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

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**SCHEDULE 14A**

**Proxy Statement Pursuant to Section 14(a) of the  
Securities Exchange Act of 1934**

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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 Pursuant to § 240.14a-12

**Bionano Genomics, 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.

Title of each class of securities to which transaction applies:

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Aggregate number of securities to which transaction applies:

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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):

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- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid:

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Form, Schedule or Registration Statement No.:

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Filing Party:

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Date Filed:

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**BIONANO GENOMICS, INC.**

**9540 Towne Centre Drive, Suite 100  
San Diego, CA 92121**



**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held On June 6, 2019**

Dear Stockholder:

You are cordially invited to attend the 2019 Annual Meeting of Stockholders (the "Annual Meeting") of Bionano Genomics, Inc., a Delaware corporation (the "Company"). The meeting will be held at the Company's executive offices located at 9540 Towne Centre Drive, San Diego, CA 92121, on Thursday, June 6, 2019 at 10:00 a.m. local time for the following purposes:

1. To elect the two nominees for Class I director named in the accompanying proxy statement, each to hold office until the 2022 Annual Meeting of Stockholders or until a successor is duly elected and qualified or until the director's earlier death, resignation or removal.
2. To ratify the selection of Deloitte & Touche LLP by the Audit Committee of the Board of Directors to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019.
3. To conduct any other business properly brought before the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

The record date for the Annual Meeting is April 15, 2019. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

**Important Notice Regarding the Availability of Proxy Materials for the Shareholders' Meeting to Be Held on Thursday, June 6, 2019 at 10:00 a.m. local time at 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.**

The proxy statement and annual report to shareholders are available at [www.proxydocs.com/BNGO](http://www.proxydocs.com/BNGO).

By Order of the Board of Directors,

/s/ Heather Adams

Heather Adams

Secretary

San Diego, California

April 26, 2019

**You are cordially invited to attend the meeting in person. Whether or not you expect to attend the meeting, please complete, date, sign and return the proxy mailed to you, or vote over the telephone or the internet as instructed in these materials, as promptly as possible in order to ensure your representation at the meeting. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.**

**BIONANO GENOMICS, INC.**  
**9540 Towne Centre Drive, Suite 100**  
**San Diego, CA 92121**

**PROXY STATEMENT**  
**FOR THE 2019 ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held on June 6, 2019**

**QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING**

**Why did I receive a notice regarding the availability of proxy materials on the internet?**

Pursuant to rules adopted by the Securities and Exchange Commission (the “SEC”), we have elected to provide access to our proxy materials over the internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials (the “Notice”) because the Board of Directors (sometimes referred to as the “Board”) of Bionano Genomics, Inc. (sometimes referred to as “we,” “us,” the “Company” or “Bionano”) is soliciting your proxy to vote at the 2019 annual meeting of stockholders (the “Annual Meeting”), including at any adjournments or postponements of the Annual Meeting. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. Instructions on how to access the proxy materials over the internet or to request a printed copy may be found in the Notice.

We intend to mail the Notice on or about April 26, 2019 to all stockholders of record entitled to vote at the Annual Meeting.

**Will I receive any other proxy materials by mail?**

We may send you a proxy card, along with a second Notice, on or after May 6, 2019.

**How do I attend the Annual Meeting?**

The Annual Meeting will be held on Thursday, June 6, 2019 at 10:00 a.m. local time at 9540 Towne Centre Drive, San Diego, California 92121 in the Irvine Conference Room. Information on how to vote in person at the Annual Meeting is discussed below.

**Who can vote at the Annual Meeting?**

Only stockholders of record at the close of business on April 15, 2019 will be entitled to vote at the Annual Meeting. On this record date, there were 10,845,020 shares of common stock outstanding and entitled to vote.

*Stockholder of Record: Shares Registered in Your Name*

If on April 15, 2019 your shares were registered directly in your name with Bionano’s transfer agent, American Stock Transfer & Trust Company, LLC, then you are a stockholder of record. As a stockholder of record, you may vote in person at the Annual Meeting or vote by proxy. Whether or not you plan to attend the Annual Meeting, we urge you to fill out and return the proxy card that may be mailed to you, or vote by proxy over the telephone or on the internet as instructed below to ensure your vote is counted.

*Beneficial Owner: Shares Registered in the Name of a Broker or Bank*

If on April 15, 2019 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in “street name” and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker, bank or other agent regarding how to vote the shares in your account. You are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the Annual Meeting unless you request and obtain a valid proxy from your broker, bank or other agent.

## What am I voting on?

There are two matters scheduled for a vote:

- Proposal 1: Election of the two Class I directors named herein, each to hold office until the 2022 annual meeting of stockholders or until a successor is duly elected and qualified or until the director's earlier death, resignation or removal; and
- Proposal 2: Ratification of the selection of Deloitte & Touche LLP by the Audit Committee of the Board of Directors (the "Audit Committee") to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019.

## What if another matter is properly brought before the Annual Meeting?

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

## How do I vote?

You may either vote "For" all the nominees to the Board or you may "Withhold" your vote for any nominee you specify. For each of the other matters to be voted on, you may vote "For" or "Against" or abstain from voting.

The procedures for voting are as follows:

### *Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record, you may vote in person at the Annual Meeting, vote by proxy over the telephone, vote by proxy through the internet or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote in person even if you have already voted by proxy.

- **VOTE BY INTERNET:** To vote through the internet, go to [www.proxypush.com/BNGO](http://www.proxypush.com/BNGO) to complete an electronic proxy card. You will be asked to provide the company number and control number from the Notice. Your internet vote must be received by 11:59 p.m., Eastern Time on June 5, 2019 to be counted.
- **VOTE BY PHONE:** To vote over the telephone, dial toll-free 866-230-6415 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the Notice. Your telephone vote must be received by 11:59 p.m., Eastern Time on June 5, 2019 to be counted.
- **VOTE BY PROXY CARD:** To vote using the proxy card, simply complete, sign and date the proxy card that may be delivered to you and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.
- **VOTE IN PERSON:** To vote in person, come to the Annual Meeting and we will give you a ballot when you arrive.

*Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If you are a beneficial owner of shares registered in the name of your brokerage firm, bank, dealer or other agent, you should have received the Notice containing voting instructions from that organization rather than from Bionano. Simply follow the voting instructions in the Notice to ensure that your vote is counted. Alternatively, you may vote by telephone or over the internet as instructed by your broker or bank. To vote in person at the Annual Meeting, you must obtain a valid proxy from your brokerage firm, bank, dealer or other agent. Follow the instructions from your broker, bank or other agent, or contact that organization to request a proxy form.

**Internet proxy voting may be provided to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your internet access, such as usage charges from internet access providers and telephone companies.**

**How many votes do I have?**

On each matter to be voted upon, you have one vote for each share of common stock you own as of April 15, 2019.

**If I am a stockholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?**

If you are a stockholder of record and do not vote by completing your proxy card, by telephone, through the internet or in person at the Annual Meeting, your shares will not be voted.

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the election of the two nominees for Class I director and “For” the ratification of the Audit Committee’s selection of Deloitte & Touche LLP to serve as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2019. If any other matter is properly presented at the Annual Meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

**If I am a beneficial owner of shares held in street name and I do not provide my broker or bank with voting instructions, what happens?**

If you are a beneficial owner and do not instruct your brokerage firm, bank, dealer or other agent how to vote your shares, the question of whether your broker or nominee will still be able to vote your shares depends on whether the particular proposal is considered to be a routine matter under applicable rules. Brokers and nominees can use their discretion to vote uninstructed shares with respect to matters that are considered to be routine under applicable rules, but not with respect to non-routine matters. Under applicable rules and interpretations, non-routine matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported. Accordingly, without your instructions your broker or nominee may not vote your shares on Proposal 1, but may vote your shares on Proposal 2.

*If you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.*

**Who is paying for this proxy solicitation?**

Bionano will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks, dealers or other agents for the cost of forwarding proxy materials to beneficial owners.

### **What does it mean if I receive more than one Notice?**

If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on each Notice to ensure that all of your shares are voted.

### **Can I change my vote after submitting my proxy?**

#### *Stockholder of Record: Shares Registered in Your Name*

Yes. You can revoke your proxy at any time before the final vote at the Annual Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date.
- You may grant a subsequent proxy by telephone or through the internet.
- You may send a timely written notice that you are revoking your proxy to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.
- You may attend the Annual Meeting and vote in person. Simply attending the Annual Meeting will not, by itself, revoke your proxy.

Your most recent proxy card or telephone or internet proxy is the one that is counted.

#### *Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If your shares are held by your brokerage firm, bank, dealer or other agent as a nominee, you should follow the instructions provided by your broker, bank or other agent.

### **When are stockholder proposals and director nominations due for next year's Annual Meeting?**

To be considered for inclusion in the Company's proxy materials for next year's annual meeting, your proposal must be submitted in writing by December 28, 2019, to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121. If you wish to submit a proposal (including a director nomination) that is not to be included in the Company's proxy materials for next year's annual meeting, you must do so between February 6, 2019 and March 8, 2019. You are also advised to review the Company's amended and restated bylaws, which contain additional requirements relating to advance notice of stockholder proposals and director nominations.

### **What are "broker non-votes"?**

When a beneficial owner of shares held in "street name" does not give instructions to the brokerage firm, bank, dealer or other agent holding the shares as to how to vote on matters deemed to be non-routine under applicable rules, the broker or nominee cannot vote the shares. These unvoted shares are counted as "broker non-votes."

***As a reminder, if you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your brokerage firm, bank, dealer or other agent by the deadline provided in the materials you receive from your brokerage firm, bank, dealer or other agent.***

### **How are votes counted?**

Votes will be counted by the inspector of election appointed for the Annual Meeting, who will separately count, for the proposal to elect directors, votes "For," "Withhold" and broker non-votes; and, for the proposal to ratify the Audit Committee's selection of Deloitte & Touche LLP to serve as our independent public accounting firm, votes "For" and "Against," abstentions and, if applicable, broker non-votes. Abstentions will have no effect on Proposal 1. Abstentions will be counted towards the vote total for Proposal 2 and will have the same effect as "Against" votes. Broker non-votes will be counted towards the presence of a quorum but will not be counted towards the vote total for any proposal.

### **How many votes are needed to approve each proposal?**

- For Proposal 1, the election of directors, the three nominees receiving the most “For” votes from the holders of shares present in person or represented by proxy and entitled to vote on the election of directors will be elected. Only votes “For” will affect the outcome.
- To be approved, Proposal 2, the ratification of the Audit Committee’s selection of Deloitte & Touche LLP to serve as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2019, must receive “For” votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote on the matter. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Broker non-votes, if any, will have no effect.

### **What is the quorum requirement?**

A quorum of stockholders is necessary to hold the Annual Meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present at the Annual Meeting in person or represented by proxy. On the record date, there were 10,845,020 shares outstanding and entitled to vote. **Thus, the holders of 5,422,511 shares must be present in person or represented by proxy at the Annual Meeting to have a quorum.**

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your brokerage firm, bank, dealer or other agent) or if you vote in person at the Annual Meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares present at the Annual Meeting in person or represented by proxy may adjourn the Annual Meeting to another date.

### **How can I find out the results of the voting at the Annual Meeting?**

Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.



