the subject of a recently initiated Phase 2b clinical trial in the U.S. (FREEDOM trial) for the treatment of coronary microvascular dysfunction ("CMD"); and CLBS201, a CD34+ cell therapy being explored as a potential treatment for moderate to severe chronic kidney disease ("CKD").

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 at the level of the microvasculature. No other native cell discovered to date has demonstrated this same capability.

The Company's 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, the Company seeks to promote the development and formation of new microvasculature and thereby increase blood flow to the impacted area. Caladrius believes that a number of conditions caused by underlying ischemic injury can be improved through its CD34+ cell technology, including but not limited to, CLI, CMD and NORDA and CKD.

HONEDRA[®] for Treatment of Critical Limb Ischemia

The Company's randomized and open-label, registration-eligible study of HONEDRA[®] in Japan for the treatment of CLI, a disease with limited therapeutic options and a higher combined incidence and mortality rate than all cancers but 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 has been slowed by the pandemic's impact in Japan, the Company is encouraged by the patient pre-screening pipeline that has been identified and hopes to conclude trial enrollment during the second quarter of 2021. While the final outcome of the trial will depend on all data from all subjects, data, to date, are very encouraging.

OLOGO™ for Treatment of No Option Refractory Disabling Angina

The Company 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 OLOGO™ 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. The Company remains in discussion with the FDA regarding the size and scope of a phase 3 trial which, in combination with previously filed Phase 1, 2 and 3 data, will be considered for the registration of OLOGO™. Notably, the RMAT designation affords the product a 6-month review time for a biologics license application (“BLA”), once submitted.

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), Caladrius initiated its program for CLBS16 for the treatment of coronary microvascular dysfunction (“CMD”), a disease that afflicts millions of patients with no current targeted treatment options. That study, the ESCaPE-CMD trial, was a Phase 2a 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, the Company 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 set from that study was presented at the SCAI 2020 Scientific Sessions Virtual Conference on May 14, 2020 by Dr. Timothy Henry FACC of the Christ Hospital in Cincinnati, Ohio. In December 2020, Caladrius commenced enrollment in its Phase 2b FREEDOM trial of CLBS16 as a therapy for CMD. . The first patient in the study was subsequently treated in January 2021 at The Christ Hospital Health Network in Cincinnati, Ohio. This 105-patient double-blind randomized and placebo-controlled clinical trial (FREEDOM trial) is designed to further evaluate the efficacy and safety of intracoronary delivery of autologous CD34+ cells in subjects with CMD and without obstructive coronary artery disease.

CLBS201 for Treatment of Chronic Kidney Disease

The Company is planning to file an IND for the clinical study of CLBS201, a CD34+ investigational product for administration into the renal arteries to slow the deterioration or reverse the decline of renal function in patients with chronic kidney disease who exhibit rapidly progressive disease. Progressive kidney failure is associated with attrition of the microcirculation of the kidney. Pre-clinical studies in kidney disease and injury models have demonstrated that protection or replenishment of the microcirculation results in improved kidney function. A Phase 2 proof of concept study that is a randomized, placebo-controlled study is being considered for initiation in the 2nd half of 2021.

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. Despite the FDA approval of multiple COVID-19 vaccines in late 2020, there remains uncertainty around the extent and duration of disruption, 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.

THE OFFERING

Shares of Common Stock that May be Offered by the Selling Stockholders -

Up to 18,750,000 shares of common stock.

Use of Proceeds

We will not receive any proceeds from the sale of the common stock by the selling stockholders. However, if all of the Warrants were exercised for cash, we would receive gross proceeds of approximately \$18.125 million. We currently intend to use such proceeds, if any, for working capital and general corporate purposes, including, but not limited to the clinical advancement of our CD34+ cell technology- based clinical programs.

Offering Price

The selling stockholders may sell all or a portion of their shares through public or private transactions at prevailing market prices or at privately negotiated prices.

