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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

- ☐ Preliminary Proxy Statement
- ☐ **Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- ☒ Definitive Proxy Statement
- ☐ Definitive Additional Materials
- ☐ Soliciting Material under §240.14a-12

AXCELLA HEALTH INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- ☒ No fee required.
- ☐ Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - (1) Title of each class of securities to which transaction applies:

 - (2) Aggregate number of securities to which transaction applies:

 - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

 - (4) Proposed maximum aggregate value of transaction:

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- ☐ Fee paid previously with preliminary materials.
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 - (1) Amount Previously Paid:

 - (2) Form, Schedule or Registration Statement No.:

 - (3) Filing Party:

 - (4) Date Filed:



AXCELLA HEALTH INC.

**840 Memorial Drive
Cambridge, Massachusetts 02139**

NOTICE OF 2020 ANNUAL MEETING OF STOCKHOLDERS

To be held May 20, 2020

Notice is hereby given that the 2020 Annual Meeting of Stockholders, or Annual Meeting, of Axcella Health Inc., which will be held on May 20, 2020 at 9:00 A.M. Eastern Time at the offices of Goodwin Procter LLP, 100 Northern Avenue, Boston, MA 02210. The purpose of the Annual Meeting is the following:

1. To elect one Class I director to our board of directors, to serve until the 2023 annual meeting of stockholders and until his or her successor has been duly elected and qualified, or until his or her earlier death, resignation or removal;
2. To ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020; and
3. To transact any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

The proposal for the election of the director relates solely to the election of the Class I director nominated by the board of directors.

Only Axcella Health Inc. stockholders of record at the close of business on March 27, 2020, will be entitled to vote at the Annual Meeting and any adjournment or postponement thereof.

We are pleased to take advantage of Securities and Exchange Commission rules that allow companies to furnish their proxy materials over the Internet. We are mailing to our stockholders a Notice of Internet Availability of Proxy Materials, or Notice, instead of a paper copy of our proxy materials and our 2019 Annual Report to Stockholders, or 2019 Annual Report. The Notice contains instructions on how to access those documents and to cast your vote via the Internet. The Notice also contains instructions on how to request a paper copy of our proxy materials and our 2019 Annual Report. This process allows us to provide our stockholders with the information they need on a more timely basis, while reducing the environmental impact and lowering the costs of printing and distributing our proxy materials.

Your vote is important. Whether or not you are able to attend the meeting in person, it is important that your shares be represented. To ensure that your vote is recorded promptly, please vote as soon as possible, even if you plan to attend the meeting, by submitting your proxy via the Internet at the address listed on the proxy card or by signing, dating and returning the proxy card.

We intend to hold our annual meeting in person. However, we are actively monitoring COVID-19 and are sensitive to the public health and travel concerns our shareholders may have and the protocols that federal, state, and local governments may impose. In the event it is not possible or advisable to hold our annual meeting in person, we will announce alternative arrangements for the meeting as promptly as practicable, which may include holding the meeting solely by means of remote communication. Please monitor our annual meeting website at www.edocumentview.com/AXLA for updated information. If you are planning to attend our annual meeting, please check the website one week prior to the meeting date. As always, we encourage you to vote your shares prior to the annual meeting.

By order of the board of directors,

/s/ WILLIAM HINSHAW

William Hinshaw
President and Chief Executive Officer

Cambridge, Massachusetts
April 3, 2020

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AXCELLA HEALTH INC.

**840 Memorial Drive
Cambridge, Massachusetts 02139**

**PROXY STATEMENT
FOR THE 2020 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD MAY 20, 2020**

This proxy statement contains information about the 2020 Annual Meeting of Stockholders, or the Annual Meeting, of Axcella Health Inc., which will be held on May 20, 2020 at 9:00 A.M. Eastern Time. The board of directors of Axcella Health Inc. is using this proxy statement to solicit proxies for use at the Annual Meeting. In this proxy statement, the terms "Axcella," "we," "us," and "our" refer to Axcella Health Inc. The mailing address of our principal executive offices is Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of our board of directors with respect to each of the matters set forth in the accompanying Notice (as defined below). You may revoke your proxy at any time before it is exercised at the meeting by giving our Corporate Secretary written notice to that effect.

We are mailing to our stockholders a Notice of Internet Availability of Proxy Materials, or Notice, on or about April 3, 2020.

We are an "emerging growth company" under applicable federal securities laws and therefore permitted to conform with certain reduced public company reporting requirements. As an emerging growth company, we provide in this proxy statement the scaled disclosure permitted under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). In addition, as an emerging growth company, we are not required to conduct votes seeking approval, on an advisory basis, of the compensation of our named executive officers or the frequency with which such votes must be conducted. We will remain an "emerging growth company" until the earliest of (i) the last day of the fiscal year following the fifth anniversary of our initial public offering in May 2019; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.07 billion; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission.

**Important Notice Regarding the Availability of Proxy Materials for
the Annual Meeting of Stockholders to be Held on May 20, 2020:**

**This proxy statement and our 2019 Annual Report to Stockholders, or 2019 Annual Report, are
available for viewing, printing and downloading www.edocumentview.com/AXLA.**

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as filed with the Securities and Exchange Commission (SEC) on March 23, 2020, except for exhibits, will be furnished without charge to any stockholder upon written request to Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. This proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 are also available on the SEC's website at www.sec.gov.

**AXCELLA HEALTH INC.
PROXY STATEMENT
FOR THE 2020 ANNUAL MEETING OF STOCKHOLDERS
GENERAL INFORMATION**

When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?

We have elected to provide access to our proxy materials to our stockholders via the Internet. Accordingly, on or about April 3, 2020, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice. Our proxy materials, including the Notice of 2020 Annual Meeting of Stockholders, this proxy statement and the accompanying proxy card or, for shares held in street name (i.e. held for your account by a broker or other nominee), a voting instruction form, and the 2019 Annual Report to Stockholders, or 2019 Annual Report, will be made available to stockholders on the Internet on or about the same date.

Why did I receive a Notice of Internet Availability of Proxy Materials instead of a full set of proxy materials?

Pursuant to rules adopted by the Securities and Exchange Commission, or SEC, for most stockholders, we are providing access to our proxy materials over the Internet rather than printing and mailing our proxy materials. We believe following this process will expedite the receipt of such materials and will help lower our costs and reduce the environmental impact of our annual meeting materials. Therefore, the Notice was mailed to holders of record and beneficial owners of our common stock, \$0.001 par value per share, as of the record date starting on or about April 3, 2020. The Notice provides instructions as to how stockholders may access and review our proxy materials, including the Notice of 2020 Annual Meeting of Stockholders, this proxy statement, the proxy card and our 2019 Annual Report, on the website referred to in the Notice or, alternatively, how to request that a copy of the proxy materials, including a proxy card, be sent to them by mail. The Notice also provides voting instructions. In addition, stockholders of record may request to receive the proxy materials in printed form by mail or electronically by e-mail on an ongoing basis for future stockholder meetings. Please note that, while our proxy materials are available at the website referenced in the Notice, and our Notice of 2020 Annual Meeting of Stockholders, this proxy statement and our 2019 Annual Report are available on our website, no other information contained on either website is incorporated by reference in or considered to be a part of this proxy statement.

Who is soliciting my vote?

Our board of directors is soliciting your vote for the Annual Meeting.

When is the record date for the Annual Meeting?

The record date for determination of stockholders entitled to vote at the Annual Meeting is the close of business on March 27, 2020.

How many votes can be cast by all stockholders?

There were 23,188,816 shares of our common stock, par value \$0.001 per share, outstanding as of the close of business on March 27, 2020, all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting. Each stockholder of record is entitled to one vote for each share of our common stock held by such stockholder. None of our shares of undesignated preferred stock were outstanding as of March 27, 2020.

How do I vote?

If you are a stockholder of record, you can vote in one of the following ways:

- ***In Person.*** You may vote in person at the Annual Meeting. We will give you a ballot when you arrive. If you hold your shares through a bank or broker and wish to vote in person at the meeting, you must obtain a valid proxy from the firm that holds your shares.
- ***By Internet.*** You can vote by proxy over the Internet by following the instructions provided in the Notice. In order to be counted, proxies submitted by Internet must be received by the cutoff time of 11:59 p.m. Eastern Time on Tuesday, May 19, 2020.
- ***By Mail.*** If you requested printed copies of the proxy materials by mail, you can vote by mailing your proxy as described in the proxy materials. Proxies submitted by mail must be received before the start of the Annual Meeting.
- ***By Telephone.*** You may vote using a touch-tone telephone by calling 1-800-652-VOTE (8683). You will need the 16-digit control number included on your Notice. Votes submitted by telephone must be received by 11:59 p.m. Eastern Time on Tuesday, May 19, 2020.

If you complete and submit your proxy before the Annual Meeting, the persons named as proxies will vote the shares represented by your proxy in accordance with your instructions. If you submit a proxy without giving voting instructions, your shares will be voted in the manner recommended by the board of directors on all matters presented in this proxy statement, and as the persons named as proxies may determine in their discretion with respect to any other matters properly presented at the Annual Meeting. You may also authorize another person or persons to act for you as proxy in a writing, signed by you or your authorized representative, specifying the details of those proxies' authority. The original writing must be given to each of the named proxies, although it may be sent to them by electronic transmission if, from that transmission, it can be determined that the transmission was authorized by you.

If any other matters are properly presented for consideration at the Annual Meeting, including, among other things, consideration of a motion to adjourn the Annual Meeting to another time or place (including, without limitation, for the purpose of soliciting additional proxies), the persons named in your proxy and acting thereunder will have discretion to vote on those matters in accordance with their best judgment. We do not currently anticipate that any other matters will be raised at the Annual Meeting.

How do I revoke my proxy?

You may revoke your proxy by (1) following the instructions on the Notice and entering a new vote by mail that we receive before the start of the Annual Meeting or over the Internet by the cutoff time of 11:59 p.m. Eastern Time on Tuesday, May 19, 2020, (2) attending and voting at the Annual Meeting (although attendance at the Annual Meeting will not in and of itself revoke a proxy), or (3) by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with our Corporate Secretary. Any written notice of revocation or subsequent proxy card must be received by our Corporate Secretary prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be hand delivered to our Corporate Secretary or sent to our principal executive offices at Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

If a broker, bank, or other nominee holds your shares, you must contact such broker, bank, or nominee in order to find out how to change your vote.

How is a quorum reached?

Our Amended and Restated Bylaws, or bylaws, provide that a majority of the shares entitled to vote, present in person or represented by proxy, will constitute a quorum for the transaction of business at the Annual Meeting.

Under the General Corporation Law of the State of Delaware, shares that are voted "abstain" or "withheld" and broker "non-votes" are counted as present for purposes of determining whether a quorum is present at the Annual Meeting. If a quorum is not present, the meeting may be adjourned until a quorum is obtained.

How is the vote counted?