**PROPOSAL 1**  
**ELECTION OF DIRECTORS**

The Board is divided into three classes. Each class consists, as nearly as possible, of one-third of the total number of directors, and each class has a three-year term. Vacancies on the Board may be filled only by persons elected by a majority of the remaining directors. A director elected by the Board to fill a vacancy in a class, including vacancies created by an increase in the number of directors, shall serve for the remainder of the full term of that class and until the director's successor is duly elected and qualified.

The Board presently has seven members. There are two Class I directors whose term of office expires in 2019: R. Erik Holmlin, Ph.D. and David L. Barker, Ph.D. Proxies may not be voted for a greater number of persons than the number of nominees named in this proxy statement. Dr. Holmlin and Dr. Barker, each current directors of the Company, were each recommended for nomination to the Board at the Annual Meeting by the Nominating and Corporate Governance Committee of the Board. If elected at the Annual Meeting, each of these nominees would serve until the 2022 Annual Meeting of Stockholders and until his successor has been duly elected and qualified, or, if sooner, until the director's death, resignation or removal. It is the Company's policy to invite directors and nominees for director to attend the Annual Meeting.

Directors are elected by a plurality of the votes of the holders of shares present in person or represented by proxy and entitled to vote on the election of directors. Accordingly, the two nominees receiving the highest number of affirmative votes will be elected. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of Dr. Holmlin and Dr. Barker. If any nominee becomes unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee will instead will be voted for the election of a substitute nominee proposed by the Company. Each of Dr. Holmlin and Dr. Barker has agreed to serve if elected. The Company's management has no reason to believe that any nominee will be unable to serve.

**NOMINEES**

The Nominating and Corporate Governance Committee seeks to assemble a board that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial expertise and high-level management experience necessary to oversee and direct the Company's business. To that end, the Committee has identified and evaluated nominees in the broader context of the Board's overall composition, with the goal of recruiting members who complement and strengthen the skills of other members and who also exhibit integrity, collegiality, sound business judgment and other qualities that the Nominating and Corporate Governance Committee views as critical to the effective functioning of the Board. To provide a mix of experience and perspective on the Board, the Committee also takes into account geographic, gender, age, and ethnic diversity. The brief biographies below include information, as of the date of this proxy statement, regarding the specific and particular experience, qualifications, attributes or skills of each director or nominee that led the Nominating and Corporate Governance Committee to recommend that nominee should continue to serve on the Board. However, each of the members of the Nominating and Corporate Governance Committee may have a variety of reasons why he believes a particular person would be an appropriate nominee for the Board, and these views may differ from the views of other members.

The following table sets forth, for the Class I nominees and our other directors who will continue in office after the Annual Meeting, their ages and position/office held with us as of the date of this proxy statement:

<u>Name</u>	<u>Age</u>	<u>Position/Office Held With ShotSpotter</u>
<b><i>Class I directors for election at the Annual Meeting</i></b>		
R. Erik Holmlin, Ph.D.	51	President, Chief Executive Officer and Director
David L. Barker, Ph.D.(1)(2)	77	Chairman, Director
<b><i>Class II directors, whose terms will expire at the 2020 annual meeting of stockholders</i></b>		
Albert Luderer, Ph.D.(2)(3)	70	Director
Quan Zhou(3)	44	Director
<b><i>Class III directors, whose terms will expire at the 2021 annual meeting of stockholders</i></b>		
Darren Cai, Ph.D.(1)	53	Director
Christopher Twomey(2)	59	Director
Junfeng Wang(1)(3)	44	Director

(1) Member of the Compensation Committee of the Board (the “Compensation Committee”)

(2) Member of the Audit Committee of the Board (the “Audit Committee”)

(3) Member of the Nominating and Corporate Governance Committee of the Board (the “Nominating and Corporate Governance Committee”)

Set forth below is biographical information for the nominees and each person whose term of office as a director will continue after the Annual Meeting. This includes information regarding each director’s experience, qualifications, attributes or skills that led our Board to recommend them for board service.

#### **CLASS I DIRECTOR NOMINEES FOR ELECTION FOR A THREE-YEAR TERM EXPIRING AT THE 2022 ANNUAL MEETING**

**R. Erik Holmlin, Ph.D.** Dr. Holmlin has served as our President and Chief Executive Officer and as a member of our Board since January 2011. From June 2010 to February 2011, Dr. Holmlin served as president and Chief Executive Officer of GenVault Corporation, a private biosample management solutions company. Previously, Dr. Holmlin held positions as an entrepreneur in residence at Domain Associates, a dedicated life sciences venture capital firm; Chief Commercial Officer of Exiqon A/S, a publicly traded RNA research solutions company; founder and executive at GeneOhm Sciences, which was acquired by Becton Dickinson and Company; and a National Institutes of Health postdoctoral fellow at Harvard University. Until June 2016, Dr. Holmlin served as a director of Nanosphere, Inc., a publicly traded molecular diagnostic company, which was subsequently acquired by Luminex Corporation, a publicly traded biological testing company. Dr. Holmlin received his bachelor’s degree in chemistry from Occidental College, his Ph.D. in chemistry from the California Institute of Technology and MBAs from University of California, Berkeley and Columbia University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Holmlin’s over 17 years of experience in the life sciences and healthcare industries, which includes the areas of technology development, product commercialization and venture financing, qualifies him to serve as a member of our Board.

**David L. Barker, Ph.D.** Dr. Barker has served on our Board since May 2010, and as Chairman of our Board since August 2016. Dr. Barker also serves as a member of the board of directors of AmideBio, Singular Genomics Systems, and Aspen Neuroscience. He is also a scientific advisor to MiNDERA Corp. and Luna DNA. He served as Vice President and Chief Scientific Officer at Illumina, Inc., from 2000 to 2007, and on the Illumina scientific advisory board until May 2016. He was previously on the boards of NextBio, which was acquired by Illumina in 2013, ProteinSimple, which was acquired by Bio-Techne in 2014, Zephyrus Biosciences, Inc., acquired by Bio-Techne in 2016, IntegenX, acquired by Thermo Fisher Scientific in 2018, and Integrated Diagnostics, acquired by Biodesix in 2018. Dr. Barker served from 1998 to 2000 as Vice President and Chief Science Advisor at Amersham Biosciences, now part of General Electric. From 1988 to 1998, Dr. Barker held senior positions, including Vice President of Research and Business Development, at Molecular Dynamics, Inc., until the acquisition of Molecular Dynamics by Amersham. In his academic career, Dr. Barker conducted interdisciplinary research in neurobiology as a postdoctoral fellow at Harvard Medical School, Assistant Professor at the University of Oregon and Associate Professor at Oregon State University. Dr. Barker holds a BS with honors in Chemistry from the California Institute of Technology and a PhD in Biochemistry from Brandeis University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Barker’s extensive experience in managing and leading early stage and established companies within the clinical diagnostic and biotechnology industries qualifies him to serve as a member of our Board.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE “FOR” EACH NAMED NOMINEE.**

## CLASS II DIRECTORS CONTINUING IN OFFICE UNTIL THE 2020 ANNUAL MEETING

**Albert Luderer, Ph.D.** Dr. Luderer has served on our Board since October 2011. Dr. Luderer currently serves as the Chief Executive Officer and a member of the board of directors of Indi Molecular, Inc., a synthetic antibody technology company, and as the Executive Chairman of the board of directors of Prostate Management Diagnostics Inc. Dr. Luderer has over 30 years of experience in executive leadership roles in the areas of technology development, operations and business development. Dr. Luderer received his bachelor's degree in zoology from Drew University and his MS in immunochemistry and Ph.D. in immunogenics from Rutgers University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Luderer's experience in the biotechnology sector, with special focuses on technology, business development and commercialization, qualifies him to serve as a member of our Board.

**Quan Zhou.** Mr. Zhou has served on our Board since February 2018. Since April 2016, Mr. Zhou has served as an Executive Director at Legend Capital, and held previous positions as Director from April 2015 and Vice President from October 2012. During his tenure at Legend Capital, Mr. Zhou has focused on the Medtech and diagnostics industries. Mr. Zhou received his bachelor's degree in Biology from the University of Science and Technology in China, his Masters in Neuroscience from the National University of Singapore, and his MBA from the China Europe International Business School.

Our Nominating and Corporate Governance Committee and Board believe that Mr. Zhou's extensive experience in investment in the healthcare sector qualifies him to serve as a member of our Board.

## CLASS III DIRECTORS CONTINUING IN OFFICE UNTIL THE 2021 ANNUAL MEETING

**Darren Cai, Ph.D.** Dr. Cai has served on our Board since September 2014. From April 2015 to April 2018, Dr. Cai served as a Managing Director of Legend Capital, a Chinese early stage and expansion stage venture capital firm, and held a previous position as a Director of Legend Capital from October 2012. Dr. Cai also served as Chief Financial Officer of Beijing Genomics Institute, a genome sequencing company, from 2014 to 2016. During his tenure at Legend Capital, Dr. Cai focused on investment opportunities in the healthcare sector and led investment in more than 20 companies located in the U.S. and China. In addition, Dr. Cai previously served on the board of directors of Beijing Genomics Institute. Dr. Cai received his bachelor's degree in biophysics from the University of Science and Technology of China, MBA from Yale University and Ph.D. in vision science from the University of California, Berkeley.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Cai's extensive experience in managing and developing investment and business opportunities within the healthcare sector qualifies him to serve as a member of our Board.

**Christopher J. Twomey** has served on our Board since July 2018. Since August 2013, Mr. Twomey has served as a director and Chairman of the Audit Committee of Tandem Diabetes Care, Inc., a medical device company. From March 1990 to June 2007, Mr. Twomey served in various roles, including as Senior Vice President, Finance and Chief Financial Officer, at Biosite Incorporated, a medical diagnostics company. From October 1981 to March 1990, Mr. Twomey served as an audit manager for Ernst & Young, LLP. From March 2006 to November 2018, Mr. Twomey served as a director of Senomyx, Inc., a taste technologies company that was acquired by Firmenich in November 2018. From July 2006 to March 2014, Mr. Twomey also served as a director and Chairman of the Audit Committee of Cadence Pharmaceuticals, Inc., a specialty pharmaceutical company that was acquired by Mallinckrodt plc in 2014. Mr. Twomey received his bachelors degree in Business Economics from the University of California at Santa Barbara.

Our Nominating and Corporate Governance Committee and Board believe that Mr. Twomey's substantial leadership skills and expertise in accounting and financial reporting qualifies him to serve as a member of our Board, and that such skills are especially valuable in his role as Chairman of our Audit Committee.

**Junfeng Wang.** Mr. Wang has served on our Board since February 2018. Since October 2009, Mr. Wang has served as a Managing Director of Legend Capital, and held previous positions with Legend Capital as Executive Director from October 2007, Senior Vice President from October 2006 and Vice President from October 2005. Through his tenure at Legend Capital, Mr. Wang has worked in the healthcare and chemical industries, developing research and investment expertise in growth capital investment. Mr. Wang received his bachelor's degree in polymer chemistry from Lanzhou University, a research university located in China, and his MBA from McMaster University, a research university located in Canada.

Our Nominating and Corporate Governance Committee and Board believe that Mr. Wang's extensive experience as a venture capital investor in the healthcare and chemical industries qualifies him to serve as a member of our Board.