Nasdaq Capital Market Symbol

CLBS

Risk Factors

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 5 of this prospectus, and any other risk factors described in the documents incorporated by reference herein, for a discussion of certain factors to consider carefully before deciding to invest in our common stock.

Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders for offer and sale, we are referring to the shares of common stock sold to the selling stockholders, as well as the shares of common stock issuable upon exercise of the Warrants, each as described under "The Private Placement" and "Selling Stockholders." When we refer to the selling stockholders in this prospectus, we are referring to the selling stockholders identified in this prospectus and, as applicable, their donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider and evaluate all of the information contained in this prospectus, the accompanying prospectus and in the documents that we incorporate by reference into this prospectus and accompanying prospectus before you decide to purchase our securities. In particular, you should carefully consider and evaluate the risks and uncertainties described under the heading "Risk Factors" in our [Annual Report on Form 10-K for the fiscal year ended December 31, 2019](#). Any of the risks and uncertainties set forth in that report, as updated by annual, quarterly and other reports and documents that we file with the SEC and incorporate by reference into this prospectus or any prospectus, could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the value of any securities offered by this prospectus. As a result, you could lose all or part of your investment.

THE PRIVATE PLACEMENT

On January 21, 2021, we entered into the Purchase Agreement with the Investors pursuant to which we issued and sold, in a private placement (the "Offering"), 12,500,000 shares of the Company's common stock at a purchase price of \$2.00 per share (the "Shares") and warrants to purchase up to 6,250,000 shares of common stock at an exercise price of \$2.90 per share (the "Warrants"). The Warrants are exercisable immediately from the date of issuance and expire five and one-half years from the date of issuance.

In connection with the Offering, we entered into a Registration Rights Agreement (the "Registration Rights Agreement") with the Investors, pursuant to which we are obligated, among other things, to (i) file a registration statement with the SEC following the closing of the Offering for purposes of registering the Shares and the shares of common stock issuable upon exercise of the Warrants for resale by the Investors by January 31, 2021, (ii) use its reasonable best efforts to have the registration statement declared effective promptly after filing, and in any event no later than forty (40) days after the closing of the Offering (or ninety (90) days after the closing of the Offering if the registration statement is reviewed by the SEC), and (iii) maintain the registration until all registrable securities (a) have been sold pursuant to this registration statement or Rule 144 under the Securities Act or (b) may be sold pursuant to Rule 144 under the Securities Act, without restriction as to volume. The Registration Rights Agreement contains customary terms and conditions for a transaction of this type, including certain customary cash penalties on the Company for its failure to satisfy specified filing and effectiveness time periods.

The foregoing descriptions of the Purchase Agreement, the Registration Rights Agreement and the form of Warrant are not complete and are subject to and qualified in their entirety by reference to the Purchase Agreement, the Registration Rights Agreement and the form of Warrant, respectively, copies of which are attached as Exhibits 10.1, 10.2 and 4.1, respectively, to the Current Report on Form 8-K dated January 25, 2021, and are incorporated herein by reference.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus 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 the common stock by the selling stockholders named in this prospectus. The selling stockholders will receive all of the proceeds from this offering.

Pursuant to conditions set forth in the Warrants, the Warrants are exercisable under certain circumstances on a cashless basis, and should a selling stockholder elect to exercise on a cashless basis we will not receive any proceeds from the sale of common stock issued upon the cashless exercise of the Warrant. The holders of the Warrants are not obligated to exercise their Warrants, and we cannot predict whether holders of the Warrants will choose to exercise all or any of their Warrants or if they will do so for cash or on a cashless basis. However, if all of the Warrants were exercised for cash, we would receive gross proceeds of approximately \$18.125 million. We currently intend to use such proceeds, if any, for working capital and general corporate purposes, including, but not limited to the advancement of our CD34+ technology-based clinical programs.