Under our bylaws, any proposal other than an election of directors is decided by a majority of the votes properly cast for and against such proposal, except where a larger vote is required by law or by our Restated Certificate of Incorporation, or certificate of incorporation, or bylaws. Abstentions and broker "non-votes" are not included in the tabulation of the voting results on any such proposal and, therefore, do not have an impact on such proposals. A broker "non-vote" occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that item, and has not received instructions from the beneficial owner.

If your shares are held in "street name" by a brokerage firm, your brokerage firm is required to vote your shares according to your instructions. If you do not give instructions to your brokerage firm, the brokerage firm will still be able to vote your shares with respect to certain "discretionary" items, but will not be allowed to vote your shares with respect to "non-discretionary" items. Proposal No. 1 is a "non-discretionary" item. If you do not instruct your broker how to vote with respect to this proposal, your broker may not vote for this proposal, and those votes will be counted as broker "non-votes." Proposal No. 2 is considered to be a "discretionary" item, and your brokerage firm will be able to vote on this proposal even if it does not receive instructions from you.

To be elected, the directors nominated via Proposal No. 1 must receive a plurality of the votes cast and entitled to vote on the proposal, meaning that the director nominees receiving the most votes will be elected. Shares voting "withheld" have no effect on the election of directors.

Who pays the cost for soliciting proxies?

We are making this solicitation and will pay the entire cost of preparing and distributing the Notice and our proxy materials and soliciting votes. If you choose to access the proxy materials or vote over the Internet, you are responsible for any Internet access charges that you may incur. Our officers and employees may, without compensation other than their regular compensation, solicit proxies through further mailings, personal conversations, facsimile transmissions, e-mails, or otherwise. We have hired Computershare Inc. to assist us in the distribution of proxy materials. Proxy solicitation expenses that we will pay include those for preparation, mailing, returning, and tabulating the proxies.

How may stockholders submit matters for consideration at an annual meeting?

The required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, or if no annual meeting were held in the preceding year, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders in 2020 must also satisfy the requirements of SEC Rule 14a-8 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and be received not later than January 21, 2020. If the date of the annual meeting is moved by more than 30 days from the date contemplated at the time of the previous year's proxy statement, then notice must be received within a reasonable time before we begin to print and send proxy materials. If that happens, we will publicly announce the deadline for submitting a proposal in a press release or in a document filed with the SEC.

How can I know the voting results?

We plan to announce preliminary voting results at the Annual Meeting and will publish final results in a Current Report on Form 8-K to be filed with the SEC within four business days following the Annual Meeting.

OVERVIEW OF PROPOSALS

This proxy statement contains two proposals requiring stockholder action. Proposal 1 requests the election of one Class I Director to the board of directors. Proposal 2 requests the ratification of the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020. Each of the proposals is discussed in more detail in the pages that follow.

PROPOSAL NO. 1—ELECTION OF CLASS I DIRECTOR

Our board of directors currently consists of nine members. In accordance with the terms of our certificate of incorporation and bylaws, our board of directors is divided into three classes, Class I, Class II and Class III, with members of each class serving staggered three-year terms. The members of the classes are divided as follows:

- the Class I directors are David R. Epstein and David A. Berry, M.D., Ph.D., and their terms will expire at the Annual Meeting;
- the Class II directors are Grégory Behar, Gary Pisano, Ph.D., and Cristina M. Rondinone, Ph.D., and their terms will expire at the annual meeting of stockholders to be held in 2021; and
- the Class III directors are William D. Baird III, William Hinshaw, Stephen Hoge, M.D., and Catherine A. Sohn, PharmD., and their terms will expire at the annual meeting of stockholders to be held in 2022.

Upon the expiration of the term of a class of directors, directors in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

Our certificate of incorporation and bylaws provide that the authorized number of directors may be changed only by resolution of our board of directors. Our certificate of incorporation also provides that our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds (2/3) of the outstanding shares then entitled to vote in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Our board of directors has nominated David R. Epstein for election as the Class I director at the Annual Meeting. The nominee is presently a director, and has indicated a willingness to continue to serve as director, if elected. If the nominee becomes unable or unwilling to serve, however, the proxies may be voted for a substitute nominee selected by our board of directors. David A. Berry, M.D., Ph.D., who is currently a Class I director, has not been nominated for re-election to the board of directors at the Annual Meeting, and his term will end as of the close of the Annual Meeting.

Nominees for Election as Class I Director

The following table identifies our director nominee, and sets forth his principal occupation and business experience during the last five years and his age as of April 3, 2020.

<u>Name</u>	<u>Positions and Offices Held with Axcella</u>	<u>Director Since</u>	<u>Age</u>
David R. Epstein	Director	2017	58

David R. Epstein has served as our Chairman and as a member of our board of directors since December 2017. Mr. Epstein has also served as Executive Partner at Flagship Pioneering Inc., a biotechnology venture creation firm, since January 2017. From January 2010 to July 2016, Mr. Epstein served as Chief Executive Officer of Novartis Pharmaceuticals Corporation, a pharmaceutical company. He currently serves on the boards of directors of International Flavors and Fragrances, Inc. (NYSE: IFF), Evelo Biosciences, Inc. (Nasdaq: EVLO) and of Rubius Therapeutics, Inc. (Nasdaq: RUBY), as Executive Chairman. Mr. Epstein holds an M.B.A. in finance and marketing from Columbia Business School and a B.S. in pharmacy from Rutgers University. We believe that Mr. Epstein's extensive experience serving in executive roles in the life sciences industry and leading the development and commercialization of numerous therapeutics qualify him to serve on our board of directors.

Vote Required and Board of Directors' Recommendation

To be elected, the director nominated via Proposal No. 1 must receive a plurality of the votes cast and entitled to vote on the proposal, meaning that the director nominee receiving the most votes will be elected. Shares voting "withheld" have no effect on the election of directors.

The proxies will be voted in favor of the above nominee unless a contrary specification is made in the proxy. The nominee has consented to serve as our directors if elected. However, if the nominee is unable to serve or for good cause will not serve as a director, the proxies will be voted for the election of such substitute nominee as our board of directors may designate.

The proposal for the election of directors relates solely to the election of Class I director nominated by our board of directors.

The board of directors recommends voting "FOR" the election of David R. Epstein as the Class I director, to serve for a three-year term ending at the annual meeting of stockholders to be held in 2023.

Directors Continuing in Office

The following table identifies our directors, and sets forth their principal occupation and business experience during the last five years and their ages as of April 3, 2020.

<u>Name</u>	<u>Positions and Offices Held with Axcella</u>	<u>Director Since</u>	<u>Class and Year in Which Term Will Expire</u>	<u>Age</u>
Grégory Behar	Director	2016	Class II—2021	50
Gary Pisano, Ph.D.	Director	2011	Class II—2021	58
Cristina M. Rondinone, Ph.D.	Director	2018	Class II—2021	59
William D. Baird III	Director	2018	Class III—2022	48
William Hinshaw	Director, Chief Executive Officer	2018	Class III—2022	51
Stephen Hoge, M.D.	Director	2014	Class III—2022	44
Catherine A. Sohn, PharmD.	Director	2019	Class III—2022	67

Class II Directors (Term Expires at 2021 Annual Meeting)

Grégory Behar has served as a member of our board of directors since February 2016. Mr. Behar has also served as Chief Executive Officer of Nestlé Health Science S.A., a health sciences company, since October 2014. He currently serves on the board of directors of Aimmune Therapeutics, Inc. (Nasdaq: AIMT) and Seres Therapeutics, Inc. (Nasdaq: MCRB). Mr. Behar holds an M.B.A. from INSEAD in France, a M.S. in mechanical engineering and manufacturing from EPFL in Switzerland, and a B.S. in mechanical engineering from the University of California, Los Angeles. We believe that Mr. Behar's extensive business experience in the health sciences and pharmaceutical industries qualifies him to serve on our board of directors.

Gary Pisano, Ph.D. has served as a member of our board of directors since October 2011. Dr. Pisano is the Harry E. Figgie, Jr. Professor of Business Administration and Senior Associate Dean for Faculty Development at the Harvard Business School. He has served on the Harvard faculty since 1988. Dr. Pisano's research and teaching focus on technology and operations strategy, the management of innovation and intellectual property, and competitive strategy. For more than two decades, he has consulted extensively on these issues with companies in the pharmaceutical, biotechnology, medical device, specialty chemical and healthcare industries. He has previously served as a director of Axovant Sciences Ltd. (Nasdaq: AXON) and Patheon NV (NYSE: PTHN). Dr. Pisano holds a Ph.D. in business administration from the University of California, Berkeley and a B.A. in economics from Yale University. We believe that Dr. Pisano's knowledge of business administration, innovation, and strategy, particularly within the healthcare industry, qualifies him to serve on our board of directors.

Cristina M. Rondinone, Ph.D. has served as a member of our board since June 2018. Dr. Rondinone has served as President of Cellarity Inc. since September 2019. Prior to this position, from March 2011 to September 2019, Dr. Rondinone served in roles of increasing responsibility at MedImmune, LLC, a wholly owned subsidiary of AstraZeneca, most recently as Senior Vice President R&D, Head of Cardiovascular, Renal and Metabolic Diseases Innovative Medicines and Early Development. Dr. Rondinone holds a Docent in molecular medicine from the University of Goteborg, Sweden School of Medicine and a M.Sc. and Ph.D. in biological sciences from the University of Buenos Aires. We believe that Dr. Rondinone's extensive industry experience qualifies her to serve on our board of directors.

Class III Directors (Term Expires at 2022 Annual Meeting)

William D. Baird III has served as a member of our board of directors since June 2018. He joined bluebird bio, Inc. as Chief Financial Officer in February 2019 and previously served as Chief Financial Officer of Amicus Therapeutics, Inc., a pharmaceutical company, from April 2012 to December 2018. Mr. Baird holds an M.B.A. in finance from The Wharton School of the University of Pennsylvania and a B.S.F.S. in international affairs from the Edmund A. Walsh School of Foreign Service of Georgetown University. We believe Mr. Baird's broad experience in pharmaceutical finance and executive management roles qualify him to serve on our board of directors.

William Hinshaw has served as our President and Chief Executive Officer and as a member of our board of directors since June 2018. Prior to joining us, Mr. Hinshaw served in increasing roles of responsibility at Novartis Pharmaceuticals Corporation, a pharmaceutical company, from December 2003 until November 2017, most recently as the Executive Vice President and Head of U.S. Oncology. Mr. Hinshaw holds a B.S. in molecular biology from the University of Wisconsin. We believe that Mr. Hinshaw's qualifications, attributes and skills, including his experience in operations management and executive leadership qualify him to serve on our board of directors.

Stephen Hoge, M.D. has served as a member of our board of directors since May 2014. He has also served in roles of increasing responsibility at Moderna Therapeutics, Inc., a biopharmaceutical company, since December 2012, and currently serves as President. Dr. Hoge holds an M.D. from the University of California, San Francisco and a B.A. in neuroscience from Amherst College. We believe that Dr. Hoge's medical knowledge and extensive experiences in the biopharmaceutical industry as a management consultant and executive qualify him to serve on our board of directors.