## **INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE**

### **INDEPENDENCE OF THE BOARD OF DIRECTORS**

As required under the Nasdaq Stock Market ("Nasdaq") listing standards, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. Our Board consults with our counsel to ensure that the Board's determinations are consistent with relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent listing standards of Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of their family members, and the Company, its senior management and its independent auditors, the Board has affirmatively determined that each of Dr. Barker, Dr. Cai, Dr. Luderer, Mr. Wang, Mr. Twomey and Mr. Zhou are independent directors within the meaning of the applicable Nasdaq listing standards. In making this determination, the Board found that none of these directors had a material or other disqualifying relationship with the Company.

### **BOARD LEADERSHIP STRUCTURE**

The Board has an independent Chairman, Dr. Barker, who has authority, among other things, to call and preside over Board meetings, including meetings of the independent directors, to set meeting agendas and to determine materials to be distributed to the Board. Accordingly, the Chairman has substantial ability to shape the work of the Board. We believe that separation of the positions of Chairman and Chief Executive Officer reinforces the independence of the Board in its oversight of our business and affairs. In addition, we have a separate chair for each committee of the Board. The chair of each committee is expected to report to the Board from time to time, or whenever so requested by the Board, on the activities of his or her committee in fulfilling its responsibilities as detailed in its respective charter or specify any shortcomings should that be the case. In addition, we believe that having an independent Chairman creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board to monitor whether management's actions are in the best interests of us and our stockholders. As a result, we believe that having an independent Board Chairman can enhance the effectiveness of the Board as a whole.

### **ROLE OF THE BOARD IN RISK OVERSIGHT**

Risk is inherent with every business, and we face a number of risks, including strategic, financial, business and operational, legal and compliance, cybersecurity and reputational. One of the key functions of our Board is informed oversight of our risk management process. Our Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various standing committees of the Board that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure and our Audit Committee has the responsibility to consider and discuss our major financial risk exposures and the steps that management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The Audit Committee also monitors compliance with legal and regulatory requirements, in addition to oversight of the performance of our internal audit function. Our Nominating and Corporate

Governance Committee monitors the effectiveness of our corporate governance guidelines, including whether they are successful in preventing illegal or improper liability-creating conduct. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. It is the responsibility of the committee chairs to report findings regarding material risk exposures to the Board as quickly as possible. The Chairman coordinates between the Board and management with regard to the determination and implementation of responses to any problematic risk management issues.

#### MEETINGS OF THE BOARD OF DIRECTORS

The Board met eight times during the last fiscal year. Each Board member attended 75% or more of the aggregate number of meetings of the Board and of the committees on which he served, held during the portion of the last fiscal year for which he was a director or committee member.

As required under the Nasdaq listing standards, during the period in 2018 when we were a public company, our independent directors met four times in regularly scheduled executive sessions at which only independent directors were present.

#### INFORMATION REGARDING COMMITTEES OF THE BOARD OF DIRECTORS

The Board has three standing committees: an Audit Committee; a Compensation Committee; and a Nominating and Corporate Governance Committee. The following table provides membership and meeting information for fiscal year 2018 for each of these committees of the Board:

<u>Name</u>	<u>Audit</u>	<u>Compensation</u>	<u>Nominating and Corporate Governance</u>
R. Erik Holmlin, Ph.D.			
David L. Barker, Ph.D.	X	X*	
Darren Cai, Ph.D.		X	
Albert Luderer, Ph.D.	X		X*
Junfeng Wang		X	X
Christopher Twomey	X*		
Quan Zhou			X
Number of meetings in fiscal year 2018	2	2	—

\* Committee Chairperson

Below is a description of each committee of the Board.

Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The Board has determined that each member of each committee meets the applicable Nasdaq rules and regulations regarding “independence” and each member is free of any relationship that would impair his or her individual exercise of independent judgment with regard to the Company.

#### Audit Committee

The Audit Committee was established by the Board in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), to oversee the Company’s corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The primary purpose of the Audit Committee is to discharge the responsibilities of the Board with respect to the Company’s corporate accounting and financial reporting processes, systems of internal control over financial reporting and financial-statement audits, as well as overseeing the Company’s independent registered accounting firm. Specific responsibilities of the Audit Committee include, among other things:

- helping the Board oversee the Company’s corporate accounting and financial reporting processes;

- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit the Company’s financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes our internal quality control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving, or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

The Audit Committee is composed of three directors: Mr. Twomey, Dr. Luderer and Dr. Barker. The Audit Committee met twice during the fiscal year. The Board has adopted a written Audit Committee charter that is available to stockholders on the Company’s website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2018.

The Board reviews the Nasdaq listing standards definition of independence for Audit Committee members on an annual basis and has determined that all members of the Company’s Audit Committee are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the Nasdaq listing standards and Rule 10A-3(b)(1) of the Exchange Act).

Each member of the Audit Committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, the Board has examined each Audit Committee member’s scope of experience and the nature of their employment in the corporate finance sector.

The chair of the Audit Committee is Mr. Twomey, who the Board has determined is an “audit committee financial expert” as defined in applicable SEC rules. The Board made a qualitative assessment of Mr. Twomey’s level of knowledge and experience based on a number of factors, including his formal education, prior experience, business acumen and independence. In addition to the Company’s Audit Committee, Mr. Twomey also serves on the Audit Committee of Tandem Diabetes Care, Inc. The Board has determined that this simultaneous service does not impair Mr. Twomey’s ability to effectively serve on the Audit Committee.

#### **Report of the Audit Committee of the Board of Directors**

The Audit Committee has reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2018 with management of the Company. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed by Auditing Standard No. 1301, *Communications with Audit Committees*, as adopted by the Public Company Accounting Oversight Board (“PCAOB”). The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent registered accountants firm’s communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm the accounting firm’s independence. Based on the foregoing, the Audit Committee has recommended to the Board that the audited financial statements be included in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

Mr. Twomey, Chair  
 Dr. Luderer  
 Dr. Barker

\* The material in this report is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference in any filing of the Company under the Exchange Act or the Securities Act of 1933, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

### **Compensation Committee**

The Compensation Committee is composed of three directors: Dr. Barker, Dr. Cai and Mr. Wang. The Board has determined that each member of the Compensation Committee is independent under the Nasdaq listing standards, a “non-employee director” as defined in Rule 16b-3 promulgated under the Exchange Act and an “outside director” as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended. The Compensation Committee met twice during the fiscal year. The Board has adopted a written Compensation Committee charter that is available to stockholders on the Company’s website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2018.

The Compensation Committee of the Board acts on behalf of the Board to review, adopt or recommend to the Board for adoption and oversee the Company’s compensation strategy, policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of the Compensation Committee include, among other things:

- reviewing and approving the compensation of our chief executive officer, other executive officers and senior management;
- reviewing and recommending to the Board the compensation paid to our directors;
- reviewing and approving the compensation arrangements with our executive officers and other senior management;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating, incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management;
- reviewing, evaluating and recommending to the Board succession plans for our executive officers; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

### *Compensation Committee Processes and Procedures*

Typically, the Compensation Committee meets approximately three times per year and with greater frequency if necessary. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with management. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer does not participate in and is not present during, any deliberations or determinations of the Compensation Committee regarding his compensation or individual performance objectives. The charter of the Compensation Committee grants the Compensation Committee full access to all books, records, facilities and personnel of the Company. In addition, under its charter, the Compensation Committee has the authority to obtain, at the expense of the Company, advice and assistance from compensation consultants and internal and external legal, accounting or other advisors and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. The Compensation Committee has direct responsibility for the oversight of the work of any consultants or advisers engaged for the purpose of advising the Compensation Committee. In particular, the

Compensation Committee has the sole authority to retain, in its sole discretion, compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms. Under its charter, to the extent required by the SEC and Nasdaq rules, the Compensation Committee may select, or receive advice from, a compensation consultant, legal counsel or other adviser to the compensation committee, other than in-house legal counsel and certain other types of advisers, only after taking into consideration six factors, prescribed by the SEC and Nasdaq, that bear upon the adviser's independence; however, there is no requirement that any adviser be independent.

During the past fiscal year, after taking into consideration the six factors prescribed by the SEC and Nasdaq described above, the Compensation Committee engaged Radford, as its compensation consultant. Our Compensation Committee identified Radford based on Radford's general reputation in the industry. The Compensation Committee requested that Radford:

- evaluate the efficacy of the Company's compensation strategy and practices in supporting and reinforcing the Company's long-term strategic goals;
- assist in refining the Company's compensation strategy and in developing and implementing an executive compensation program to execute that strategy;
- develop a comparative group of companies and perform analyses of competitive performance and compensation levels for that group; and
- examine competitiveness of equity compensation and retention value of the equity program.

The Compensation Committee holds one or more meetings during the first quarter of the year to discuss and make recommendations to the Board for annual compensation adjustments, annual bonuses, annual equity awards, and new corporate performance objectives. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of the Company's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Compensation Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee, which determines recommendations to the Board regarding any adjustments to his compensation as well as awards to be granted. For all executives and directors as part of its deliberations, the Compensation Committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, executive and director stock ownership information, company stock performance data, analyses of historical executive compensation levels and current Company-wide compensation levels, compensation data from comparative companies, compensation surveys, and recommendations of any compensation consultant, if applicable.

#### **Nominating and Corporate Governance Committee**

The Nominating and Corporate Governance Committee of the Board is responsible for identifying, reviewing and evaluating candidates to serve as directors of the Company (consistent with criteria approved by the Board), reviewing and evaluating incumbent directors, selecting or recommending to the Board for selection candidates for election to the Board, making recommendations to the Board regarding the membership of the committees of the Board, assessing the performance of the Board, and developing a set of corporate governance principles for the Company.

The Nominating and Corporate Governance Committee is composed of three directors: Dr. Luderer, Mr. Wang and Mr. Zhou. Each member of the Nominating and Corporate Governance Committee is independent under the Nasdaq listing standards, a non-employee director and free from any relationship that would interfere with the exercise of his independent judgment. The Nominating and Corporate Governance Committee did not meet formally during the



fiscal year as this was the first year that the Company was a public company. The Board has adopted a written Nominating and Corporate Governance Committee charter that is available to stockholders on the Company's website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2018.

The responsibilities of the Nominating and Corporate Governance Committee include, among other things:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on the Board;
- considering and making recommendations to the Board regarding the composition and chairmanship of the committees of the Board;
- instituting plans or programs for the continuing education of the Board and orientation of new directors;
- developing and making recommendations to the Board regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the Board's performance, including committees of the Board and management.

The Nominating and Corporate Governance Committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, being over 21 years of age and having the highest personal integrity and ethics. The Nominating and Corporate Governance Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to the affairs of the Company, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of the Company's stockholders. However, the Nominating and Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of stockholders. In conducting this assessment, the Nominating and Corporate Governance Committee typically considers diversity (including gender, racial and ethnic diversity), age, skills and such other factors as it deems appropriate, given the current needs of the Board and the Company, to maintain a balance of knowledge, experience and capability.

The Nominating and Corporate Governance Committee appreciates the value of thoughtful Board refreshment, and regularly identifies and considers qualities, skills and other director attributes that would enhance the composition of the Board. In the case of incumbent directors whose terms of office are set to expire, the Nominating and Corporate Governance Committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee is independent for Nasdaq purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Nominating and Corporate Governance Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating and Corporate Governance Committee meets to discuss and consider the candidates' qualifications and then selects candidates for recommendation to the Board by majority vote.