SELLING STOCKHOLDERS

The common stock being offered by the selling stockholders are those previously issued to the selling stockholders, and those issuable to the selling stockholders, upon exercise of the warrants. For additional information regarding the issuances of those shares of common stock and warrants, see “The 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. Except for the ownership of the shares of common stock and the warrants, the selling stockholders have not had any material relationship with us within the past three years.

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 and warrants, as of January 29, 2021, assuming exercise of the warrants held by the selling stockholders on that date, without regard to any limitations on exercises.

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 (i) the number of shares of common stock issued to the selling stockholders in the “The Private Placement” described above and (ii) the maximum number of shares of common stock issuable upon exercise of the related warrants, determined as if the outstanding warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the registration right agreement, without regard to any limitations on the exercise of the warrants. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of the warrants, a selling stockholder may not exercise the warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 4.99% (or for certain holders, 9.99%) of our then outstanding common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. The number of shares in the second column does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

Name of Selling Stockholder	Number of Shares of Common Stock Beneficially Owned Prior to Offering	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Number of Shares of Common Stock Beneficially Owned After Offering	
			Number	%
MMCAP International Inc. SPC (2)	3,000,000	3,000,000	0	*
Armistice Capital Master Fund Ltd. (3)	3,000,000	3,000,000	0	*
Empery Asset Master, LTD (4)	1,578,528	1,323,252	255,276	*
Empery Tax Efficient, LP (5)	359,821	287,577	72,244	*
Empery Tax Efficient III, LP (6)	842,528	639,171	203,357	*
Bigger Capital Fund, LP (7)	750,000	750,000	0	*
District 2 Capital Fund LP (8)	750,000	750,000	0	*
Anson Investments Master Fund LP (9)	1,125,000	1,125,000	0	*
Anson East Master Fund LP (10)	375,000	375,000	0	*
Sabby Volatility Warrant Master Fund, Ltd. (11)	1,760,606	1,500,000	260,606	*
Intracoastal Capital, LLC (12)	1,312,500	1,312,500	0	*
BPY Limited (13)	450,000	450,000	0	*
Nomis Bay Ltd (14)	675,000	675,000	0	*
3i, LP (15)	1,125,000	1,125,000	0	*
Cavalry Fund I LP (16)	375,000	375,000	0	*
Cavalry Special Ops Fund, LLC (17)	375,000	375,000	0	*
Iroquois Master Fund Ltd. (18)	500,000	500,000	0	*
Iroquois Capital Investment Group LLC (19)	250,001	250,001	0	*
Lincoln Park Capital Fund, LLC (20)	1,093,378	562,500	530,878	1.61%
CVI Investments, Inc. (21)	225,000	225,000	0	*
Kingsbrook Opportunities Master Fund LP (22)	75,000	75,000	0	*
Boothbay Diversified Alpha Master Fund, LP (23)	25,320	25,320	0	*
Boothbay Absolute Return Strategies LP (24)	49,680	49,680	0	*

*Less than one percent

- (1) Based on a denominator equal to the sum of (i) 32,966,475 shares of our common stock outstanding on January 29, 2021 and (ii) the number of shares of our common stock issuable upon exercise or conversion of convertible securities that are currently exercisable or convertible or are exercisable or convertible within 60 days of January 29, 2021 beneficially owned by the applicable selling stockholder.
- (2) Consists of (i) 2,000,000 shares of common stock held by the selling stockholder and (ii) 1,000,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. MM Asset Management Inc. is the investment advisor to MMCAP International Inc. SPC. Matthew MacIsaac is the Secretary of MM Asset Management Inc. and has voting and investment control of the shares held by MMCAP International Inc. SPC. The address of MMCAP International Inc. SPC is c/o MM Asset Management Inc., 161 Bay St. TD Canada Trust Tower Ste 2240, Toronto, Ontario, M5J 2S1.
- (3) Consists of (i) 2,000,000 shares of common stock held by the selling stockholder and (ii) 1,000,000 shares of common stock issuable upon the exercise of Warrants subject to certain beneficial ownership limitations held by the selling stockholder. The shares are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the "Master Fund"), and may be deemed to be indirectly beneficially owned by: (i) Armistice Capital, LLC ("Armistice Capital"), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. Armistice Capital and Steven Boyd disclaim beneficial ownership of the shares except to the extent of their respective pecuniary interests therein. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.
- (4) Consists of (i) 882,168 shares of common stock held by the selling stockholder and (ii) 696,360 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. 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. The selling stockholder's address is c/o Empery Asset Management, LP, One Rockefeller Plaza, Suite 1205, New York, NY 10020.
- (5) Consists of (i) 191,718 shares of common stock held by the selling stockholder and (ii) 168,103 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. 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. The selling stockholder's address is c/o Empery Asset Management, LP, One Rockefeller Plaza, Suite 1205, New York, NY 10020.