Catherine A. Sohn, PharmD. has served as a member of our board of directors since August 2019. Since January 2011, Dr. Sohn has consulted for pharmaceutical, biotechnology, medical device and consumer healthcare companies in the areas of business strategy, business development, strategic product development and commercial launch at Sohn Health Strategies, LLC, which she founded and serves as President. Dr. Sohn serves on the board of directors of Jazz Pharmaceuticals plc (Nasdaq: JAZZ), Landec Corporation (Nasdaq: LNDC) and Rubius Therapeutics (Nasdaq: RUBY), and she is non-executive chair of BioEclipse Therapeutics, a privately held biotechnology company. Dr. Sohn previously served on the board of Neuralstem, Inc. (Nasdaq: CUR). From 1982 to 2010, Dr. Sohn spent 28 years at GlaxoSmithKline plc and its predecessor companies, SmithKline Beecham and SK&F, serving most recently as Senior Vice President from 2003 until 2010. From 1994 to 1998 she was Vice President of Worldwide Strategic Product Development for Cardiovascular, Pulmonary and Metabolic Therapeutic Areas. Dr. Sohn received a PharmD. from the University of California, San Francisco, and a Certificate of Professional Development from the Wharton School at the University of Pennsylvania. She also is a Certified Licensing Professional and is a Board Leadership Fellow of the National Association of Corporate Directors (NACD). We believe that Dr. Sohn is qualified to serve on our board of directors because of her experience with product development, strategic marketing and business development transactions in the pharmaceutical industry.

There are no family relationships between or among any of our directors or executive officers. The principal occupation and employment during the past five years of each of our directors was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our directors and any other person or persons pursuant to which he or she is to be selected as a director.

There are no material legal proceedings to which any of our directors is a party adverse to us or any of our subsidiaries or in which any such person has a material interest adverse to us or our subsidiaries.

Executive Officers Who Are Not Directors

The following table identifies our executive officers, and sets forth their current positions at Axcella and their ages as of April 3, 2020. Biographical information for Mr. Hinshaw, our Chief Executive Officer, is set forth under the heading "Directors Continuing in Office" above.

<u>Name</u>	<u>Position Held with Axcella</u>	<u>Officer Since</u>	<u>Age</u>
Shreeram Aradhye, M.D.	Executive Vice President, Chief Development Officer	2019	57
Stephen Mitchener, PharmD.	Senior Vice President, Chief Business Officer	2018	41
Manu Chakravarthy, M.D., Ph.D.	Senior Vice President, Chief Medical Officer	2017	46
Tony Tramontin, Ph.D.	Senior Vice President of R&D, Chief Scientific Officer	2017	52
Paul Fehlner, J.D., Ph.D.	Senior Vice President, Chief Intellectual Property Officer	2018	56
Heidy King-Jones, J.D., LL.M.	Senior Vice President of Legal, General Counsel	2019	37
Laurent Chardonnet	Senior Vice President, Chief Financial Officer	2019	55

Shreeram Aradhye, M.D. has served as our Executive Vice President and Chief Development Officer since January 2019. Prior to joining us, Dr. Aradhye built an accomplished career at Novartis Pharmaceuticals Corporation. For over two decades, he served in multiple leadership roles of increasing responsibility in Development and Medical Affairs, across multiple therapeutic areas and geographies. In his most recent role as CMO of Novartis, he was a member of the Global Pharmaceuticals Executive Committee responsible for over \$20 billion in worldwide business, provided medical expertise on portfolio strategy and led governance of medical activities worldwide. Dr. Aradhye was also a Member of the Development Committee of Novartis that oversaw global development activities across its portfolio. In previous roles at Novartis and Sandoz, he led the clinical development program for Gilenya® in MS, provided functional leadership for clinical development and medical affairs teams working on novel and biosimilar medicines across multiple therapeutic areas and headed Global Development for Neuroscience, where he oversaw a portfolio of programs in MS, Alzheimer's Disease, neuropathic pain, muscle disease and migraine. Prior to industry, Dr. Aradhye was Assistant Professor of Medicine and a transplant nephrologist at the University of Pennsylvania. Dr. Aradhye received his medical education at the All India Institute of Medical Sciences in New Delhi, India, and in Internal Medicine and Nephrology in the United States.

Stephen Mitchener, PharmD. has served as our Senior Vice President and Chief Business Officer since August 2018. Prior to joining us, Dr. Mitchener served in increasing roles of responsibility at Novartis Pharmaceuticals Corporation from April 2005 to August 2018, most recently as Head of U.S. Oncology Strategy, Partnering and Operations. He previously served as a board observer for COTA Healthcare on behalf of Novartis Oncology. Dr. Mitchener holds a Post Doctorate from Rutgers University and a PharmD. from the University of North Carolina at Chapel Hill.

Manu Chakravarthy, M.D., Ph.D. has served as our Senior Vice President of Clinical Development and Chief Medical Officer since August 2017. Prior to joining us, Dr. Chakravarthy served as the Global Head of Innovation Strategy and External R&D in diabetes and cardiovascular research at Eli

Lilly & Company, from August 2015 to June 2017. Previously, Dr. Chakravarthy spent more than seven years at Merck & Co., from September 2008 to August 2015, where he assumed positions of increasing responsibility and leadership within the company, most recently as a Distinguished Scientist and leader of the Discovery Medicine group for diabetes and cardiometabolic diseases within Translational Medicine. He is also Board certified in Internal Medicine and Endocrinology, Diabetes & Metabolism and was an Adjunct Clinical Assistant Professor of Medicine at the Rutgers School of Medicine, New Jersey. Dr. Chakravarthy holds an M.D. from the University of Texas Houston Medical School, a Ph.D. in cell biology and physiology from the University of Texas Graduate School of Biomedical Sciences and the MD Anderson Cancer Center and a B.A. in biology and chemistry from St. John's University.

Tony Tramontin, Ph.D. has served as our Senior Vice President of Research & Development and Chief Scientific Officer since June 2017. Prior to joining us, Dr. Tramontin served as a Partner at McKinsey & Company, a consulting firm, in its Global Healthcare Practice from 2003 until May 2017. Dr. Tramontin holds a Ph.D. in biology (neuroscience and endocrinology) from the University of Washington and a B.A. in business from the University of Notre Dame.

Paul Fehlner, J.D., Ph.D. has served as our Senior Vice President and Chief Intellectual Property Officer since April 2018. In addition, Dr. Fehlner has served as a Principal at Life Sciences Innovation LLC, an intellectual property and legal consulting firm, since December 2017. From November 2008 through November 2017, Dr. Fehlner served as Global Head of Intellectual Property at Novartis Pharma AG in Basel, Switzerland. Dr. Fehlner holds a J.D. from Fordham University School of Law, a Ph.D. in immunology and biochemistry from The Rockefeller University and a B.S. in chemistry from Haverford College.

Heidy King-Jones, J.D., LL.M. has served as our Senior Vice President, General Counsel and Corporate Secretary since November 2019. Prior to joining us in 2018, Ms. King-Jones managed the Corporate Law Department and was lead commercial counsel at Sarepta Therapeutics, Inc. holding various positions of increasing seniority from 2013 through 2018. During this time, she led legal efforts for Sarepta's transition from an R&D-stage to a commercial-stage company, including developing Sarepta's compliance program. Prior to joining Sarepta, Ms. King-Jones was an associate in the Securities and Public Company practice group at Ropes & Gray LLP, where she focused her practice on representing public companies in corporate matters including mergers, acquisitions, corporate governance issues, SEC filings and compliance matters, initial public offerings and sales of common stock, bonds, debentures and notes. Ms. King-Jones has experience representing clients in various industries including the utility, technology, retail and pharmaceutical industries. Ms. King-Jones holds a J.D. and LL.M. in International and Comparative Law from Cornell Law School and a B.A. in Psychology and Sociology from Dartmouth College.

Laurent Chardonnet has served as our Senior Vice President and Chief Financial Officer since November 2019. Prior to joining us, Mr. Chardonnet served in various positions at Incyte Corporation, including Vice President, Treasurer and Principal Accounting Officer, Head of Finance and Administration for the company's European division, and most recently, as Vice President of Alliances. Prior to Incyte, Mr. Chardonnet served as Controller, Vice President of Finance and acting Chief Financial Officer of DrugAbuse Sciences, a privately held biotechnology company, and as a senior consultant at PricewaterhouseCoopers LLP. Mr. Chardonnet received his Master of Business Administration from Vanderbilt University and his initial business degree from the Institut Supérieur de Gestion in Paris.

The principal occupation and employment during the past five years of each of our executive officers was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our executive officers and any other person or persons pursuant to which he or she was or is to be selected as an executive officer.

There are no material legal proceedings to which any of our executive officers is a party adverse to us or our subsidiaries or in which any such person has a material interest adverse to us or our subsidiaries.

**PROPOSAL NO. 2—RATIFICATION OF THE APPOINTMENT OF DELOITTE & TOUCHE LLP
AS AXCELLA'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2020**

Axcella's stockholders are being asked to ratify the appointment by the audit committee of the board of directors of Deloitte & Touche LLP as Axcella's independent registered public accounting firm for the fiscal year ending December 31, 2020. Deloitte & Touche LLP has served as Axcella's independent registered public accounting firm since 2012.

The audit committee is solely responsible for selecting Axcella's independent registered public accounting firm for the fiscal year ending December 31, 2020. Stockholder approval is not required to appoint Deloitte & Touche LLP as Axcella's independent registered public accounting firm. However, the board of directors believes that submitting the appointment of Deloitte & Touche LLP to the stockholders for ratification is good corporate governance. If the stockholders do not ratify this appointment, the audit committee will reconsider whether to retain Deloitte & Touche LLP. If the selection of Deloitte & Touche LLP is ratified, the audit committee, at its discretion, may direct the appointment of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of Axcella and its stockholders.

A representative of Deloitte & Touche LLP is expected to be present at the Annual Meeting and will have an opportunity to make a statement if he or she desires to do so and to respond to appropriate questions from our stockholders.

Axcella incurred the following fees from Deloitte & Touche LLP for the audit of the consolidated financial statements and for other services provided during the years ended December 31, 2019 and 2018.

	2019	2018
Audit fees(1)	\$ 355,250	\$ 201,600
Audit-related fees(2)	436,424	—
Tax fees	—	—
All other fees(3)	1,895	1,895
Total fees	\$ 793,569	\$ 203,495

- (1) Audit fees consist of fees for the audit of our annual financial statements and the review of our interim financial statements included in our quarterly reports on Form 10-Q.
- (2) Audit-related fees include services provided in connection with registration statements, consents and other services typically provided by the independent registered public accounting firm. Audit-related fees in 2019 include the registration statement for the initial public offering of our common stock, which was completed in May 2019.
- (3) All other fees include a subscription to the Deloitte Accounting Research Tool.

Audit Committee Pre-approval Policy and Procedures

Our audit committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by our audit committee or the engagement is entered into pursuant to the pre-approval procedure described below.