Our Nominating and Corporate Governance Committee does not have a formal policy regarding board diversity. Diversity is one of a number of factors, however, that the committee takes into account in identifying nominees, and the Nominating and Corporate Governance Committee believes that it is essential that the board members represent diverse viewpoints. To accomplish the Board's diversity objectives, the Nominating and Governance Committee may retain an executive search firm to help identify potential directors that meet these objectives.

Our Nominating and Corporate Governance Committee and full Board identified and confirmed, as a priority, the need to recruit a new director who not only provides a valuable skillset to the Board, but also will contribute to its gender diversity. The Nominating and Corporate Governance Committee is committed to nominating a qualified female candidate to the Board, and has been pursuing a methodical approach to identify the right director candidate to recommend to the full Board.

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Nominating and Corporate Governance Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee at the following address: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121, no later than the close of business on the 90<sup>th</sup> day nor earlier than the close of business on the 120<sup>th</sup> day prior to the first anniversary of the preceding year's annual meeting of stockholders. Submissions must include the name and address of the Company stockholder on whose behalf the submission is made; the number of Company shares that are owned beneficially by such stockholder as of the date of the submission; the full name of the proposed candidate; a description of the proposed candidate's business experience for at least the previous five years; complete biographical information for the proposed candidate; and a description of the proposed candidate's qualifications as a director. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

#### **STOCKHOLDER COMMUNICATIONS WITH THE BOARD OF DIRECTORS**

The Board has adopted a formal process by which stockholders may communicate with the Board or any of its directors. Stockholders who wish to communicate with the Board may do so by sending written communications addressed to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121. These communications will be reviewed by the Secretary of Bionano, who will determine whether the communication is appropriate for presentation to the Board or the relevant director. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications (such as advertisements, solicitations and hostile communications). The screening procedures have been approved by a majority of the independent directors. All communications directed to the Audit Committee in accordance with our Open Door Policy for Reporting Complaints Regarding Accounting and Auditing Matters that relate to questionable accounting or auditing matters will be promptly and directly forwarded to the Audit Committee.

#### **CODE OF ETHICS**

We have adopted a Code of Business Conduct and Ethics that applies to all of our officers, directors and employees. The Code of Business Conduct and Ethics is available on the Company's website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2018. If we make any substantive amendments to the Code of Business Conduct and Ethics or grants any waiver from a provision of the code to any executive officer or director, the Company will promptly disclose the nature of the amendment or waiver on its website.

## PROPOSAL 2

### RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee has selected Deloitte & Touche LLP to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019 and our Board has further directed that management submit the Audit Committee's selection of Deloitte & Touche LLP as the Company's independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. Deloitte & Touche LLP has audited the Company's financial statements since 2016. Representatives of Deloitte & Touche LLP are expected to be present at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither the Company's Amended and Restated Bylaws nor other governing documents or law require stockholder ratification of the selection of Deloitte & Touche LLP as the Company's independent registered public accounting firm. However, the Audit Committee is submitting the selection of Deloitte & Touche LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of different independent auditors at any time during the year if they determine that such a change would be in the best interests of the Company and its stockholders.

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote on the matter at the Annual Meeting will be required to ratify the selection of Deloitte & Touche LLP.

### PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table summarizes the aggregate fees billed to the Company by Deloitte & Touche, LLP for the fiscal years ended December 31, 2018 and 2017:

	2018	2017
Audit fees (1)	\$1,020,000	\$45,000
Audit-related fees (2)	49,000	—
Tax fees (3)	20,000	16,700
All other fees (4)	2,000	1,900
<b>Total</b>	<b><u>\$1,091,000</u></b>	<b><u>\$63,600</u></b>

- (1) Audit fees consist of fees billed for professional services rendered for the audit of the consolidated annual financial statements of the Company, review of the interim condensed consolidated financial statements included in quarterly reports, review of the SEC-filings associated with the Company's initial public offering, and services that are normally provided by Deloitte & Touche, LLP in connection with statutory and regulatory filings or engagements.
- (2) Audit-related fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the consolidated financial statements of the Company and are not reported under "Audit fees." For the fiscal years ended December 31, 2018 and 2017, these fees primarily related to miscellaneous professional services.
- (3) Tax fees consist of fees billed for professional services rendered for tax compliance, advice and planning. For the fiscal years ended December 31, 2018 and 2017, these services included assistance regarding federal and state tax compliance and consultations regarding various income tax issues.
- (4) All other fees for the fiscal year ended December 31, 2018 and 2017 related to software subscription services.

In considering the nature of the services provided by Deloitte & Touche, LLP, the Audit Committee determined that such services were compatible with the provision of independent audit services. The Audit Committee discussed these services with Deloitte & Touche, LLP and Management to determine that they were permitted under the rules and regulations concerning auditor independence promulgated by the SEC to implement the Sarbanes-Oxley Act of 2002, as well as the Public Company Accounting Oversight Board. The Audit Committee requires that all services performed by Deloitte & Touche, LLP be pre-approved prior to the services being performed. During the fiscal years ended December 31, 2018 and 2017, all services were pre-approved in accordance with these procedures.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE “FOR” PROPOSAL 2.**

## EXECUTIVE OFFICERS

The following table sets forth information concerning our executive officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
R. Erik Holmlin, Ph.D.	51	President, Chief Executive Officer and Director
Mike Ward	47	Chief Financial Officer
Warren Robinson	50	Chief Commercial Officer
Mark Borodkin	45	Chief Operating Officer

## EXECUTIVE OFFICERS WHO ARE NOT DIRECTORS

The following sets forth certain information with respect to our executive officers who are not directors:

**Mike Ward.** Mr. Ward has served as our Chief Financial Officer since May 2018, and previously served as our Chief Business Officer from July 2017 and as our Vice President, Corporate Development since April 2014. From September 2009 to September 2013, Mr. Ward served as a Director and Vice President of the Private Equity and Venture Capital Investment team of Lurie Investment Fund. In addition, Mr. Ward previously served in investment banking positions at Leerink Partners, BMO Capital Markets, Dresdner Kleinwort Wasserstein, Prudential Securities and Credit Suisse. Mr. Ward has previously served on the boards of directors of public and private companies, including Nanosphere, Inc., CytoPherx, Inc., Aperion Biologics, Inc. and Impact Health, Inc. Mr. Ward has over 20 years of experience in the areas of investment banking, private equity and venture capital in the life sciences industry. Mr. Ward received his bachelor's degree in finance from the University of Illinois.

**Warren Robinson.** Mr. Robinson has served as our Chief Commercial Officer since November 2017 and previously served as a Vice President with us in various sales and marketing functions from October 2015 to November 2017, including most recently as our Vice President of Global Sales and Marketing. From June 2013 to October 2015, Mr. Robinson served as Division Vice President of Aegis Chemical Solutions, LLC, a private oil production services company. Previously, Mr. Robinson held various leadership roles in sales-focused positions with Life Technologies Corporation, a publicly traded research tools development company acquired by Thermo Fisher Scientific Inc. in February 2014, and Invitrogen Corporation, a publicly traded research tools development company acquired by Life Technologies in January 2008. Mr. Robinson received his bachelor's degree in biochemistry from The University of Lethbridge, a research university located in Canada.

**Mark Borodkin.** Mr. Borodkin has served as our Chief Operating Officer since November 2017 and previously served as our Vice President, Product Development and Operations since October 2014. From December 2011 to August 2014, Mr. Borodkin served as the Senior Director of Engineering and Chief Product Officer at Brooks Life Science Systems, a provider of automation and cryogenic solutions for the life science industry, and from April 2009 to October 2011 as a Director of Engineering at Affymetrix, Inc., a private life science systems company that was acquired by Thermo Fisher Scientific in March 2016. From December 2007 to April 2009, Mr. Borodkin served as a Senior Manager and Core Team Leader of R&D for Siemens Healthcare Diagnostics, and for the prior 13 years, he developed sequencing and real-time PCR systems at Applied Biosystems, now a part of Thermo Fisher Scientific. Mr. Borodkin received both his bachelor's degree in electrical engineering and his master's degree in computer and systems engineering from Rensselaer Polytechnic Institute.

**SECURITY OWNERSHIP OF**

**CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth information regarding beneficial ownership of our capital stock as of March 29, 2019 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

The following table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, the Company believes that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Applicable percentages are based on 10,845,020 shares of our common stock outstanding on March 29, 2019, adjusted as required by rules promulgated by the SEC. Unless otherwise indicated, the address for the following stockholders is care of: Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.

<u>Name of Beneficial Owner</u>	<u>Shares Owned Directly</u>	<u>Options Exercisable within 60 Days of 3/29/2019</u>	<u>Warrants</u>	<u>Number of Shares Beneficially Owned(1)</u>	<u>%(2)</u>
<b>Greater than 5% Stockholders</b>					
LC Fund VI, L.P. and Affiliates <sup>(3)</sup>	2,906,915	—	—	2,906,915	26.8%
Wealth Strategy Holding Limited <sup>(4)</sup>	975,000	—	975,000	1,950,000	16.5%
AIGH Capital Management, LLC and Affiliates <sup>(5)</sup>	651,802	—	—	651,802	6.0%
Entities affiliated with Domain Partners VIII, L.P. <sup>(6)</sup>	950,769	—	15,000	965,769	8.9%
Sio Capital Management, LLC <sup>(7)</sup>	714,842	—	675,000	1,389,842	12.1%
ETP Global Fund, LP <sup>(8)</sup>	680,400	—	325,000	1,005,400	9.0%
Entities affiliated with Innovatus Life Sciences GP, LP <sup>(9)</sup>	406,504	—	161,987	568,491	5.2%
<b>Directors and Named Executive Officers</b>	<b>**</b>	<b>**</b>	<b>**</b>	<b>**</b>	<b>**</b>
David L. Barker, Ph.D.	3,894	13,025	3,894	20,813	*
Darren Cai, Ph.D.	—	2,044	—	2,044	*
R. Erik Holmlin, Ph.D.	1,848	208,589	1,630	212,067	1.9%
Albert Luderer, Ph.D.	—	9,584	—	9,584	*
Warren Robinson	—	52,741	—	52,741	*
Christopher Twomey	10,000	2,044	10,000	22,044	*
Junfeng Wang <sup>(3)</sup>	2,906,915	2,044	—	2,908,959	26.8%
Mike Ward	—	46,476	—	46,476	*
Quan Zhou <sup>(3)</sup>	2,906,915	2,044	—	2,908,959	26.8%
<b>All directors and executive officers as a group (11 persons)<sup>(10)</sup></b>	<b>5,975,169</b>	<b>388,182</b>	<b>16,339</b>	<b>6,379,690</b>	<b>56.7%</b>

\* Represents beneficial ownership of less than 1%.