- (6) Consists of (i) 426,114 shares of common stock held by the selling stockholder and (ii) 416,414 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. 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 Empery Tax Efficient III, LP 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. The selling stockholder’s address is c/o Empery Asset Management, LP, One Rockefeller Plaza, Suite 1205, New York, NY 10020.
- (7) Consists of (i) 500,000 shares of common stock held by the selling stockholder and (ii) 250,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Bigger Capital, LLC is the investment manager of Bigger Capital Fund, LP. Mr. Michael Bigger is a managing partner of Bigger Capital GP, LLC and has sole voting and investment power over the shares. Bigger Capital GP, LLC and Mr. Bigger may be deemed to beneficially own the shares beneficially held by Bigger Capital Fund, LP. The principal business address of Bigger Capital Fund, LP is 11434 Glowing Sunset, Las Vegas, NV 89135.
- (8) Consists of (i) 500,000 shares of common stock held by the selling stockholder and (ii) 250,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Michael Bigger and Eric Schlanger are Managing Members of District 2 GP LLC, which is the general partner of District 2 Capital Fund LP, and, in such capacity, may be deemed to have voting and dispositive power over the shares held by District 2 Capital Fund LP. The address of the foregoing individuals and entities is 175 W. Carver St., Huntington, NY 11743.
- (9) Consists of (i) 750,000 shares of common stock held by the selling stockholder and (ii) 375,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP (“Anson Investments Master Fund”), hold voting and dispositive power over the shares held by Anson Investments Master Fund. Bruce Winson is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Winson, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these shares except to the extent of their pecuniary interest therein. The principal business address of Anson is Walkers Corporate Limited, Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands.
- (10) Consists of (i) 250,000 shares of common stock held by the selling stockholder and (ii) 125,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson East Master Fund LP (“Anson East”), hold voting and dispositive power over the shares held by Anson East. Bruce Winson is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Winson, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these shares except to the extent of their pecuniary interest therein. The principal business address of Anson is Walkers Corporate Limited, Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands.
- (11) Consists of (i) 1,000,000 shares of common stock held by the selling stockholder and (ii) 760,606 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Sabby Management, LLC is the investment manager of Sabby Volatility Warrant Master Fund, Ltd. and shares voting and investment power with respect to these shares in this capacity. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of Sabby Volatility Warrant Master Fund, Ltd. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the shares except to the extent of their pecuniary interest therein. The address of principal business office of Sabby Volatility Warrant Master Fund, Ltd., Sabby Management, LLC and Hal Mintz is 10 Mountainview Road, Suite 205, Upper Saddle River, New Jersey 07458.