From time to time, our audit committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such pre-approval details the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

During our 2019 and 2018 fiscal years, no services were provided to us by Deloitte & Touche LLP other than in accordance with the pre-approval policies and procedures described above.

Vote Required and Board of Directors' Recommendation

The approval of Proposal No. 2 requires that a majority of the votes properly cast vote FOR this proposal. Shares that are voted "abstain" will not affect the outcome of this proposal.

The board of directors recommends voting "FOR" Proposal No. 2 to ratify the appointment of Deloitte & Touche LLP as Axcella's independent registered public accounting firm for the fiscal year ending December 31, 2020.

CORPORATE GOVERNANCE

Director Nomination Process

Our nominating and corporate governance committee is responsible for identifying individuals qualified to serve as directors, consistent with criteria approved by our board, and recommending such persons to be nominated for election as directors, except where we are legally required by contract, law or otherwise to provide third parties with the right to nominate.

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates, and interviews of selected candidates by management, recruiters, members of the committee and our board. The qualifications, qualities and skills that our nominating and corporate governance committee believes must be met by a committee-recommended nominee for a position on our board of directors are as follows:

- Nominees should have experience at a strategic or policymaking level in a business, government, non-profit or academic organization of high standing.
- Nominees should be highly accomplished in his or her respective field, with superior credentials and recognition.
- Nominees should be well regarded in the community and shall have a long-term reputation for the high ethical and moral standards.
- Nominees should have sufficient time and availability to devote to the affairs of the company, particularly in light of the number of boards of directors on which such nominee may serve.
- To the extent such nominee serves or has previously served on other boards, the nominee shall have a demonstrated history of actively contributing at board meetings.

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates. Any such proposals should be submitted to our corporate secretary at our principal executive offices no later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the one-year anniversary of the date of the preceding year's annual meeting and should include appropriate biographical and background material to allow the nominating and corporate governance committee to properly evaluate the potential director candidate and the number of shares of our stock beneficially owned by the stockholder proposing the candidate. Stockholder proposals should be addressed to Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. Assuming that biographical and background material has been provided on a timely basis in accordance with our bylaws, any recommendations received from stockholders will be evaluated in the same manner as potential nominees proposed by the nominating and corporate governance committee. If our board of directors determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included on our proxy card for the next annual meeting of stockholders. See "Stockholder Proposals" for a discussion of submitting stockholder proposals.

Director Independence

Applicable Nasdaq Stock Market LLC, or Nasdaq, rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act and that compensation committee members satisfy independence criteria set forth in Rule 10C-1 under the Exchange Act. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. In addition, in affirmatively determining the independence of any director who will serve on a company's compensation committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors must consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including: the source of compensation to the director, including any consulting, advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors has determined that all members of the board of directors, except Mr. Hinshaw and Mr. Epstein, are independent directors, including for purposes of the rules of Nasdaq and the SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors or executive officers. Mr. Hinshaw is not an independent director under these rules because he is an executive officer of Axcella. Mr. Epstein is not an independent director under these rules because of the compensation he receives for non-director services pursuant to his Chairman and Consulting Agreement with Axcella, dated August 22, 2019, as discussed under "Director Compensation."

Board Committees

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. Each of the audit committee, compensation committee, and nominating and corporate governance committee operates under a charter that satisfies the applicable standards of the SEC and Nasdaq. Each such committee reviews its respective charter at least annually. A current copy of the charter for each of the audit committee, compensation committee, and nominating and corporate governance committee is posted on the corporate governance section of our website, <https://ir.axcellahealth.com/corporate-governance/documents-and-charters>.

Audit Committee

William D. Baird III, Grégory Behar and Gary Pisano, Ph.D., serve on the audit committee, which is chaired by Mr. Baird. Our board of directors has determined that each member of the audit committee is "independent" for audit committee purposes as that term is defined in the rules of the SEC and the applicable Nasdaq rules, and each has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has designated Mr. Baird as an "audit committee financial expert," as defined under the applicable rules of the SEC. During the fiscal year ended December 31, 2019, the audit committee met four times. The report of the audit committee is included in this proxy statement under "Report of the Audit Committee." The audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the audit committee's review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

All audit and non-audit services, other than *de minimis* non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our audit committee.

Compensation Committee

David R. Epstein, Stephen Hoge, M.D., William D. Baird III, and Catherine A. Sohn, PharmD., serve on the compensation committee, which is chaired by Mr. Epstein. Our board of directors has determined that each member of the compensation committee other than Mr. Epstein is "independent" as defined in the applicable Nasdaq rules. Mr. Epstein will step down from the compensation

committee prior to the Annual Meeting. During the fiscal year ended December 31, 2019, the compensation committee met seven times. The compensation committee's responsibilities include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and based on such evaluation: (i) recommending to the board of directors the cash compensation of our Chief Executive Officer and (ii) recommending grants and awards to our Chief Executive Officer under equity-based plans;
- reviewing and approving or recommending to the board of directors the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors;
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention, termination or compensation of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

Nominating and Corporate Governance Committee

Catherine A. Sohn, PharmD., David R. Epstein and Cristina Rondinone, Ph.D., serve on the nominating and corporate governance committee, which is chaired by Dr. Sohn. Our board of directors has determined that each of the members of the nominating and corporate governance committee other than Mr. Epstein are "independent" as defined in the applicable Nasdaq rules. Mr. Epstein will step down from the nominating and corporate governance committee prior to the Annual Meeting. During the fiscal year ended December 31, 2019, the nominating and corporate governance committee met three times. The nominating and corporate governance committee's responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the size and composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- developing and recommending to the board of directors a code of business conduct and ethics and a set of corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

The board of directors has delegated to the nominating and corporate governance committee the responsibility of identifying prospective candidates for board of director membership and recommending such candidates to the board of directors. Additionally, in selecting nominees for directors, the nominating and corporate governance committee will review candidates recommended by stockholders in the same manner and using the same general criteria as candidates recruited by the committee and/or recommended by our board of directors. Any stockholder who wishes to recommend a candidate for consideration by the committee as a nominee for director should follow the procedures described later in this proxy statement under the heading "Stockholder Proposals." The nominating and corporate governance committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our bylaws relating to stockholder nominations as described later in this proxy statement under the heading "Stockholder Proposals."

Identifying and Evaluating Director Nominees. Our board of directors is responsible for filling vacancies on our board of directors and for nominating candidates for election by our stockholders each year in the class of directors whose term expires at the relevant annual meeting. The board of directors delegates the selection and nomination process to the nominating and corporate governance committee, with the expectation that other members of the board of directors, and of management, will be requested to take part in the process as appropriate.

Generally, the nominating and corporate governance committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisors, through the recommendations submitted by stockholders or through such other methods as the nominating and corporate governance committee deems to be helpful to identify candidates. Once candidates have been identified, the nominating and corporate governance committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the nominating and corporate governance committee. The nominating and corporate governance committee may gather information about the candidates through interviews, detailed questionnaires, comprehensive background checks or any other means that the nominating and corporate governance committee deems to be appropriate in the evaluation process. The nominating and corporate governance committee then meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of our board of directors. Based on the results of the evaluation process, the nominating and corporate governance committee recommends candidates for the board of directors' approval to fill a vacancy or as director nominees for election to the board of directors by our stockholders each year in the class of directors whose term expires at the relevant annual meeting.

Minimum Qualifications. Our nominating and corporate governance committee and our board of directors may consider a broad range of factors relating to the qualifications and background of nominees. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is the identification of persons who will further the interests of our stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape, and professional and personal experiences and expertise relevant to our growth strategy. We have no formal policy regarding board diversity.

Board and Committee Meetings Attendance

The full board of directors met six times during 2019. During 2019, each member of the board of directors attended in person or participated in 75% or more of the aggregate of (i) the total number of meetings of the board of directors (held during the period for which such person has been a director) and (ii) the total number of meetings held by all committees of the board of directors on which such person served (during the periods that such person served).

Director Attendance at Annual Meeting of Stockholders

Directors are responsible for attending the annual meeting of stockholders to the extent practicable. We did not hold an annual meeting of stockholders in 2019.

Policy on Trading, Pledging and Hedging of Company Stock

Certain transactions in our securities (such as purchases and sales of publicly traded put and call options, and short sales) create a heightened compliance risk or could create the appearance of misalignment between management and stockholders. In addition, securities held in a margin account or pledged as collateral may be sold without consent if the owner fails to meet a margin call or defaults on the loan, thus creating the risk that a sale may occur at a time when an officer or director is aware of material, non-public information or otherwise is not permitted to trade in Axcella securities. Our insider trading policy expressly prohibits short sales, purchases or sales of puts or calls, and other derivative transactions of our stock, including any transaction that provides the economic equivalent of ownership, by our executive officers, directors, employees and certain designated consultants and contractors. Our insider trading policy also prohibits using our securities as collateral in a margin account and pledging our securities as collateral for a loan (or modifying an existing pledge).

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the corporate governance section of our website, which is located at <https://ir.axcellahealth.com/corporate-governance/documents-and-charters>. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Board Leadership Structure and Board's Role in Risk Oversight

David R. Epstein is the current Chairman of our board of directors and William Hinshaw is our current Chief Executive Officer, hence the roles of Chairman of our board of directors and Chief Executive Officer are separated. We believe that separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing our Chairman of the board to lead the board of directors in its fundamental role of providing advice to and independent oversight of management. Our board of directors recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our Chairman, particularly as the board of directors' oversight responsibilities continue to grow. While our bylaws and corporate governance guidelines do not require that our Chairman and Chief Executive Officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent to every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction, and intellectual property. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees above and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairman of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Communication with the Directors of Axcella

Any interested party with concerns about our company may report such concerns to the board of directors or the chairman of our board of directors and nominating and corporate governance committee, by submitting a written communication to the attention of such director at the following address:

c/o Axcella Health Inc.
840 Memorial Drive
Cambridge, Massachusetts 02139
United States

You may submit your concern anonymously or confidentially by postal mail. You may also indicate whether you are a stockholder, customer, supplier, or other interested party.

A copy of any such written communication may also be forwarded to Axcella's legal counsel and a copy of such communication may be retained for a reasonable period of time. The director may discuss the matter with Axcella's legal counsel, with independent advisors, with non-management directors, or with Axcella's management, or may take other action or no action as the director determines in good faith, using reasonable judgment, and applying his or her own discretion.

Communications may be forwarded to other directors if they relate to important substantive matters and include suggestions or comments that may be important for other directors to know. In general, communications relating to corporate governance and long- term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances, and matters as to which we tend to receive repetitive or duplicative communications.

The audit committee oversees the procedures for the receipt, retention, and treatment of complaints received by Axcella regarding accounting, internal accounting controls, or audit matters, and the confidential, anonymous submission by employees of concerns regarding questionable accounting, internal accounting controls or auditing matters.

DIRECTOR COMPENSATION

The table below shows all compensation paid to each individual who served as non-employee member of our board of directors during 2019 for their services as directors in 2019, other than Mr. Hinshaw. Amounts paid to Mr. Hinshaw are presented below in the Summary Compensation Table.