- (1) Beneficial ownership is determined in accordance with SEC rules. In computing the beneficial ownership we have included shares for which the named person has sole or shared power over voting or investment decisions. The number of shares of common stock beneficially owned includes common stock which the named person has the right to acquire, through option exercise or otherwise, within 60 days after March 29, 2019.
- (2) For each named person, the percentage ownership includes common stock that the person has the right to acquire within 60 days after March 29, 2019, as described in Footnote 1. However, such shares are not deemed outstanding with respect to the calculation of ownership percentage for any other person. In some cases, beneficial ownership calculations for five percent or greater stockholders are based solely on publicly-filed Schedules 13D or 13G, which five percent or greater stockholders are required to file with the SEC, and which generally set forth ownership interests as of December 31, 2018 unless otherwise provided.

- (3) Consists of (i) 426,900 shares of common stock held by LC Fund VI, L.P., (ii) 20,656 shares of common stock held by LC Parallel Fund VI, L.P., (iii) 1,325,359 shares of common stock held by LC Healthcare Fund I, L.P., and (iv) 1,134,000 shares of common stock held by Rosy Shine Limited, (v) 2,044 shares of common stock subject to options exercisable as of May 28, 2019 held by Junfeng Wang and (vi) 2,044 shares of common stock subject to options exercisable as of May 28, 2019 held by Quan Zhou. Each of LC Fund VI, L.P., LC Parallel Fund VI, L.P., and LC Healthcare Fund I, L.P., collectively referred to as the LC Funds, are ultimately controlled and managed by Legend Capital, a limited liability Chinese company. Legend Capital is ultimately controlled by a management team consisting of three key individuals, Linan Zhu, Hao Chen, and Nengguang Wang. In addition, Junfeng Wang is a Managing Director of Legend Capital. Each of these individual managers of Legend Capital shares voting and investment power over the shares held by the LC Funds and each disclaims beneficial ownership of all shares held by Legend Capital, except to the extent of each such member's actual pecuniary interest therein. Rosy Shine Limited is ultimately controlled and managed by Legend Holdings, a limited liability Chinese joint stock company listed on a Stock Exchange of Hong Kong (3396), which is controlled by its board of directors. The board of directors of Legend Holdings has sole voting and investment power over the shares held by Rosy Shine Limited. None of the members of the board of directors has individual voting or investment power with respect to such shares and each disclaims beneficial ownership of such shares. The address of each of the above entities is Legend Capital, 10F, Tower A, Raycom Infotech Park, No.2, Kexueyuan South Road, Zhongguancun, Haidian District, Beijing 100190 PRC.
- (4) Based solely on a Schedule 13G filed with the SEC by the reporting person on December 14, 2018, the indicated ownership consists of 975,000 shares of common stock and 975,000 shares of common stock issuable upon the exercise of warrants held by Wealth Strategy Holding Limited. According to the Schedule 13G, Mr. Kung Hung Ka may be deemed to have sole voting and dispositive power with respect to the shares held by Wealth Strategy Holding Limited. The Schedule 13G/A filed by the reporting person provides information as of August 21, 2018 and, consequently, the beneficial ownership of the reporting person may have changed between August 21, 2018 and March 29, 2019. The address for Wealth Strategy Holding Limited listed in the Schedule 13G is Level 12, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong.
- (5) Based solely on a Schedule 13G filed with the SEC by the reporting person on February 15, 2019, the indicated ownership consists of (1) 651,802 shares of common stock held by AIGH Capital Management, LLC and (ii) 651,802 shares of common stock held by Orin Hirschman. According to the Schedule 13G, Mr. Hirschman is the Managing Member of AIGH Capital Management, LLC and may be deemed to have sole voting and dispositive power with respect to the shares held by AIGH Capital Management, LLC and himself. The Schedule 13G/A filed by the reporting person provides information as of December 31, 2018 and, consequently, the beneficial ownership of the reporting person may have changed between December 31, 2018 and March 29, 2019. The address of both AIGH Capital Management, LLC and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, MD 21209.
- (6) Based solely on a Schedule 13G filed with the SEC by the reporting person on January 11, 2019, the indicated ownership consists of (i) 958,878 shares of common stock and 15,000 shares of common stock issuable upon the exercise of warrants held by Domain Partners VIII, L.P. and (ii) 6,891 shares of common stock held by DP VIII Associates, L.P. James C. Blair, Brian H. Dovey, Brian K. Halak, Jesse I. Treu and Nicole Vitullo, the managing members of One Palmer Square VIII, L.L.C., share voting and investment power over the shares held by Domain Partners VIII, L.P. and DP VIII Associates, L.P. The Schedule 13G/A filed by the reporting person provides information as of December 31, 2018 and, consequently, the beneficial ownership of the reporting person may have changed between December 31, 2018 and March 29, 2019. The address for the Domain Entities is One Palmer Square, Suite 515, Princeton, NJ 08542.
- (7) Based solely on a Schedule 13G filed with the SEC by the reporting person on February 14, 2019, the indicated ownership consists of 714,842 shares of common stock held by Sio Capital Management, LLC. According to the Schedule 13G, Sio Capital Management, LLC, or Sio, and Sio GP, LLC, or GP, act as investment advisor and general partner, respectively, to various clients that are the record owners of the common stock held by Sio. Because Sio's investment discretion with respect to such clients is subject to oversight by the GP, the GP may be deemed to be the beneficial owner of the common stock owned by such clients. Both Sio and the GP are controlled by Michael Castor, who may be deemed to control the voting and dispositive decisions with respect to the shares of common stock held by Sio. The Schedule 13G/A filed by the reporting person provides information as of December 31, 2018 and, consequently, the beneficial ownership of the reporting person may have changed between December 31, 2018 and March 29, 2019. The address for Sio is 535 Fifth Avenue, Suite 910, New York, New York 10017.
- (8) ETP Global Fund, LP, or ETP Global, is a limited partnership organized under the laws of the State of Delaware. Emerging Technology Partners LLC is the general partner of ETP Global, and Wei-Wu He is its managing member, who exercises sole voting and investment power over the shares held by ETP Global. Wei-Wu He disclaims beneficial ownership of the shares held by ETP Global, except to the extent of his pecuniary interest therein. The registered address of ETP Global and Emerging Technology Partners LLC is 4919 Rebel Ridge Dr., Sugarland, TX 77478.

- (9) Based solely on a Schedule 13D filed with the SEC by the reporting person on March 22, 2019, the indicated ownership consists of (i) 312,758 shares of common stock held by Innovatus Life Sciences Lending Fund I, LP (“Lending Fund”), (ii) 93,746 shares of common stock held by Innovatus Life Sciences Offshore Fund I, LP (“Offshore Fund”) and (iii) 161,987 shares of common stock issuable upon the exercise of a warrant held by Lending Fund. According to the Schedule 13D, (a) Innovatus Life Sciences GP, LP (“Innovatus GP”) is the general partner of Lending Fund, (b) Innovatus Capital Partners, LLC (“Innovatus Management”) serves as investment manager to each of Innovatus Fund and Innovatus Offshore Fund, (c) Innovatus Life Sciences Offshore GP, LP (“Offshore GP” and together with Lending Fund, Offshore Fund, Innovatus GP and Innovatus Management, the “Reporting Innovatus Entities”) is the general partner of Offshore Fund, and each of (x) Innovatus Flagship Parent GP, LLC (“Innovatus Holdings”), which is the parent company of Innovatus GP, (y) Innovatus Offshore Parent GP, LLC (“Innovatus Offshore Holdings” and, together with Innovatus Holdings, the “Parent Companies”) and (z) David Schiff, a citizen of the United States, who is a control person of the Parent Companies could be deemed to control one or more of the Reporting Innovatus Entities, and Mr. Schiff may be deemed to have sole voting and dispositive power with respect to the shares beneficially held by the Reporting Innovatus Entities and the Parent Companies. The address for Innovatus is 777 Third Avenue, 25th Floor, New York, New York 10017.
- (10) Consists of shares identified in the list of Directors and Named Executive Officers above plus (i) 7,310 shares of common stock, (ii) 49,591 options exercisable within 60 days of March 29, 2019, and (iii) 815 shares of common stock subject to outstanding warrants.



## SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than 10% of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and other equity securities. Officers, directors and greater than 10% stockholders are required by SEC regulation to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2018, all Section 16(a) filing requirements applicable to our officers, directors and greater than 10% beneficial owners of our capital stock were complied with, except that David L. Barker failed to timely file a Form 4 during our fiscal year ended December 31, 2018 to report the purchase of warrants to purchase common stock on August 21, 2018 and the grant to Dr. Barker by the Company of stock options on October 1, 2018.

## EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for the year ended December 31, 2018, consisting of our principal executive officer and the next two most highly compensated executive officers, were:

- R. Erik Holmlin, Ph.D., our Chief Executive Officer;
- Mike Ward, our Chief Financial Officer;
- Warren Robinson, our Chief Commercial Officer; and
- Han Cao, Ph.D., our Chief Scientific Officer.(1)

(1) Dr. Cao, Ph.D. ceased serving as our Chief Scientific Officer effective November 5, 2018 and terminated service with us on December 7, 2018.

### Summary Compensation Table

The following table presents all of the compensation awarded to or earned by or paid to our named executive officers during the fiscal year ended December 31, 2018.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus (\$)</u>	<u>Option Awards(1) (\$)</u>	<u>Non-Equity Incentive Plan Compensation(2) (\$)</u>	<u>All Other Compensation(3) (\$)</u>	<u>Total (\$)</u>
R. Erik Holmlin, Ph.D.	2018	389,986	—	1,993,316	132,595	11,360	2,527,257
<i>Chief Executive Officer</i>	2017	378,628	—	93,786	118,132	14,784	605,330
Mike Ward	2018	298,061	—	463,014	78,241	11,360	850,676
<i>Chief Financial Officer</i>	2017	289,380	—	20,841	72,056	14,198	396,475
Warren Robinson	2018	295,000	—	502,253	88,795	11,360	897,408
<i>Chief Commercial Officer</i>							
Han Cao, Ph.D.(4)	2018	309,451	—	180,497	—	11,360	501,578
<i>Former Chief Scientific Officer</i>	2017	300,451	—	31,262	45,518	14,468	391,699

(1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of stock options granted to our named executive officers during fiscal year ended December 31, 2017 under our 2006 Plan and during fiscal year ended December 31, 2018 under our 2018 Plan, computed in accordance with ASC 718. The valuation assumptions used in calculating the fair value of the stock options are included in Note 8 to our financial statements included in our Annual Report for fiscal year 2018. These amounts do not reflect the actual economic value that may be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.

(2) Amounts reported represent bonuses earned for 2017 and paid in 2018 and earned in 2018 and paid in 2019 at the discretion of our Board.

(3) Amounts for 2018 reflect the following: \$11,000 for 401(k) matching contributions and \$360 for life insurance premiums.

(4) Dr. Cao ceased serving as our Chief Scientific Officer effective November 5, 2018 and terminated services with us on December 7, 2018.

### Compensation Program Overview

Our compensation program for executive officers is designed to encourage our management team to continually achieve our short-term and long-term corporate objectives while effectively managing business risks and challenges. We provide what we believe is a competitive total compensation package to our management team through a combination of base salary, an annual performance-based bonus and long-term equity-based incentives.

The compensation of our named executive officers other than our chief executive officer is generally determined and approved by the Compensation Committee of our Board, and the compensation of our chief executive officer is approved by our Board based upon the recommendations of the Compensation Committee.