- (12) Consists of (i) 875,000 shares of common stock held by the selling stockholder and (ii) 437,500 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Mitchell P. Kopin and Daniel B. Asher, each of whom are Managers of Intracoastal Capital, LLC (“Intracoastal”), have shared voting control and investment discretion over the shares that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of the shares that are held by Intracoastal. The address for Intracoastal Capital, LLC is 245 Palm Trail, Delray Beach, FL 33483.
- (13) Consists of (i) 300,000 shares of common stock held by the selling stockholder and (ii) 150,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Peter Poole is the Director of BPY and may be deemed to beneficially own such shares. The address for BPY Limited is Wessex House, 3rd Floor, 45 Reid Street, Hamilton, Bermuda HM 12.
- (14) Consists of (i) 450,000 shares of common stock held by the selling stockholder and (ii) 225,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Peter Poole is the Director of the selling stockholder and may be deemed to beneficially own such shares. The address for BPY Limited is Wessex House, 3rd Floor, 45 Reid Street, Hamilton, Bermuda HM 12.
- (15) Consists of (i) 750,000 shares of common stock held by the selling stockholder and (ii) 375,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Voting and investment power over the shares is held by 3i Management LLC, the general partner of 3i, LP. Maier Joshua Tarlow is the Manager of 3i Management LLC. The selling stockholder’s address is 140 Broadway, 38 Floor, New York, New York 10005.
- (16) Consists of (i) 250,000 shares of common stock held by the selling stockholder and (ii) 125,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Thomas Walsh is the managing member of Cavalry Fund I Management LLC, which is the general partner of Cavalry Fund I LP. As such, Mr. Walsh has voting control and investment discretion over the shares and may be deemed to be the beneficial owner thereof. The selling stockholder’s address is 82 East Allendale Road, Suite 5B, Saddle River NJ 07458.
- (17) Consists of (i) 250,000 shares of common stock held by the selling stockholder and (ii) 125,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Thomas Walsh is the managing member of Cavalry Fund I Management LLC, which is the general partner of Cavalry Special Ops Fund, LLC. As such, Mr. Walsh has voting control and investment discretion over the shares and may be deemed to be the beneficial owner thereof. The selling stockholder’s address is 82 East Allendale Road, Suite 5B, Saddle River NJ 07458.
- (18) Consists of (i) 333,333 shares of common stock held by the selling stockholder (“Iroquois Master Fund”) and (ii) 166,667 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Iroquois Capital Management L.L.C. is the investment manager of Iroquois Master Fund, Ltd. Iroquois Capital Management, LLC has voting control and investment discretion over securities held by Iroquois Master Fund. As Managing Members of Iroquois Capital Management, LLC, Richard Abbe and Kimberly Page make voting and investment decisions on behalf of Iroquois Capital Management, LLC in its capacity as investment manager to Iroquois Master Fund Ltd. As a result of the foregoing, Mr. Abbe and Mrs. Page may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of the shares held by Iroquois Capital Management and Iroquois Master Fund. The selling stockholder’s address is 125 Park Avenue, 25th Floor, New York, New York 10017.
- (19) Consists of (i) 166,667 shares of common stock held by the selling stockholder and (ii) 83,334 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Richard Abbe is the managing member of Iroquois Capital Investment Group LLC. Mr. Abbe has voting control and investment discretion over securities held by Iroquois Capital Investment Group LLC. As such, Mr. Abbe may be deemed to be the beneficial owner (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) of the shares held by Iroquois Capital Investment Group LLC. The selling stockholder’s address is 125 Park Avenue, 25th Floor, New York, New York 10017.