<u>Name</u>	<u>Fees Paid In Cash (\$)</u>	<u>Option Awards (\$) (1)(2)</u>	<u>All Other Compensation (\$)</u>	<u>Total (\$)</u>
William D. Baird III	46,875	99,551	—	146,426
Grégory Behar	31,875	99,551	—	131,426
David A. Berry, M.D., Ph.D.	29,250	99,551	—	128,801
David R. Epstein	325,000(3)	607,519	300,000(4)	1,232,519
Stephen Hoge, M.D.	30,000	99,551	—	129,551
Gary Pisano, Ph.D.	31,875	99,551	—	131,426
Cristina M. Rondinone, Ph.D.	31,750	99,551	—	131,301
Catherine A. Sohn, PharmD.	17,500	115,582	—	133,082
Christopher Viehbacher(5)	—	—	—	—

- (1) The amounts reported represent the aggregate grant date fair value of the stock options awarded to the non-employee directors in the fiscal year ended December 31, 2019, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in Note 7 to our Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2019. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value actually received by the non-employee directors or that may be received by the non-employee directors upon the exercise of the stock options or any sale of the underlying shares of common stock. For Mr. Epstein, the awards underlying these amounts represent all option awards issued to Mr. Epstein, including the option award issued to Mr. Epstein in 2019 in consideration for consulting services rendered pursuant to the Chairman and Consulting Agreement described in more detail below.
- (2) As of December 31, 2019, each non-employee director, other than Mr. Viehbacher, held unexercised options to purchase the number of shares of the Company's common stock as set forth below:

<u>Director</u>	<u>Number of Shares Underlying Stock Options</u>
David R. Epstein	111,000
David A. Berry, M.D., Ph.D.	11,000
Grégory Behar	11,000
Gary Pisano, Ph.D.	11,000
Cristina M. Rondinone, Ph.D.	11,000
William D. Baird III	11,000
Stephen Hoge, M.D.	11,000
Catherine A. Sohn, PharmD.	22,000

- (3) In 2019, the amount reported includes (i) a \$225,000 retainer payment to Mr. Epstein approved by the Compensation Committee for consulting services to be rendered in 2019 and (ii) a \$100,000 retainer payment to Mr. Epstein approved by the Compensation Committee for services as Chairman of the board of directors to be rendered in 2019.

- (4) In 2019, the amount reported represents \$300,000 in cash payments made to Mr. Epstein in consideration for consulting services rendered pursuant to the Chairman and Consulting Agreement described in more detail below.
- (5) Mr. Viehbacher served as a director until he resigned on August 21, 2019. Mr. Viehbacher received no compensation or equity awards for his service as a director in 2019 and held no unexercised stock options as of December 31, 2019.

Non-Employee Director Compensation

Under our director compensation program, effective as of the date on which the registration statement covering the initial public offering of our common stock was declared effective, we pay our non-employee directors a cash retainer for service on the board of directors and for service on each committee on which the director is a member. The chairman of each committee receives a higher retainer for such service. These fees are payable in arrears in four equal quarterly installments on the last day of each quarter, provided that the amount of such payment is prorated for any portion of such quarter that the director is not serving on our board of directors. The fees paid to non-employee directors, other than our chairman, for service on the board of directors and for service on each committee of the board of directors on which the director is a member are as follows:

	Annual Retainer
Board of Directors:	
All non-employee members, except chairman	\$ 35,000
Audit Committee:	
Members	\$ 7,500
Chairman	\$ 15,000
Compensation Committee:	
Members	\$ 5,000
Chairman	\$ 10,000
Nominating and Corporate Governance Committee:	
Members	\$ 4,000
Chairman	\$ 8,000

We also reimburse our non-employee directors for reasonable travel and out-of-pocket expenses incurred in connection with attending our board of directors and committee meetings.

In addition, each new non-employee director elected to our board of directors will be granted an initial, one-time equity award of an option to purchase 22,000 shares of our common stock, which shall vest in equal quarterly installments during the 12 quarters following the grant date, subject to continued service as a director through such vesting date. On the date of each annual meeting of stockholders of Axcella, each non-employee director will receive an annual equity award of an option to purchase 11,000 shares of common stock, which shall vest on the earlier of the one-year anniversary of the grant date and Axcella's next annual meeting of stockholders, subject to continued service as a director through such vesting date.

This program is intended to provide a total compensation package that enables us to attract and retain qualified and experienced individuals to serve as directors and to align our directors' interests with those of our stockholders.

On August 21, 2019, David R. Epstein entered into a Chairman and Consulting Agreement with Axcella (the "Epstein Agreement") pursuant to which Mr. Epstein has agreed to serve as Chairman of the Board and to provide certain consulting services to Axcella. In exchange for his consulting services, Mr. Epstein will receive an annual base retainer of \$300,000 and an annual option to purchase 65,000 shares of Axcella's common stock, subject to periodic review and adjustment at Axcella's discretion. The Chairman and Consulting Agreement also contains customary non-competition and confidentiality obligations.

Securities Authorized for Issuance under Equity Compensation Plans

The following table sets forth information as of December 31, 2019 regarding shares of common stock that may be issued under our equity compensation plans.

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights (#)</u>	<u>Weighted-average exercise price of outstanding options, warrants and rights (\$)</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column)</u>
Equity compensation plans approved by security holders(1)	5,243,745(2)	\$ 7.35	273,647(3)(4)
Equity compensation plans not approved by security holders	—	—	—
Total	5,243,745	\$ 7.35	273,647

- (1) Includes the Axcella Health Inc. Amended and Restated 2010 Stock Incentive Plan (the "2010 Plan"), the Axcella Health Inc. 2019 Stock Option and Incentive Plan (the "2019 Plan") and the Axcella Health Inc. 2019 Employee Stock Purchase Plan (the "2019 Employee Stock Purchase Plan").
- (2) Includes 5,176,944 shares of common stock issuable upon the exercise of outstanding stock options and 66,801 shares of common stock issuable upon settlement of restricted stock units
- (3) As of December 31, 2019, there were 36,466 shares available for grant under the 2019 Plan and 237,181 shares available for grants under the 2019 Employee Stock Purchase Plan. As of the closing of our initial public offering, no additional equity awards may be granted under the 2010 Plan. The shares of common stock underlying any awards granted under the 2010 Plan or 2019 Plan that are forfeited, canceled, reacquired by us prior to vesting, satisfied without the issuance of stock, or otherwise terminated (other than by exercise) and the shares of common stock that are withheld upon exercise of a stock option or settlement of such award to cover the exercise price or tax withholding will be added to the shares of common stock available for issuance under the 2019 Plan.
- (4) The 2019 Plan provides that an additional number of shares will automatically be added to the shares authorized for issuance under the 2019 Plan on January 1 of each year. The number of shares added each year will be equal to the lesser of: (i) 4% of the outstanding shares on the immediately preceding December 31 or (ii) such amount as determined by the compensation committee of our board of directors. The 2019 Employee Stock Purchase Plan provides that an additional number of shares will automatically be added to the shares authorized for issuance under the 2019 Employee Stock Purchase Plan on January 1 of each year through January 1, 2029. The number of shares added each year will be equal to the least of: (i) 1% of the outstanding shares on the immediately preceding December 31, (ii) 237,181 shares or (iii) such amount as determined by the compensation committee of our board of directors.

EXECUTIVE COMPENSATION

Our named executive officers for the year ended December 31, 2019 include our chief executive officer, chief development officer, and our chief medical officer:

- William Hinshaw, our chief executive officer; and
- Shreeram Aradhye, M.D., our chief development officer; and
- Manu Chakravarthy, M.D. Ph.D., our chief medical officer.

Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers for the years indicated.

	Year	Salary (\$)	Non-Equity Incentive Plan Compensation \$(1)	Option awards \$(2)	All other compensation (\$)	Total (\$)
William Hinshaw <i>President and CEO</i>	2019	496,731	288,750	560,049	—	1,345,530
	2018	278,910(3)	231,563	3,608,347	160,000(4)	4,278,820
Shreeram Aradhye, M.D. <i>Chief Development Officer</i>	2019	289,103(5)	190,238	3,379,523	52,859(6)	3,911,723
Manu Chakravarthy, M.D., Ph.D. <i>Chief Medical Officer</i>	2019	374,000	155,210	1,180,679	—	1,709,889

- (1) The amounts reported represent cash incentive compensation based on the board of directors' assessment of the achievement of company and individual performance objectives for the years ended December 31, 2018 and December 31, 2019, respectively, which were paid in February 2019 and February 2020, respectively.
- (2) The amounts reported represent the aggregate grant date fair value of stock options awarded, calculated in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value are set forth in Note 7 to our audited consolidated financial statements appearing at the end of this prospectus.
- (3) Mr. Hinshaw commenced employment with us in June 2018. His annual base salary for 2018 was \$475,000.
- (4) The amount reported represents a one-time relocation stipend.
- (5) Dr. Aradhye commenced employment with us in May 2019 with an initial annual base salary of \$420,000 which was then increased in August 2019 to an annual base salary of \$445,000 to align with compensation of peers at the 50th percentile.
- (6) The amount reported includes a \$40,000 one-time relocation stipend, a \$9,000 housing stipend and \$3,859 in commuting expenses.

Narrative to Summary Compensation Table

Our board of directors and compensation committee review compensation annually for all employees, including our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our company. We target a general

competitive position, based on independent third-party benchmark analytics to inform the mix of compensation of base salary, bonus or long-term incentives.

Our compensation committee discharges our board of directors' responsibilities relating to compensation of our directors and executives, oversees our company's overall compensation structure, policies and programs, and reviews our processes and procedures for the consideration and determination of director and executive compensation. Our compensation committee typically reviews and approves grants and awards under equity-based plans for all service providers, including our executive officers. In addition, our compensation committee reviews and recommends to the board of directors for determination the corporate goals and objectives that may be relevant to the compensation of our chief executive officer, and evaluates our chief executive officer's performance, and recommends to the board of directors for determination our chief executive officer's equity and non-equity compensation. Our board of directors discusses the compensation committee's recommendations and ultimately approves the compensation of our executive officers without members of management present.

Annual base salary

Each named executive officer's base salary is a fixed component of annual compensation for performing specific duties and functions, and has been established by our board of directors taking into account each individual's role, responsibilities, skills, and experience. Base salaries for our named executive officers are reviewed annually by our compensation committee, typically in connection with our annual performance review process, and adjusted from time to time, based on the recommendation of the compensation committee, to realign salaries with market levels after taking into account individual responsibilities, performance, and experience.

Cash bonus

Our annual bonus program is intended to reward our named executive officers for meeting objective or subjective performance goals for a fiscal year. From time to time, our board of directors or compensation committee may approve annual bonuses for our named executive officers based on individual performance, company performance, or as otherwise determined appropriate.