## Annual Base Salary

The compensation of our named executive officers is generally determined and approved by our Board, based on the recommendation of the compensation committee of our Board. The 2018 base salaries that became effective as of January 1, 2018 were as follows:

<u>NAME</u>	<u>2018 BASE SALARY (\$)</u>
R. Erik Holmlin, Ph.D.	389,986
Mike Ward	298,091
Han Cao, Ph.D.	309,465
Warren Robinson	295,000

## Bonus Opportunity

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual performance goals and to reward our executives for individual achievement towards these goals. The annual performance-based bonus each named executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our compensation committee establishes each year and, for all except Dr. Holmlin, the individual's contributions to such achievements. Dr. Holmlin's payout is based entirely on Company performance, Dr. Cao's payout is based on Company performance (25% weighting) and his individual performance (75% weighting), and Mr. Ward's and Robinson's payouts are based on Company performance (50% weighting) and his individual performance (50% weighting). At the end of the year, our Board reviews each executive's performance and determines the actual bonus payout to be awarded to each of our named executive officers.

For 2018, the target bonus for Dr. Holmlin was 40% of base salary, for Mr. Ward was 30% of base salary, for Mr. Robinson was 35% of base salary and for Dr. Cao was 20% of base salary. Our corporate performance objectives for 2018, as established by our compensation committee, included achievement of our 2018 operating plan, launch of our Saphyr instrument, accomplishment of product development milestones, entry into product development and marketing arrangements and securing additional financing. In March 2018, our Board approved a 85% overall achievement level of our corporate goals and awarded bonuses to our named executive officers, except for Dr. Cao who terminated service prior to year-end, based on Company achievements and, except for Dr. Holmlin, on individual performance in 2018.

## Equity-Based Incentive Awards

We believe that our ability to grant equity-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of our stockholders. In addition, we believe that our ability to grant equity-based awards helps us to attract, retain and motivate employees, consultants and directors, and encourages them to devote their best efforts to our business and financial success. Our Board is responsible for approving equity grants. Vesting of equity awards is generally tied to continuous service with us and serves as an additional retention measure. Our executives generally are awarded an initial new hire grant upon commencement of employment. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to our August 2018 initial public offering (the "IPO"), we granted all equity awards pursuant to the 2006 Plan. All options are granted with a per share exercise price equal to no less than the fair market value of a share of our common stock on the date of the grant of such award. Generally our stock option awards vest over a three-year period subject to the holder's continuous service to us.

In August 2018, our Board amended all outstanding options held as of such date by Dr. Holmlin and Mr. Ward such that, contingent upon and following the date of the underwriting agreement related to the IPO, the vesting of all such awards will be suspended until such time as the closing price of our common stock is at least

\$12.00 per share for 90 consecutive trading days, at which point the suspension will automatically and immediately lapse and the awards will vest to the extent they otherwise would have vested pursuant to their terms and notwithstanding the suspension and will continue to vest thereafter under their original vesting schedules. In addition, the suspension will lapse as to the awards held by Dr. Holmlin or Mr. Ward upon Dr. Holmlin's or Mr. Ward's respective death, disability or upon a change in control of the Company, as such terms are defined in the 2018 Plan.

In October 2018, our Board granted options to purchase 256,540 shares to Dr. Holmlin, 23,230 shares to Dr. Cao, 64,640 shares to Mr. Robinson and 59,590 shares to Mr. Ward. Each option has an exercise price of \$7.77 per share and vests as follows: 25% of the shares vest immediately on the grant date and the balance of the shares vest in a series of 36 successive equal monthly installments thereafter, provided in each case that the holder is then providing services to us in accordance with the terms of the 2018 Plan. For additional information, please see below under "Outstanding Equity Awards at Fiscal Year-End."

### Equity Compensation Plan Information

The following table provides information as of December 31, 2018 with respect to equity compensation plans (including individual compensation arrangements) under which the Company's common stock is authorized for issuance.

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options and rights</u>	<u>Weighted average exercise price of outstanding options and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans</u>
Equity compensation plans approved by stockholders:			
Amended and Restated 2006 Equity Compensation Plan	—	\$ 5.14	—
2018 Equity Incentive Plan	1,499,454	\$ 7.69	216,413
2018 Employee Stock Purchase Plan	175,000	\$ 5.08	152,821
Equity compensation plans not approved by stockholders:			
None			
<b>Total</b>	<b>1,674,454</b>	<b>\$ 6.87</b>	<b>369,234</b>

### Agreements with Our Named Executive Officers

Below are descriptions of our employment agreements with our named executive officers. For a discussion of the severance pay and other benefits to be provided in connection with a termination of employment and/or a change in control under the arrangements with our named executive officers, please see "-Potential Payments upon Termination or Change in Control" below.

*Dr. Holmlin.* We entered into an employment agreement with Dr. Holmlin in January 2011, as amended in March 2011 and in November 2017, which governs the current terms of his employment with us. Pursuant to the agreement, as amended, Dr. Holmlin was entitled to an initial annual base salary of \$315,000 and is eligible to receive an annual performance bonus with a target of 40% of his base salary, with a higher amount possible if goals exceeding target are achieved, as determined by our compensation committee and subject to approval by our Board. In addition, Dr. Holmlin was eligible to receive an option to purchase shares of the Company's common stock representing 5.0% of the fully-diluted equity shares immediately subsequent to the closing of a Series B transaction, which were equal to 2,992 shares of our common stock and were granted in 2011. In addition, Dr. Holmlin's agreement provided for additional options to be granted in connection with specified events in order to maintain Dr. Holmlin's ownership percentage, pursuant to which Dr. Holmlin was granted additional options to purchase 1,115 shares in 2012 and 2,546 shares in 2015. No obligations to make additional grants to maintain Dr. Holmlin's ownership percentage remain under his employment agreement. Dr. Holmlin's employment is at will.

*Mr. Ward.* We entered into an employment agreement with Mr. Ward in July 2016, which governs the current terms of his employment with us. Pursuant to the agreement, Mr. Ward was entitled to an initial annual base salary of \$278,250 and is eligible to receive an annual performance bonus with a target amount of up to 30% of his base salary, as determined by our Board. Mr. Ward's employment is at will.

*Mr. Robinson.* We entered into an employment agreement with Mr. Robinson in November 7, 2017, which governs the current terms of his employment with us. Pursuant to the agreement, Mr. Robinson was entitled to an initial annual base salary of \$275,392 and is eligible to receive an annual performance bonus with a target amount of up to 30% of his base salary (subsequently increased to 35%), as determined by our Board. Mr. Robinson's employment is at will.

*Dr. Cao.* We entered into an employment agreement with Dr. Cao in July 2011, as amended in November 2017, which governed the terms of his employment with us. Pursuant to the agreement, Dr. Cao was entitled to an initial annual base salary of \$250,000 and a one-time signing bonus of \$40,000 in cash. Dr. Cao received certain benefits in connection with his relocation, which were paid in 2012. Dr. Cao was eligible to receive an annual performance bonus with a target amount of 20% of his base salary based on the Company's performance (25% weighting) and Dr. Cao's individual performance (75% weighting), as determined by our Board. In addition, Dr. Cao was eligible to receive an option to purchase a number of shares of the Company's common stock that, together with shares and/or options then owned by Dr. Cao and the shares of Series B preferred stock of the Company that was to be issued to Dr. Cao as described in his employment agreement, represented no less than 7.5% of the total outstanding shares of the common stock of the Company on a fully diluted basis, which was equal to 2,344 shares of our common stock and was granted in 2011. No obligations to make additional grants to maintain Dr. Cao's ownership percentage remain under his employment agreement. Dr. Cao was also entitled to a bonus consisting of 240,800 shares of Series B preferred stock of the Company pursuant to the terms of a restricted stock purchase agreement entered into in August 2011. Dr. Cao's employment ceased December 7, 2018.

#### **Potential Payments upon Termination or Change in Control**

Regardless of the manner in which a named executive officer's service terminates, each named executive officer is entitled to receive amounts earned during his term of service, including unpaid salary and unused vacation. In addition, each of our named executive officers is eligible to receive certain benefits pursuant to his employment agreement with us, as described below. For the definitions of "cause," "good reason" and "disability" referenced below, please refer to the individual employment agreements with each of our named executive officers.

*Dr. Holmlin.* Upon Dr. Holmlin's termination for any reason other than death, disability, cause or resignation without good reason, and subject to Dr. Holmlin's execution of a release, Dr. Holmlin shall be eligible to receive (i) a lump sum amount equal to nine months of base salary, (ii) accelerated vesting of any options or restricted shares that would have vested within 18 months after the date of termination and (iii) premiums for continued health coverage for nine months following the date of termination, or until Dr. Holmlin is no longer eligible for continuation coverage, whichever is earlier. In the event of termination due to disability, and subject to Dr. Holmlin's execution of a release, Dr. Holmlin shall be eligible to receive accelerated vesting in full for any unvested portion of the options granted pursuant to his agreement. In the event of a deemed liquidation event (as defined in Dr. Holmlin's employment agreement), the options granted to Dr. Holmlin pursuant to his agreement shall vest in full.

*Mr. Ward.* Upon termination without cause, and subject to Mr. Ward's execution of a release, Mr. Ward will be eligible to receive (i) six months of continued base salary payments at the rate in effect at the time of termination and (ii) premiums for continued health coverage for six months following the date of termination or until Mr. Ward is no longer eligible for continuation coverage or he becomes eligible for new healthcare eligibility available through new employment, whichever is earlier.

*Mr. Robinson.* Upon termination without cause, and subject to Mr. Robinson’s execution of a release, Mr. Robinson will be eligible to receive (i) six months of continued base salary payments at the rate in effect at the time of termination and (ii) premiums for continued health coverage for six months following the date of termination or until Mr. Robinson is no longer eligible for continuation coverage or he becomes eligible for new healthcare eligibility available through new employment, whichever is earlier.

*Dr. Cao.* Prior to his termination, Dr. Cao was entitled to the following benefits under his employment agreement with us. Upon Dr. Cao’s termination without cause or resignation for good reason, and subject to Dr. Cao’s execution of a release, Dr. Cao was eligible to receive (i) six months of continued base salary, to be paid on the Company’s normal pay days commencing with the first regular payroll date of the Company following the effective date of the release, and (ii) premiums for continued health coverage for a period of six months following the date of termination or until Dr. Cao was no longer eligible for such coverage, whichever is earlier. In addition, Dr. Cao’s unvested options would immediately vest as if Dr. Cao had been employed for an additional six months from the date of termination, since more than two years has passed from start of Dr. Cao’s employment. Upon Dr. Cao’s termination by death or disability, Dr. Cao’s unvested options would immediately vest as if Dr. Cao had been employed for an additional six months from the date of termination, since more than two years has passed from the start of Dr. Cao’s employment. Under the terms of Dr. Cao’s employment agreement, he received only his final regular salary payment and payment of unused vacation time when terminated service with us on December 7, 2018.

Each of our named executive officers holds stock options under the 2006 Plan that were granted subject to the general terms of the 2006 Plan and the form of stock option agreement. The specific vesting terms of each named executive officer’s stock options are described below under “-Outstanding Equity Awards at Fiscal Year-End.”

### Outstanding Equity Awards at Fiscal Year-End

The following table presents information regarding outstanding equity awards held by our named executive officers as of December 31, 2018.