- (20) Consists of (i) 375,000 shares of common stock held by the selling stockholder and (ii) 718,378 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Lincoln Park Capital, LLC is the managing member of Lincoln Park Capital Fund, LLC. Rockledge Capital Corporation and Alex Noah Investors, Inc. are the managing members of Lincoln Park Capital, LLC. Joshua Scheinfeld is the president and sole shareholder of Rockledge Capital Corporation, as well as a principal of Lincoln Park Capital, LLC. Jonathan Cope is the president and sole shareholder of Alex Noah Investors, Inc., as well as a principal of Lincoln Park Capital, LLC. As a result of the foregoing, Mr. Scheinfeld and Mr. Cope have shared voting and shared investment power over the shares held directly by Lincoln Park Capital Fund, LLC. The principal address of Lincoln Park Capital Fund, LLC is 440 N. Wells St., Suite 410, Chicago, IL 60654.
- (21) Consists of (i) 150,000 shares of common stock held by the selling stockholder and (ii) 75,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. ("CVI"), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. CVI is affiliated with one or more FINRA members. CVI purchased the shares being registered hereunder in the ordinary course of business and at the time of purchase, had no agreements or understandings, directly or indirectly, with any other person to distribute such shares. The address of the principal business office of CVI Investments, Inc. is c/o Heights Capital Management, Inc. 101 California Street, Suite 3250, San Francisco, CA 94111.
- (22) Consists of (i) 50,000 shares of common stock held by the selling stockholder and (ii) 25,000 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Kingsbrook Partners LP ("Kingsbrook Partners") is the investment manager of Kingsbrook Opportunities Master Fund LP ("Kingsbrook Opportunities") and consequently has voting control and investment discretion over securities held by Kingsbrook Opportunities. Kingsbrook Opportunities GP LLC ("Opportunities GP") is the general partner of Kingsbrook Opportunities and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Opportunities. KB GP LLC ("GP LLC") is the general partner of Kingsbrook Partners and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Partners. Ari J. Storch, Adam J. Chill and Scott M. Wallace are the sole managing members of Opportunities GP and GP LLC and as a result may be considered beneficial owners of any securities deemed beneficially owned by Opportunities GP and GP LLC. Each of Kingsbrook Partners, Opportunities GP, GP LLC and Messrs. Storch, Chill and Wallace disclaim beneficial ownership of these securities. The address of Kingsbrook Opportunities Master Fund LP is 689 Fifth Avenue, 12th Floor, New York, NY 10022.
- (23) Consists of (i) 16,880 shares of common stock held by the selling stockholder and (ii) 8,440 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Boothbay Fund Management, LLC acts as investment adviser to the selling stockholder and has the power to vote and the power to direct disposition of all securities held by the selling stockholder. Ari Glass is the founding partner and managing member of Boothbay Fund Management, LLC. The address of the selling stockholder is c/o Boothbay Fund Management, LLC, 140 E 45th Street, 14th Floor, New York, New York 10017.
- (24) Consists of (i) 33,120 shares of common stock held by the selling stockholder and (ii) 16,560 shares of common stock issuable upon the exercise of Warrants held by the selling stockholder. Boothbay Fund Management, LLC acts as investment adviser to the selling stockholder and has the power to vote and the power to direct disposition of all securities held by the selling stockholder. Ari Glass is the founding partner and managing member of Boothbay Fund Management, LLC. The address of the selling stockholder is c/o Boothbay Fund Management, LLC, 140 E 45th Street, 14th Floor, New York, New York 10017.

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 any or all of their securities hereby on the principal trading 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. The selling stockholders 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 transaction through broker-deals 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 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 securities, from the purchaser) in amounts to be negotiated, but except as set forth in a supplement to this prospectus, in the case of any 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.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. 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).

LEGAL MATTERS

The validity of the shares of common stock offered in this prospectus has been passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York.

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 ADDITIONAL 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.

INFORMATION INCORPORATED 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):

- [Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed on March 5, 2020](#) (including information specifically incorporated by reference therein from our [Proxy Statement filed with the SEC on April 29, 2020](#));
- [Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2020, filed on May 7, 2020](#);
- [Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020, filed on August 13, 2020](#);
- [Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2020, filed on November 5, 2020](#);
- Current Reports on Form 8-K filed on [April 22, 2020](#), [April 24, 2020](#), [May 26, 2020](#), [June 18, 2020](#), [July 10, 2020](#), [July 28, 2020](#), [August 5, 2020](#), [November 5, 2020](#), and [November 17, 2020](#); and
- [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.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses payable by the Registrant, in connection with the sale of the securities being registered under this registration statement. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee.

	Amount
SEC registration fee	\$ 4,132.16
Legal fees and expenses	\$ 25,000.00
Accounting fees and expenses	\$ 20,000.00
Total	<u>\$ 49,132.16</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 our director, officer, employee, agent or fiduciary.