<u>Name</u>	<u>Target Bonus (% of base salary)</u>
William Hinshaw	55
Shreeram Aradhye, M.D.	40
Manu Chakravarthy, M.D., Ph.D.	40

Long-term equity incentives

Our equity grant program is intended to align the interests of our named executive officers with those of our stockholders and to motivate them to make important contributions to our performance. We granted awards to our named executive officers in 2019, as described in the "Outstanding Equity Awards at 2019 Fiscal Year End Table."

Outstanding Equity Awards at 2019 Fiscal Year End Table

The following table presents information regarding all outstanding equity awards held by each of our named executive officers on December 31, 2019.

Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option awards			Stock awards	
			Equity incentive plan awards: number of securities underlying unexercised unearned options (#)	Option exercise price (\$)	Option expiration date	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$)(1)
William Hinshaw	410,824(1)	528,204(1)	—	6.21	6/21/2028	—	—
<i>President and CEO</i>	—(2)	60,803(2)	—	13.83	3/22/2029	—	—
Shreeram Aradhye, M.D.	—(3)	244,299(3)	—	20.00	5/1/2029	66,801(4)	227,123
<i>Chief Development Officer</i>	—(5)	54,500(5)	—	3.40	12/18/2029	—	—
Manu Chakravarthy, M.D., Ph.D.	115,022(6)	69,021(6)	—	6.52	8/9/2027	—	—
<i>Chief Medical Officer</i>	—(7)	117,806(7)	—	13.83	3/11/2029	—	—
	—(5)	41,000(5)	—	3.40	12/18/2029	—	—

- (1) 25% of this option vested and became exercisable on May 31, 2019 and the remainder shall vest in 12 equal quarterly installments thereafter.
- (2) This option was granted on March 22, 2019. Following the closing of our initial public offering on May 13, 2019, the vesting period for the stock option commenced subject to approval of performance criteria by the board of directors, which occurred on May 22, 2019. 25% of this option vested and became exercisable on March 1, 2020 and the remainder shall vest in 12 equal quarterly installments thereafter.
- (3) 25% of this option shall vest and become exercisable on May 1, 2020, with the remainder to vest in 12 equal quarterly installments thereafter.
- (4) 1/3 of the restricted stock units shall vest on December 18, 2021 and the remaining 2/3 of the grant shall vest on December 18, 2022.
- (5) 25% of this option shall vest and become exercisable on December 18, 2020, with the remainder to vest in 12 equal quarterly installments thereafter.
- (6) 25% of this option vested and became exercisable on August 1, 2018, with the remainder to vest in 12 equal quarterly installments thereafter.
- (7) 25% of this option vested and became exercisable on January 1, 2020, with the remainder to vest in 12 equal quarterly installments thereafter.

Employment arrangements with our named executive officers

William Hinshaw

Under our Amended and Restated Employment Agreement with Mr. Hinshaw, dated December 20, 2018, or the Hinshaw Employment Agreement, he will continue to serve as our President and Chief Executive Officer on an at will basis. Mr. Hinshaw initially received a base salary of \$500,000 per year, which is subject to periodic review and adjustment. Mr. Hinshaw is also eligible for an annual performance bonus targeted at 55% of his base salary and is eligible to participate in the employee benefit plans generally available to our employees, subject to the terms of those plans. In addition, in March 2019, we approved a grant to Mr. Hinshaw of a performance option to purchase 60,803 shares of our common stock, contingent upon the completion of an initial public offering that the board of directors deems successful, which occurred on May 22, 2019. The option vested 25% on March 1, 2020, with the remainder vesting in equal quarterly installments over the three years thereafter.

The Hinshaw Employment Agreement further provides that if Mr. Hinshaw's employment is terminated by us without Cause (as defined in the Hinshaw Employment Agreement) or Mr. Hinshaw resigns for Good Reason (as defined in the Hinshaw Employment Agreement), he will be entitled to receive: (i) base salary continuation for 12 months following termination, or the Hinshaw Severance Amount, and, (ii) if Mr. Hinshaw is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, 12 months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law). Payment of the Hinshaw Severance Amount shall immediately cease if Mr. Hinshaw breaches the terms of the Restrictive Covenants Agreement between him and us. In lieu of the severance payments and benefits set forth above, in the event Mr. Hinshaw's employment is by us without Cause or he resigns for Good Reason, in either case within 12 months following a Change in Control (as defined in the Hinshaw Employment Agreement), he will be entitled to receive: (i) a lump sum cash amount equal to 1.5 times the sum of (A) his current base salary (or his base salary in effect prior to the Change in Control, if higher) plus (B) his target annual cash incentive compensation for the year of termination, (ii) if Mr. Hinshaw is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, 18 months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law), and (iii) notwithstanding anything to the contrary provided in the applicable award agreement, accelerated vesting of 100% of all time-based stock options and other stock-based awards subject to time-based vesting, or "Time-Based Equity Awards", held by Mr. Hinshaw.

Shreeram Aradhya

Under our Employment Agreement with Dr. Aradhya, dated January 1, 2019, or the Aradhya Employment Agreement, he will continue to serve as our Executive Vice President and Chief Development Officer on an at-will basis. Dr. Aradhya initially received a base salary of \$445,000 per year, which is subject to periodic review and adjustment. Dr. Aradhya is also eligible for an annual performance bonus targeted at 40% of his base salary and is eligible to participate in the employee benefit plans generally available to our employees, subject to the terms of those plans.

Under the Aradhya Employment Agreement, Dr. Aradhya is entitled for the first three months of employment with Axcella to a housing stipend of up to \$3,000 per month and reimbursements for three months after his start date with Axcella of up to \$600 per week for commuting expenses as long as his main domicile remains in New Jersey. Dr. Aradhya is also entitled to a stipend of up to \$40,000 to cover the costs of relocating from his primary state tax residence to within a reasonable commuting distance of Axcella's Cambridge office prior to his one-year anniversary of his start date. Dr. Aradhya is obligated to repay the entire relocation stipend he received from Axcella in the event that, prior to his one-year anniversary of his start date, he resigns other than for Good Reasons or his employment is terminated for Cause (as such terms are defined in the Aradhya Employment Agreement).

The Aradhya Employment Agreement also provides for the grant of the following equity awards subject to final approval by the board of directors or the compensation committee: (i) an option to purchase 244,299 shares of Axcella's common stock (the "New Hire Options"). The New Hire Options will vest 25% on the first anniversary of Dr. Aradhya's start date, with the remainder vesting in equal quarterly installments over the three years following the first anniversary of Dr. Aradhya's start date.

The Aradhya Employment Agreement further provides that if Dr. Aradhya's employment is terminated by us without Cause (as defined in the Aradhya Employment Agreement) or Dr. Aradhya resigns for Good Reason (as defined in the Aradhya Employment Agreement), he will be entitled to

receive: (i) base salary continuation for nine months following termination, or the Aradhye Severance Amount, and, (ii) if Dr. Aradhye is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, nine months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law). Payment of the Aradhye Severance Amount shall immediately cease if Dr. Aradhye breaches the terms of the Restrictive Covenants Agreement between him and us. In lieu of the severance payments and benefits set forth above, in the event Dr. Aradhye's employment is terminated by us without Cause or he resigns for Good Reason, in either case within 12 months following a Change in Control (as defined in the Aradhye Employment Agreement), he will be entitled to receive: (i) a lump sum cash amount equal to one times the sum of (A) his current base salary (or his base salary in effect prior to the Change in Control, if higher) plus (B) his target annual cash incentive compensation for the year of termination, (ii) if Dr. Aradhye is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, 12 months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law), and (iii) notwithstanding anything to the contrary provided in the applicable award agreement, accelerated vesting of 100% of all Time-Based Equity Awards held by Dr. Aradhye.

Manu Chakravarthy

Under our Amended and Restated Employment Agreement with Dr. Chakravarthy, dated December 29, 2018, or the Chakravarthy Employment Agreement, he will continue to serve as our Senior Vice President of Clinical Development and Chief Medical Officer on an at-will basis. Dr. Chakravarthy initially received a base salary of \$374,000 per year, which is subject to periodic review and adjustment. Dr. Chakravarthy is also eligible for an annual performance bonus targeted at 40% of his base salary and is eligible to participate in the employee benefit plans generally available to our employees, subject to the terms of those plans.

The Chakravarthy Employment Agreement also provides for the grant of the following equity awards subject to final approval by the board of directors or the compensation committee: an option to purchase 0.5% of the Company's common stock upon the Company (i) signing a partnership to develop therapeutic products or (ii) initiating four (4) pre-IND studies in new target areas (excluding NAFL or epilepsy) before December 31, 2018 (the "Performance Options"). The Performance Options (options to purchase 117,806 shares of Axcella's common stock) were granted to Dr. Chakravarthy on March 11, 2019. 25% of the shares subject to the option award vested on January 1, 2020 and the remainder shall vest in equal quarterly installments over the three years thereafter.

The Chakravarthy Employment Agreement further provides that if Dr. Chakravarthy's employment is terminated by us without Cause (as defined in the Chakravarthy Employment Agreement) or Dr. Chakravarthy resigns for Good Reason (as defined in the Chakravarthy Employment Agreement), he will be entitled to receive: (i) base salary continuation for nine months following termination, or the Chakravarthy Severance Amount, and, (ii) if Dr. Chakravarthy is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, nine months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law). Payment of the Chakravarthy Severance Amount shall immediately cease if Dr. Chakravarthy breaches the terms of the Restrictive Covenants Agreement between him and us. In lieu of the severance payments and benefits set forth above, in the event Dr. Chakravarthy's employment is terminated by us without Cause or he resigns for Good Reason, in either case within 12 months following a Change in Control (as defined in the Chakravarthy Employment Agreement), he will be entitled to receive: (i) a lump sum cash amount equal to one times the sum of (A) his current base salary (or his base salary in effect prior to the Change in Control, if higher) plus (B) his target annual cash incentive compensation for the year of termination, (ii) if Dr. Chakravarthy is enrolled in our health care program immediately prior to the date of termination and properly elects to receive COBRA benefits, 12 months of COBRA premiums for himself and his eligible dependents at our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination (or a monthly cash payment in lieu thereof if we determine we cannot pay such amounts without potentially violating applicable law), and (iii) notwithstanding anything to the contrary provided in the applicable award agreement, accelerated vesting of 100% of all Time-Based Equity Awards held by Dr. Chakravarthy.

Other agreements

We have also entered into employee confidentiality, inventions, non-solicitation and non-competition agreements with each of our named executive officers. Under such agreements, each named executive officer has agreed (1) not to compete with us during his or her employment and for a period of one year after the termination of such employment, (2) not to solicit our employees during his or her employment and for a period of one year after the termination of such employment, (3) to protect our confidential and proprietary information and (4) to assign to us related intellectual property developed during the course of his or her employment.

Additional Narrative Disclosure

401(k) Savings Plan. We maintain a 401(k) retirement savings plan for the benefit of our employees, including our named executive officers, who satisfy certain eligibility requirements. Under the 401(k) plan, eligible employees may elect to defer a portion of their compensation, within the limits prescribed by Internal Revenue Code of 1986, as amended, (the "Code") on a pre-tax or after tax (Roth) basis through contributions to the 401(k) plan. We are permitted to make discretionary profit sharing contributions to the 401(k) plan. The 401(k) plan is intended to qualify under Section 401(a) of the Code. As a tax qualified retirement plan, pre-tax contributions to the 401(k) plan and earnings on those pre-tax contributions are not taxable to the employees until distributed from the 401(k) plan, and earnings on Roth contributions are not taxable when distributed from the 401(k) plan.