Name	Grant Date	Option Awards <sup>(1)</sup>		Option Exercise Price Per Share <sup>(2)</sup>	Option Expiration Date
		Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable		
R. Erik Holmlin, Ph.D <sup>(6)</sup>	10/1/2018 <sup>(3)</sup>	74,824	153,605	\$ 7.77	10/1/2028
	2/7/2017 <sup>(4)</sup>	96,243	57,744	\$ 1.28	2/6/2027
	1/29/2015	4,146	592	\$ 64.20	1/28/2025
	1/29/2015	2,546	—	\$ 64.20	1/28/2025
	6/20/2012	1,115	—	\$ 68.48	6/19/2022
Mike Ward <sup>(6)</sup>	5/16/2011	2,992	—	\$ 42.80	5/15/2021
	10/1/2018 <sup>(3)</sup>	17,379	42,211	\$ 7.77	10/1/2028
	2/7/2017 <sup>(4)</sup>	14,971	19,248	\$ 1.28	2/6/2027
	1/29/2015 <sup>(5)</sup>	697	317	\$ 64.20	1/28/2025
Warren Robinson	4/21/2014 <sup>(5)</sup>	535	76	\$ 81.32	4/20/2024
	10/1/2018 <sup>(3)</sup>	18,853	45,787	\$ 7.77	10/1/2028
	2/7/2017	19,997	9,089	\$ 1.28	2/6/2027
Han Cao, Ph.D.	11/9/2015	876	292	\$ 64.20	11/9/2025
	10/1/2018 <sup>(3)</sup>	5,441	—	\$ 7.77	3/7/2019
	10/1/2018 <sup>(3)</sup>	1,333	—	\$ 7.77	3/7/2019
	2/7/2017 <sup>(4)</sup>	22,456	—	\$ 1.28	3/7/2019
	1/29/2015 <sup>(5)</sup>	2,398	—	\$ 64.20	3/7/2019
	1/29/2015	1,599	—	\$ 64.20	3/7/2019
	8/10/2011	2,344	—	\$ 42.80	3/7/2019
4/2/2010	46	—	\$ 38.52	3/7/2019	
	1/15/2009	46	—	\$291.04	1/15/2019

(1) Option awards were granted under the 2006 Plan and 2018 Plan.

- (2) All of the option awards were granted with a per share exercise price equal to the fair market value of one share of our common stock on the date of grant, as determined in good faith by our Board.
- (3) Each option award vests as follows: 25% of the shares subject to the option vest on the date of grant and the balance of the shares vest in a series of 36 successive equal monthly installments thereafter, provided in each case that the holder is then providing services to us in accordance with the terms of the 2018 Plan.
- (4) Each option award vests as follows: 25% of the shares subject to the option are fully vested and 6.25% of the shares subject to the option vest at the end of each three month anniversary of the vesting commencement date, subject to single trigger acceleration of vesting in connection with a change of control, provided in each case that the holder is then providing services to us in accordance with the terms of the 2006 Plan.
- (5) Each option award vests as follows: 25% of the shares subject to the option shall vest at the end of the first anniversary of the vesting commencement date, and 6.25% of the shares subject to the option vest at the end of each three month anniversary of the vesting commencement date, subject to single trigger acceleration of vesting in connection with a change of control, provided in each case that the holder is then providing services to us in accordance with the terms of the 2006 Plan.
- (6) All outstanding options, other than the 2018 grant, held by Dr. Holmlin and Mr. Ward were amended by our Board in August 2018 to suspend the vesting until the achievement of certain milestones, as further described above under “-Equity-Based Incentive Awards.”

### **Perquisites, Health, Welfare and Retirement Benefits**

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. We pay the premiums for the life, disability, accidental death and dismemberment insurance for all of our employees, including our named executive officers. In addition, we provide a 401(k) plan to our employees, including our named executive officers, as discussed in the section below entitled “-401(k) Plan.” We generally do not provide perquisites or personal benefits to our named executive officers.

### **Nonqualified Deferred Compensation**

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during the fiscal year ended December 31, 2018. Our Board may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

### **Equity Benefit Plans**

The principal features of our equity plans are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which are filed as exhibits hereto and incorporated herein by reference.

#### ***2018 Equity Incentive Plan***

Our 2018 Plan became effective upon the IPO following approval by our Board and our stockholders. Our 2018 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the Code, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other forms of stock awards to employees, directors and consultants, including employees and consultants of our affiliates. Our 2018 Plan is a successor to and continuation of our 2006 Plan. Our compensation committee has the authority, concurrent with our Board, to administer our 2018 Plan, and may also delegate to one or more of our officers certain authority under the terms of the 2018 Plan.

Stock options under the 2018 Plan are generally granted with an exercise price equal to the fair market value of our common stock on the date of grant. Options granted under the 2018 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator. Options may have a term up to a maximum of 10 years. Unless the terms of an optionee’s stock option agreement provides otherwise, if an optionee’s service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. If an optionee’s service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain

period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual. In no event may an option be exercised beyond the expiration of its term.

Our 2018 Plan provides that in the event of certain specified significant corporate transactions (or a change in control, as defined below), unless otherwise provided in an award agreement or other written agreement between us and the award holder, the administrator may take one or more of the following actions with respect to such stock awards:

- arrange for the assumption, continuation, or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting, in whole or in part, of the stock award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- cancel or arrange for the cancellation of the stock award, to the extent not vested or not exercised before the effective time of the transaction, in exchange for a cash payment, if any, as determined by the board; or
- make a payment, in the form determined by our Board, equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise.

The plan administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner and is not obligated to treat all participants in the same manner.

Under the 2018 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

In the event of a change in control, the board of directors may take any of the above-mentioned actions. Awards granted under the 2018 Plan will not receive automatic acceleration of vesting and exercisability in the event of a change in control, although this treatment may be provided for in an award agreement or other written agreement between the Company and the participant. Under the 2018 Plan, a change in control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity), (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders, (4) a complete dissolution or liquidation of the Company, or (5) when a majority of our Board becomes comprised of individuals who were not serving on our Board on the date of the underwriting agreement related to the IPO, or the incumbent board, or whose nomination, appointment, or election was not approved by a majority of the incumbent board still in office.

#### ***Amended and Restated 2006 Equity Compensation Plan***

Our Board adopted and our stockholders originally approved our 2006 Plan in September 2006, and it was subsequently amended and restated in September 2008 and most recently amended in March 2016. No further grants may be made under our 2006 Plan following the IPO, however outstanding awards granted under our 2006 Plan remain subject to the terms of our 2006 Plan and applicable award agreements.



Our 2006 Plan allowed for the grant of ISOs to employees, including employees of any subsidiary, and for the grant of NSOs, stock appreciation rights, restricted stock awards and restricted stock units and other equity awards to employees, directors and consultants, including employees and consultants of our subsidiaries. Our compensation committee has the authority, concurrent with our Board, to administer our 2006 Plan. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. If an optionee's service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability or death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual. In no event may an option be exercised beyond the expiration of its term.

Our 2006 Plan provides that in the event of a change of control, all awards granted under the 2006 Plan shall become fully vested and exercisable (as applicable), unless the board of directors determines otherwise. In the event of a change of control, the administrator may take any of the following actions with respect to any or all outstanding awards: (i) determine that all outstanding options and stock appreciation rights that are not exercised shall be assumed by, or replaced with comparable options by the surviving corporation (or a parent or subsidiary of the surviving corporation), and other outstanding grants that remain in effect after the change of control shall be converted to similar grants of the surviving corporation (or a parent or subsidiary of the surviving corporation), (ii) require that grantees surrender their outstanding options and stock appreciation rights in exchange for one or more payments, in cash or Company stock as determined by the board of directors, in an amount, if any, equal to the amount by which the then fair market value of the shares of Company stock subject to the grantee's unexercised options and stock appreciation rights exceeds the exercise price or base amount of the options and stock appreciation rights, on such terms as the board of directors determines, or (iii) after giving grantees an opportunity to exercise their outstanding options and stock appreciation rights, terminate any or all unexercised options and stock appreciation rights at such time as the board of directors deems appropriate.

Such assumption, surrender or termination shall take place as of the date of the change of control or such other date as the board of directors may specify.

Under the 2006 Plan, a change of control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) the consummation of a merger or consolidation with another corporation where our stockholders, immediately prior to the merger or consolidation, will not beneficially own, immediately after the merger or consolidation, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, (3) the consummation of a sale or other disposition of all or substantially all of our assets, or (4) the consummation of a liquidation or dissolution.

#### ***2018 Employee Stock Purchase Plan***

Additional long-term equity incentives are provided through the 2018 Employee Stock Purchase Plan, or the ESPP, which became effective in connection with the IPO. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code. Our compensation committee has the authority, concurrent with our Board, to administer the ESPP. Under the ESPP, generally all of our regular employees (including our Named Executive Officers during their employment with us) may participate and may contribute, normally through payroll deductions, up to 15% of their earnings for the purchase of our common stock.

The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, we may specify offerings with a duration of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which our common stock will be purchased for employees participating in the offering. Unless otherwise determined by our compensation committee, shares are purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of our common stock on the first date of an offering or (b) 85% of the fair market value of our common stock on the date of purchase.

## **401(k) Plan**

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our named executive officers are eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code. The plan permits us to make discretionary contributions, including matching contributions and discretionary profit sharing contributions. The 401(k) plan currently does not offer the ability to invest in our securities.

## **Director Compensation**

Our Board adopted a non-employee director compensation policy in July 2018 that became effective upon the IPO and is applicable to each member of our Board who is not also serving as an employee or consultant to the Company. This compensation policy provides that each such non-employee director will receive the following compensation for service on our Board:

- an annual cash retainer of \$30,000;
- an additional annual cash retainer of \$20,000 for service as chairman of the board of directors;
- an additional annual cash retainer of \$15,000, \$10,000 and \$10,000 for service as chair of the Audit Committee, Compensation Committee and the Nominating and Corporate Governance Committee, respectively;
- an additional annual cash retainer of \$7,500, \$5,000 and \$5,000 for service as a member of the Audit Committee, Compensation Committee and the Nominating and Corporate Governance Committee, respectively (not applicable to committee chairs);
- an initial option grant to purchase common stock with an aggregate Black-Scholes option value of \$50,000 on the date of each such non-employee director's appointment to our Board; and
- an annual option grant to purchase common stock with an aggregate Black-Scholes option value of \$35,000 on the date of each of our annual stockholder meetings.

Each of the option grants described above will be granted under our 2018 Plan, the terms of which are described in more detail above under "Equity Benefit Plans." Each such option grant will vest and become exercisable subject to the director's continuous service to us, provided that each option will vest in full upon a change in control (as defined in the 2018 Plan). The term of each option will be 10 years, subject to earlier termination as provided in the 2018 Plan, provided that upon a termination of service other than for death, disability or cause, the post-termination exercise period will be 12 months from the date of termination. An eligible director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date cash may be paid or equity awards are to be granted, as the case may be. Our Board determined that each of our non-employee directors would receive the grant of an initial option under the non-employee director compensation policy in connection with our initial public offering and such grants were effective on October 1, 2018.

We have reimbursed and will continue to reimburse all of our non-employee directors for their reasonable out-of-pocket expenses incurred in attending board of directors and committee meetings. Dr. Holmlin, our President and Chief Executive Officer, is also a director but did not receive any additional compensation for his service as a director.