Item 16. Exhibits and financial statement schedules.

(a) Exhibits.

See the Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(b) Financial statement schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 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 SEC 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.
- 2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- 3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- 4) That for 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.

5) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities, other than the payment by the registrant of expenses incurred and paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding, is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

(b) Each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

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 January 29, 2021.

CALADRIUS BIOSCIENCES, INC.

By: /s/ David J. Mazzo

David J. Mazzo, Ph.D.

President and Chief Executive Officer

(Principal Executive Officer)

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints David Mazzo and Todd Girolamo, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their 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 by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ David J. Mazzo</u> David J. Mazzo, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	January 29, 2021
<u>/s/ Gregory B. Brown</u> Gregory B. Brown, M.D.	Chairman of the Board of Directors	January 29, 2021
<u>/s/ Steven S. Myers</u> Steven S. Myers	Director	January 29, 2021
<u>/s/ Steven M. Klosk</u> Steven M. Klosk	Director	January 29, 2021
<u>/s/ Peter G. Traber</u> Peter G. Traber, M.D.	Director	January 29, 2021
<u>/s/ Cynthia Schwalm</u> Cynthia Schwalm	Director	January 29, 2021
<u>/s/ Michael H. Davidson</u> Michael H. Davidson, M.D.	Director	January 29, 2021
<u>/s/ Anne Whitaker</u> Anne Whitaker	Director	January 29, 2021

EXHIBIT INDEX

Exhibit Number	Description
4.1	Form of Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on January 25, 2021).
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1	Securities Purchase Agreement, dated January 21, 2021, by and among the Company and the Investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on January 25, 2021).
10.2	Registration Rights Agreement, dated January 21, 2021, by and among the Company and the Investors (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on January 25, 2021).
23.1*	Consent of Grant Thornton LLP.
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (contained in Exhibit 5.1 hereto).
24.1*	Powers of Attorney (included in the signature page of this registration statement).

* Filed herewith.



Chrysler Center
666 Third Avenue
New York, NY 10017
212 935 3000
mintz.com

January 29, 2021

Caladrius Biosciences, Inc.
110 Allen Road, 2nd Floor
Basking Ridge, NJ 07920

Ladies and Gentlemen:

We have acted as legal counsel to Caladrius Biosciences, Inc., a Delaware corporation (the “Company”), in connection with the preparation and filing with the Securities and Exchange Commission (the “Commission”) of a Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Securities Act”). The Registration Statement relates to the registration for resale by the selling stockholders named in the Registration Statement (the “Selling Stockholders”) of up to an aggregate of 18,750,000 shares of the Company’s common stock, \$0.001 par value per share (“Common Stock”), consisting of (i) 12,500,000 shares of Common Stock issued to the Selling Stockholders on January 25, 2021 (the “Shares”) and (ii) 6,250,000 shares of Common Stock issuable upon the exercise of certain outstanding warrants (the “Warrants”) issued by the Company to the Selling Stockholders on January 25, 2021 (the “Warrant Shares”). This opinion is being rendered in connection with the filing of the Registration Statement with the Commission.

In connection with this opinion, we have examined and relied upon the Certificate of Incorporation and Bylaws of the Company, each as restated and/or amended to date, and such other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies.

Our opinion is limited to the general corporate laws of the State of Delaware 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 or the Warrant Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

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.

Based upon the foregoing, we are of the opinion that (i) the Shares are validly issued, fully paid and non-assessable and (ii) the Warrant Shares, when issued and delivered upon the exercise of the Warrants in accordance with their terms, will be validly issued, fully paid and non-assessable. 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 prospectus which forms part of 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 and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

BOSTON

LONDON

LOS ANGELES

NEW YORK

SAN DIEGO

SAN FRANCISCO

WASHINGTON

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

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 5, 2020 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, 2019, which is 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".

/s/ GRANT THORNTON LLP
New York, New York
January 29, 2021