Health and Welfare Benefits. All of our full time employees, including our named executive officers, are eligible to participate in our health and welfare plans, including medical and dental benefits, short term and long term disability insurance, and life insurance. We believe these perquisites are necessary and appropriate to provide a competitive compensation package to our named executive officers.

Compensation Risk Assessment

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. Our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

Rule 10b5-1 Sales Plans

Our policy governing transactions in our securities by directors, officers, and employees permits our officers, directors, and certain other persons to enter into trading plans complying with Rule 10b5-1 under the Exchange Act. Generally, under these trading plans, the individual relinquishes control over the transactions once the trading plan is put into place. Accordingly, sales under these plans may occur at any time, including possibly before, simultaneously with, or immediately after significant events involving our company.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than the compensation agreements and other arrangements described under "Executive Compensation" and "Director Compensation" in this proxy statement and the transactions described below, since January 1, 2018, there has not been and there is not currently proposed, any transaction or series of similar transactions to which we were, or will be, a party in which the amount involved exceeded, or will exceed, \$120,000 and in which any director, executive officer, holder of five percent or more of any class of our capital stock or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest.

Private placements of securities

Series E preferred stock financing

In November 2018, we issued and sold to investors in a private placement an aggregate of 5,282,002 shares of our Series E Preferred Stock at a purchase price of \$11.17 per share, for aggregate consideration of approximately \$59.0 million. The following table sets forth the number of shares of our Series E preferred stock that we issued to our five percent stockholders and their affiliates in this transaction:

<u>Stockholder</u>	<u>Shares of Series E Preferred Stock</u>	<u>Total Purchase Price (\$)</u>
Flagship Pioneering Funds(1)	1,342,882	15,000,000
Fidelity Investments(2)	895,255	10,000,000
Nestlé Health Sciences US Holdings, Inc.	581,915	6,500,000
Gurnet Point L.P.	895,255	10,000,000

- (1) Flagship Pioneering Funds consists of Flagship VentureLabs IV, LLC, Flagship Ventures Fund 2007, L.P., Flagship Ventures Fund IV, L.P., Flagship Ventures Fund IV-Rx, L.P. and Flagship Ventures Opportunity Fund I, L.P.
- (2) Fidelity Investments consists of Fidelity Select Portfolios: Biotechnology Portfolio, Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund, Fidelity Securities Fund: Fidelity Series Blue Chip Growth Fund, Fidelity Growth Company Commingled Pool, Fidelity Mt. Vernon Street Trust: Fidelity Series Growth Company Fund and FIAM Target Date Blue Chip Growth Commingled Pool.

Promissory notes

We entered into a stock repurchase agreement with Robert Connelly, our former CEO, dated May 31, 2018, in which we repurchased 168,594 shares of our common stock owned by Mr. Connelly at a cost of \$3.37 per share, resulting in an aggregate repurchase price of \$568,162, which amount was applied to settle a balance of \$568,159, including principal and accrued interest, owed to us by Mr. Connelly under a promissory note dated September 5, 2013.

Agreements with our stockholders

Investors' Rights Agreement

In connection with the initial closing of our Series E Preferred Stock financing on November 30, 2018, we entered into a fifth amended and restated investors' rights agreement, or investors' rights

agreement, with certain of our stockholders, including affiliates of Flagship Pioneering Funds, or Flagship. The investors' rights agreement, among other things:

- granted investors party thereto certain registration rights (the "Registration Rights"), including demand registration rights, short-form registration rights, and piggyback registration rights, with respect to shares of our common stock, including shares of common stock issued or issuable upon conversion of our convertible preferred stock;
- obligated us to deliver periodic financial statements (the "Information Rights") to Flagship, Fidelity Investments, Gurnet Point L.P. and its affiliates and any investor who, individually or together with affiliates, holds at least 350,000 shares of our preferred stock, each of whom we refer to as a "Major Investor"; and
- granted a right of first offer with respect to sales of our shares by us (the "Participation Rights"), subject to specified exclusions (which exclusions include the sale of the shares in connection with this offering), to Major Investors.

Certain provisions of this agreement, including the Information Rights and the Participation Rights, terminated upon the closing of our initial public offering on May 13, 2019. The Registration Rights will terminate on the earlier to occur of May 13, 2024 or, as to each holder, such earlier time at which such holder (i) can sell all shares held by it in compliance with SEC Rule 144(b)(1)(i) or (ii) holds 1% or less of our common stock and all registrable securities held by such holder can be sold in any three-month period without registration in compliance with SEC Rule 144.

Voting Agreement

In connection with the initial closing of our Series E Preferred Stock financing on November 30, 2018, we entered into a fifth amended and restated voting agreement, or the voting agreement, with certain of our stockholders, including affiliates of Flagship. The voting agreement, among other things, provided the terms for the voting of shares with respect to the constituency of our directors. The voting agreement terminated upon the closing of our initial public offering on May 13, 2019.

Right of First Refusal and Co-sale Agreement

In connection with initial closing of our Series E Preferred Stock financing on November 30, 2018, we entered into a right of first refusal and co-sale agreement with certain of our stockholders, including Flagship. The right of first refusal and co-sale agreement, among other things, granted our investors certain rights of first refusal and co-sale with respect to proposed transfers of our securities by certain stockholders and granted us certain rights of first refusal with respect to proposed transfers of our securities by certain stockholders. The right of first refusal and co-sale agreement terminated upon the closing of our initial public offering on May 13, 2019.

Agreement with Flagship Pioneering

In December 2008, we entered into a services agreement with Flagship Ventures Management, Inc., now known as Flagship Pioneering, Inc., an affiliate of the Flagship Pioneering Funds, under which Flagship Pioneering, Inc. provides us with advisory and administrative services on an as-needed basis. The agreement, which is invoiced monthly, may be terminated by either party upon 30 days' prior written notice. We paid Flagship Pioneering, Inc. an aggregate of approximately \$18,000 for the year ended December 31, 2019, for services provided under the services agreement, inclusive of the services provided under the services agreement.

Participation in our IPO

Our existing stockholders, including certain affiliates of our directors, purchased an aggregate of approximately 1,426,200 shares of our common stock in our initial public offering at the initial public offering price. The following table sets forth the number of shares of our common stock purchased by directors, executive officers and 5% stockholders and their affiliates and the aggregate purchase price paid for such shares.

Name	Shares of Common Stock Purchased	Aggregate Cash Purchase Price
Flagship Ventures Opportunities Fund I, L.P.(1)	500,000	\$ 10,000,000
Fidelity Investments	576,200	\$ 11,524,000
Nestlé Health Sciences US Holdings, Inc.	350,000	\$ 7,000,000
Total	1,426,200	\$ 28,524,000

(1) Member of the Flagship Pioneering Funds

Limitation of Liability and Indemnification of Officers and Directors

Our restated certificate of incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by the Delaware General Corporation Law, or DGCL. Consequently, our directors are not personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated bylaws require us to indemnify our directors and officers to the maximum extent not prohibited by the DGCL and allow us to indemnify other employees and agents as set forth in the DGCL. Subject to certain limitations, our amended and restated bylaws also require us to advance expenses incurred by our directors and officers for the defense of any action for which indemnification is required or permitted.

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors, officers and certain of our key employees, in addition to the indemnification provided for in our restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, require us to indemnify our directors, officers and key employees for certain expenses, including attorneys' fees, judgments, penalties, fines and settlement amounts actually incurred by these individuals in any action or proceeding arising out of their service to us or any of our subsidiaries or any other company or enterprise to which these individuals provide services at our request. Subject to certain limitations, our indemnification agreements also require us to advance expenses incurred by our directors, officers and key employees for the defense of any action for which indemnification is required or permitted.

PRINCIPAL STOCKHOLDERS

The following table sets forth information, to the extent known by us or ascertainable from public filings, with respect to the beneficial ownership of our common stock as of March 31, 2020 by:

- each of our directors;
- each of our named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own of greater-than-5.0% of our common stock.

The column entitled "Shares Beneficially Owned" is based on a total of 23,188,816 shares of our common stock outstanding as of March 31, 2020.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of March 31, 2020 are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise indicated in the table below, addresses of named beneficial owners are in care of Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139.

Name and address of beneficial owner	Shares beneficially owned	
	Number	Percentage
5% Stockholders:		
Flagship Pioneering Funds(1)	8,748,414	37.7%
FMR LLC(2)	3,211,922	13.9%
Nestlé Health Sciences US Holdings, Inc.(3)	2,368,699	10.2%
Gurnet Point L.P.(4)	1,293,891	5.6%
HarbourVest Partners L.P.(5)	1,229,034	5.3%
.		
Named executive officers and directors:		
David R. Epstein(6)	602,455	2.5%
William Hinshaw(7)	484,713	2.0%
Manu Chakravarthy, M.D., Ph.D.(8)	163,337	*
William D. Baird III(9)	33,324	*
Grégory Behar, M.B.A.(10)	11,000	*
David A. Berry, M.D., Ph.D.(11)	771,042	3.3%
Shreeram Aradhya, M.D.(12)	61,074	*
Stephen Hoge, M.D.(13)	65,288	*
Gary Pisano, Ph.D.(14)	92,433	*
Cristina M. Rondinone, Ph.D.(15)	31,185	*
Catherine A. Sohn, PharmD.(16)	6,499	*
All executive officers and directors as a group (16 persons)(17)	2,598,734	10.4%

* Represents beneficial ownership of less than one percent.