The following table sets forth in summary form information concerning the compensation that was earned by each of our non-employee directors during the year ended December 31, 2018:

<u>NAME</u>	<u>FEES EARNED OR PAID IN CASH</u>	<u>OPTION AWARDS (\$)(1)</u>	<u>TOTAL (\$)</u>
David L. Barker, Ph.D.	\$ 24,395	\$ 50,000	\$ 74,395
Darren Cai, Ph.D.	\$ 12,649	\$ 50,000	\$ 62,649
Brian K. Halak, Ph.D.(2)	—	—	—
Albert Luderer, Ph.D.	\$ 17,167	\$ 50,000	\$ 67,167
Junfeng Wang	\$ 14,457	\$ 50,000	\$ 64,457
Christopher Twomey(3)	\$ 16,254	\$ 50,000	\$ 66,254
Quan Zhou(4)	\$ 12,649	\$ 50,000	\$ 62,649

- (1) The amounts reported reflect the aggregate grant date fair value of each equity award granted to our non-employee directors during the fiscal year ended December 31, 2018, as computed in accordance with Financial Accounting Standard Board Accounting Standards Codification Topic 718 for stock-based compensation transactions (ASC 718). Assumptions used in the calculation of these amounts are included in Note 2 to our financial statements for the fiscal year ended December 31, 2018. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. These amounts do not reflect the actual economic value that will be realized by our non-employee directors upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options. As of December 31, 2018, the aggregate number of shares outstanding under all options to purchase our common stock held by our non-employee directors were: Dr. Barker, 23,906; Dr. Cai, 10,516; Dr. Halak, 5,155; Dr. Luderer 19,697; Mr. Wang, 10,516; Mr. Twomey, 10,516, and Mr. Zhou, 10,516.
- (2) Dr. Halak resigned from our Board of Directors in May 2018.
- (3) Mr. Twomey was appointed to our Board of Directors in July 2018.
- (4) Mr. Zhou was appointed to our Board of Directors in July 2018.

## TRANSACTIONS WITH RELATED PERSONS AND INDEMNIFICATION

### RELATED-PERSON TRANSACTIONS POLICY AND PROCEDURES

In 2018, the Company adopted a written Related-Person Transactions Policy that sets forth the Company's policies and procedures regarding the identification, review, consideration and approval or ratification of "related-persons transactions." For purposes of the Company's policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which the Company and any "related person" are participants involving an amount that exceeds \$120,000.

Transactions involving compensation for services provided to the Company as an employee, director, consultant or similar capacity by a related person are not covered by this policy. A related person is any executive officer, director, or more than 5% stockholder of the Company, including any of their immediate family members, and any entity owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to the Audit Committee (or, where Audit Committee approval would be inappropriate, to another independent body of the Board) or the Board for consideration and approval or ratification. The presentation must include a description of, among other things, all of the parties, the direct and indirect interests of the related parties, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-person transactions in advance, the Company relies on information supplied by its executive officers, directors and certain significant stockholders. In considering related-person transactions, the Audit Committee takes into account the relevant available facts and circumstances including, but not limited to (a) the risks, costs and benefits to the Company, (b) the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated, (c) the terms of the transaction, (d) the availability of other sources for comparable services or products and (e) the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval. The policy requires that, in determining whether to approve, ratify or reject a related-person transaction, the Audit Committee consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, the best interests of the Company and its stockholders, as the Audit Committee determines in the good faith exercise of its discretion.

### CERTAIN RELATED-PERSON TRANSACTIONS

Other than compensation arrangements for our directors and executive officers, which are described above under the heading "Executive and Director Compensation," below we describe transactions since January 1, 2017 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of (a) \$120,000 or (b) 1% of the average of our total assets for the fiscal years ended December 31, 2017 or 2018; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

### Series D-1 Convertible Preferred Stock Financing

In February, March, April, May, July, August and November 2017, we issued and sold, in a series of closings, an aggregate of 36,974,586 shares of our Series D-1 convertible preferred stock at a purchase price of \$0.48 per share for an aggregate gross proceeds of approximately \$17.7 million. The following table summarizes the Series D-1 convertible preferred stock purchased by affiliates of our executive officers and of members of our Board and holders of more than 5% of our outstanding capital stock:

<u>Name of Participant</u>	<u>Shares of Series D-1 Convertible Preferred Stock</u>	<u>Aggregate Purchase Price</u>
Full Succeed International Limited	10,416,667	\$5,000,000
LC Healthcare Fund I, L.P.	6,472,371	\$3,106,738
Praise Alliance International Limited	6,250,000	\$3,000,000
Entities affiliated with Domain Partners VIII, L.P.(1)	3,710,247	\$1,780,919
Han Cao, Ph.D.	104,167	\$ 50,000

(1) Includes (i) \$1,767,801 in cash from Domain Partners VIII, L.P., and (ii) \$13,117 in cash from DP VIII Associates, L.P.

### Convertible Promissory Note Financing

In February 2018, we issued convertible promissory notes in the aggregate principal amount of approximately \$13.4 million with an interest rate of 8% per annum. In August 2018, \$14.9 million of principal and interest outstanding under the convertible promissory notes converted into an aggregate of 3,239,294 shares of common stock upon completion of the IPO.

The participants in this note financing included the following members of our Board and holders of more than 5% of our outstanding capital stock:

<u>Name of Participant</u>	<u>Total Principal Amount</u>
Entities affiliated with LC Fund VI, L.P. (1)	\$ 8,460,000
Entities affiliated with Domain Partners VIII, L.P.(2)	\$ 1,500,000

(1) Includes (i) \$3,460,000 in cash from LC Healthcare Fund I, L.P.; and (ii) \$5,000,000 cash from Rosy Shine Limited.

(2) Includes (i) \$1,488,952 in cash from Domain Partners VIII, L.P., and (ii) \$11,048 in cash from DP VIII Associates, L.P.

Two of our directors, Junfeng Wang and Quan Zhou, are affiliated with LC Fund VI, L.P. (and its affiliated entities that participated in the financings described above).

### Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

## HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other Annual Meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials or other Annual Meeting materials addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are Bionano stockholders will be “householding” the Company’s proxy materials. A single Notice of Internet Availability of Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate Notice of Internet Availability of Proxy Materials, please notify your broker or Bionano. Direct your written request to the attention of the Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121 or call us at 858-888-7600. Stockholders who currently receive multiple copies of the Notice of Internet Availability of Proxy Materials at their addresses and would like to request “householding” of their communications should contact their brokers.

## OTHER MATTERS

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board of Directors

/s/ Heather Adams  
Heather Adams  
Secretary

April 26, 2019

**A copy of the Company's Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 31, 2018 is available without charge upon written request to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.**



ANNUAL MEETING OF BIONANO GENOMICS, INC.

Date: June 6, 2019
Time: 10:00 A.M. (Local Time)
Place: 9540 Towne Centre Drive, San Diego, California 92121

Please make your marks like this: [X] Use dark black pencil or pen only

The Board of Directors Recommends a Vote FOR the two nominees for director and FOR proposal 2.

1: Election of Class I Directors

Directors Recommend

Table with 4 columns: Candidate Name, For, Withhold, Directors Recommend. Candidates: 01 R. Erik Holmlin, Ph.D., 02 David L. Barker, Ph.D.

2: To ratify the selection of Deloitte & Touche LLP by the Audit Committee of the Board of Directors to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019.

3: To conduct any other business properly brought before the meeting.

Authorized Signatures - This section must be completed for your Instructions to be executed.

Signature and Date lines: Please Sign Here, Please Date Above

Please sign exactly as your name(s) appears on your stock certificate. If held in joint tenancy, all persons should sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the proxy.

Please separate carefully at the perforation and return just this portion in the envelope provided.



Annual Meeting of Bionano Genomics, Inc. to be held on Thursday, June 6, 2019 for Holders as of April 15, 2019

This proxy is being solicited on behalf of the Board of Directors



INTERNET

Go To www.proxypush.com/BNGO
Cast your vote online.
View Meeting Documents.



TELEPHONE

866-230-6415

OR

Use any touch-tone telephone.
Have your Proxy Card/Voting Instruction Form ready
Follow the simple recorded instructions.



MAIL

OR

Mark, sign and date your Proxy Card/Voting Instruction Form.
Detach your Proxy Card/Voting Instruction Form.
Return your Proxy Card/Voting Instruction Form in the postage-paid envelope provided.

The undersigned hereby appoints Erik Holmlin Ph.D. and Mike Ward, and each or either of them, as the true and lawful attorneys of the undersigned, with full power of substitution and revocation, and authorizes them, and each of them, to vote all the shares of capital stock of Bionano Genomics, Inc. which the undersigned is entitled to vote at said meeting and any adjournment thereof upon the matters specified and upon such other matters as may be properly brought before the meeting or any adjournment thereof, conferring authority upon such true and lawful attorneys to vote in their discretion on such other matters as may properly come before the meeting and revoking any heretofore given.

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, SHARES WILL BE VOTED FOR THE ELECTION OF THE DIRECTORS IN ITEM 1 AND FOR THE PROPOSALS IN ITEM 2.

Votes must be received by 11:59 P.M., Eastern Time, June 5, 2019.

PROXY TABULATOR FOR

BIONANO GENOMICS, INC.
P.O. BOX 8016
CARY, NC 27512-9903





**Proxy — Bionano Genomics, Inc.  
Annual Meeting of Stockholders  
Thursday, June 6, 2019, 10:00 a.m. (Local Time)  
This Proxy is Solicited on Behalf of the Board of Directors**

The undersigned appoints Erik Holmlin Ph.D. and Mike Ward (the "Named Proxies") and each of them as proxies for the undersigned, with full power of substitution, to vote the shares of common stock of Bionano Genomics, Inc., a Delaware corporation ("the Company"), the undersigned is entitled to vote at the Annual Meeting of Stockholders of the Company to be held at 9540 Towne Centre Drive, San Diego, California 92121, on Thursday, June 6, 2019 at 10:00 a.m. (PST) and all adjournments thereof.

The purpose of the Annual Meeting is to take action on the following:

1. To elect the two nominees for Class I director named in the accompanying proxy statement, each to hold office until the 2022 Annual Meeting of Stockholders or until a successor is duly elected and qualified or until the director's earlier death, resignation or removal;
2. To ratify the selection of Deloitte & Touche LLP by the Audit Committee of the Board of Directors to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019; and
3. To conduct any other business properly brought before the meeting.

The two directors up for re-election are: R. Erik Holmlin, Ph.D. and David L. Barker, Ph.D..

The Board of Directors of the Company recommends a vote "FOR" all nominees for director and "FOR" each proposal.

**This proxy, when properly executed, will be voted in the manner directed herein. If no direction is made, this proxy will be voted "FOR" all nominees for director and "FOR" each proposal. In their discretion, the Named Proxies are authorized to vote upon such other matters that may properly come before the Annual Meeting or any adjournment or postponement thereof.**

**You are encouraged to specify your choice by marking the appropriate box (SEE REVERSE SIDE) but you need not mark any box if you wish to vote in accordance with the Board of Directors' recommendation. The Named Proxies cannot vote your shares unless you sign and return this card.**

**To attend the meeting and vote your shares  
in person, please mark this box.**

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↓