- (1) Based solely on a Schedule 13D filed with the SEC on May 23, 2019, consists of (i) 2,035,830 shares of common stock held by Flagship VentureLabs IV, LLC ("VentureLabs IV") (ii) 1,761,029 shares of common stock held by Flagship Ventures Fund 2007, L.P. ("Flagship Fund 2007"), (iii) 3,288,780 shares of common stock held by Flagship Ventures Fund IV, L.P. ("Flagship Fund IV"), (iv) 676,752 shares of common stock held by Flagship Ventures Fund IV Rx, L.P. ("Flagship Fund IV Rx" and, together with VentureLabs IV and Flagship Fund IV, the "Flagship IV Funds") and (v) 986,023 shares of common stock held by Flagship Ventures Opportunities Fund I, L.P. ("Flagship Opportunities I"). Noubar B. Afeyan, Ph.D. and Edwin M. Kania are the managers of the general partner of Flagship Fund IV and Flagship Fund 2007, and each of these individuals may be deemed to beneficially own the shares directly held by the Flagship Fund IV Funds and Flagship Fund 2007. While Mr. Kania is retired from Flagship Pioneering, he continues to serve as a manager of Flagship Fund IV GP and Flagship Fund 2007 GP. Dr. Afeyan, as the sole manager of the general partner of Flagship Opportunities I, may be deemed to beneficially own the shares directly held by Flagship Opportunities I. The address of each of the entities and individuals listed above is 55 Cambridge Parkway, Suite 800E, Cambridge, MA 02142.
- (2) Based solely on a Schedule 13G/A filed with the SEC on February 7, 2020, FMR LLC has sole voting power with respect to 950,165 shares and sole dispositive power over 3,211,922 shares and Abigail P. Johnson has sole dispositive power over 3,211,922 shares. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company ("FMR Co"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. FMR Co carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.
- (3) Based solely on a Schedule 13G filed with the SEC on February 13, 2020, (i) Nestlé Health Science US Holdings, Inc. ("NHS"), (ii) NIMCO US, Inc. ("NIMCO"), the parent of NHS, (iii) Nestlé US Holdco, Inc. ("Nestlé US Holdco"), an indirect parent of NHS, (iv) Société des Produits Nestlé S.A. ("SPN"), an indirect parent of NHS, and (v) Nestlé S.A. ("Nestlé"), the ultimate parent of each of NHS, NIMCO, Nestlé US Holdco and SPN, each has shared voting power and shared dispositive power with respect to 2,368,699 shares. The principal executive office of NHS, NIMCO and Nestlé US Holdco is 1812 North Moore Street, Arlington, VA 22209 and the principal executive office of SPN and Nestlé is Avenue Nestlé 55, CH-1800, Vevey Switzerland.
- (4) Based solely on a Schedule 13G filed with the SEC on February 7, 2020, Gurnet Point L.P. ("Gurnet Point") and Waypoint International GP LLC ("Waypoint"), the general partner of Gurnet Point, each has shared voting power and shared dispositive power with respect to 1,293,891 shares. The address of Gurnet Point and Waypoint is 55 Cambridge Parkway, Suite 401, Cambridge, Massachusetts 02142.
- (5) Based solely on a Schedule 13G filed with the SEC on February 5, 2020, consists of 1,229,034 shares common stock owned directly by SMRS-TOPE LLC. HarbourVest Partners, LLC ("HarbourVest") is the General Partner of HarbourVest Partners L.P., which is the Manager of

HVST-TOPE LLC, which is the Managing Member of SMRS-TOPE LLC. Each of HarbourVest, HarbourVest Partners L.P. and HVST-TOPE LLC may be deemed to have a beneficial interest in the shares held by SMRS-TOPE LLC. Voting and investment power over the securities owned directly by SMRS-TOPE LLC is exercised by the Investment Committee of HarbourVest. Each of HarbourVest, HarbourVest Partners L.P. and HVST-TOPE LLC and the members of the HarbourVest Investment Committee disclaim beneficial ownership of the shares held directly by SMRS-TOPE LLC. The principal business office of each HarbourVest, HarbourVest Partners L.P., HVST-TOPE LLC and SMRS-TOPE LLC is One Financial Center, Boston, MA 02111.

- (6) Consists of 68,103 shares of common stock and 534,352 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (7) Consists of 484,713 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (8) Consists of 163,337 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (9) Consists of 33,324 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (10) Consists of 11,000 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (11) Consists of 760,042 shares of common stock and 11,000 shares of common stock underlying options exercisable within 60 days of March 31, 2020. Mr. Berry, who is currently a Class I director, has not been nominated for re-election to the board of directors at the Annual Meeting, and his term will end as of the close of the Annual Meeting.
- (12) Consists of 61,074 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (13) Consists of 65,288 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (14) Consists of 92,433 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (15) Consists of 31,185 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (16) Consists of 1,000 shares of common stock and 5,499 shares of common stock underlying options exercisable within 60 days of March 31, 2020.
- (17) Also includes an aggregate of 3,665 shares of common stock and 272,719 shares of common stock underlying options exercisable within 60 days of March 31, 2020 held by Laurent Chardonnet, Stephen Mitchener, PharmD., Tony Tramontin, Ph.D., Paul Fehlner, J.D., Ph.D., and Heidi King-Jones, J.D., LLM.

DELINQUENT SECTION 16(a) REPORTS

Section 16(a) of the Exchange Act requires our directors, executive officers, and persons holding more than 10% of our common stock to report their initial ownership of the common stock and other equity securities and any changes in that ownership in reports that must be filed with the SEC. The SEC has designated specific deadlines for these reports, and we must identify in this proxy statement those persons who did not file these reports when due.

Based solely on a review of reports furnished to us, or written representations from reporting persons, we believe all directors, executive officers, and 10% owners timely filed all reports regarding transactions in our securities required to be filed for 2019 by Section 16(a) under the Exchange Act, except for a Form 3 for Nestlé Health Sciences US Holdings, Inc. and a Form 4 for David R. Epstein.

REPORT OF THE AUDIT COMMITTEE

The audit committee is appointed by the board of directors to assist the board of directors in fulfilling its oversight responsibilities with respect to (1) the integrity of Axcella's financial statements and financial reporting process and systems of internal controls regarding finance, accounting, and compliance with legal and regulatory requirements, (2) the qualifications, independence, and performance of Axcella's independent registered public accounting firm, (3) the performance of Axcella's internal audit function, if any, and (4) other matters as set forth in the charter of the audit committee approved by the board of directors.

Management is responsible for the preparation of Axcella's financial statements and the financial reporting process, including its system of internal control over financial reporting and its disclosure controls and procedures. The independent registered public accounting firm is responsible for performing an audit of Axcella's financial statements in accordance with the standards of the Public Company Accounting Oversight Board (PCAOB) and issuing a report thereon. The audit committee's responsibility is to monitor and oversee these processes.

In connection with these responsibilities, the audit committee reviewed and discussed with management and the independent registered public accounting firm the audited consolidated financial statements of Axcella for the fiscal year ended December 31, 2019. The audit committee also discussed with the independent registered public accounting firm the matters required to be discussed by the PCAOB's Auditing Standard No. 1301, *Communication with Audit Committees*. In addition, the audit committee received written communications from the independent registered public accounting firm confirming their independence as required by the applicable requirements of the PCAOB and has discussed with the independent registered public accounting firm their independence.

Based on the reviews and discussions referred to above, the audit committee recommended to the board of directors that the audited consolidated financial statements of Axcella be included in Axcella's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, that was filed with the SEC. The information contained in this report shall not be deemed to be (1) "soliciting material," (2) "filed" with the SEC, (3) subject to Regulations 14A or 14C of the Exchange Act, or (4) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

THE AUDIT COMMITTEE OF THE BOARD OF
DIRECTORS OF AXCELLA HEALTH INC.

William D. Baird III, Chairperson
Gary Pisano, Ph.D.
Grégory Behar

April 3, 2020

HOUSEHOLDING OF PROXY MATERIALS

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our documents, including the annual report to stockholders and proxy statement, may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary, telephone: (857) 320-2200. If you want to receive separate copies of the proxy statement or annual report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

STOCKHOLDER PROPOSALS

A stockholder who would like to have a proposal considered for inclusion in our 2021 proxy statement must submit the proposal in accordance with the procedures outlined in Rule 14a-8 of the Exchange Act so that it is received by us no later than December 23, 2020. However, if the date of the 2021 Annual Meeting of Stockholders is changed by more than 30 days from the date of the previous year's meeting, then the deadline is a reasonable time before we begin to print and send our proxy statement for the 2021 Annual Meeting of Stockholders. SEC rules set standards for eligibility and specify the types of stockholder proposals that may be excluded from a proxy statement. Stockholder proposals should be addressed to Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

If a stockholder wishes to propose a nomination of persons for election to our board of directors or present a proposal at an annual meeting but does not wish to have the proposal considered for inclusion in our proxy statement and proxy card, our bylaws establish an advance notice procedure for such nominations and proposals. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely notice in proper form to our corporate secretary of the stockholder's intention to bring such business before the meeting.

The required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. For stockholder proposals to be brought before the 2021 Annual Meeting of Stockholders, the required notice must be received by our corporate secretary at our principal executive offices no earlier than January 20, 2021, and no later than February 19, 2021. Stockholder proposals and the required notice should be addressed to Axcella Health Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

OTHER MATTERS

Our board of directors does not know of any other matters to be brought before the Annual Meeting. If any other matters not mentioned in this proxy statement are properly brought before the meeting, the individuals named in the enclosed proxy intend to use their discretionary voting authority under the proxy to vote the proxy in accordance with their best judgment on those matters.



Your vote matters – here's how to vote!

You may vote online or by phone instead of mailing this card.



Votes submitted electronically must be received by 11:59pm, ET, on May 19, 2020

Online

Go to www.investorvote.com/AXLA or scan the QR code – login details are located in the shaded bar below.



Phone

Call toll free 1-800-652-VOTE (8683) within the USA, US territories and Canada



Save paper, time and money!
Sign up for electronic delivery at
www.investorvote.com/AXLA

Using a **black ink** pen, mark your votes with an **X** as shown in this example.
Please do not write outside the designated areas.



2020 Annual Meeting Proxy Card

▼ IF VOTING BY MAIL, SIGN, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

A Proposals – The Board of Directors recommend a vote **FOR** the nominee listed and **FOR** Proposal 2.

1. Election of Director:

01 - David R. Epstein

For Withhold
☐ ☐



2. To ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020

For Against Abstain
☐ ☐ ☐

B Authorized Signatures – This section must be completed for your vote to count. Please date and sign below.

Please sign exactly as name(s) appears hereon. Joint owners should each sign. When signing as attorney, executor, administrator, corporate officer, trustee, guardian, or custodian, please give full title.

Date (mm/dd/yyyy) – Please print date below:

Signature 1 – Please keep signature within the box.

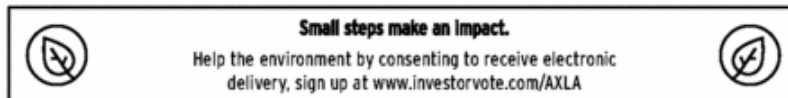
Signature 2 – Please keep signature within the box.



11 B V



Important notice regarding the Internet availability of proxy materials for the Annual Meeting of Stockholders.
The material is available at: www.investorvote.com/AXLA



▼ IF VOTING BY MAIL, SIGN, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

Axcella Health Inc.



Notice of 2020 Annual Meeting of Stockholders

Proxy Solicited by Board of Directors for Annual Meeting – May 20, 2020

William Hinshaw and Laurent Chardonnet, or any of them, each with the power of substitution, are hereby authorized to represent and vote the shares of the undersigned, with all the powers which the undersigned would possess if personally present, at the Annual Meeting of Stockholders of Axcella Health Inc. to be held on May 20, 2020 or at any postponement or adjournment thereof.

Shares represented by this proxy will be voted as directed by the stockholder. If no such directions are indicated, the Proxies will have authority to vote FOR the election of the nominee and FOR Item 2.

In their discretion, the Proxies are authorized to vote upon such other business as may properly come before the meeting.

(Items to be voted appear on reverse side)

C Non-Voting Items

Change of Address – Please print new address below.

Comments – Please print your comments below.

