

GENOCEA BIOSCIENCES, INC.
Form DEF 14A
March 29, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934
Filed by the Registrant

Filed by a Party other than the Registrant
Check the appropriate box:

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

Genocea Biosciences, 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.
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- (1) Amount Previously Paid:
(2) Form, Schedule or Registration Statement No.:
(3) Filing Party:
(4) Date Filed:

Genocea Biosciences, Inc.
100 Acorn Park Drive,
Cambridge, MA 02140

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

The 2019 Annual Meeting of Stockholders of Genocea Biosciences, Inc. (the "Company" or "Genocea") will be held on May 15, 2019, at 9:00 a.m. local time, at Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, MA 02199 (the "Annual Meeting") for the following purposes:

1. To elect Ms. Katrine Bosley and Mr. Michael Higgins as Class II directors, each for a three-year term;
2. To approve an amendment to the Company's restated certificate of incorporation to effect a reverse stock split (the "Reverse Stock Split Proposal");
3. In the event the shareholders approve the Reverse Stock Split Proposal, to approve an amendment to the Company's restated certificate of incorporation to decrease the total number of shares of common stock that the Company is authorized to issue from 250,000,000 shares to 85,000,000 shares;
4. To ratify the appointment of Ernst & Young LLP as the independent registered public accounting firm for the Company for the fiscal year ending December 31, 2019; and
5. To consider and act upon any other matters that properly come before the Annual Meeting or any adjournment or postponement thereof.

Each outstanding share of the Company's common stock (Nasdaq: GNCA) entitles the holder of record at the close of business on March 19, 2019, to receive notice of and to vote at the Annual Meeting or any adjournment or postponement of the Annual Meeting.

WHETHER OR NOT YOU EXPECT TO ATTEND THE ANNUAL MEETING, WE URGE YOU TO VOTE YOUR SHARES BY FOLLOWING THE INSTRUCTIONS TO THE IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS THAT YOU PREVIOUSLY RECEIVED AND SUBMIT YOUR PROXY BY INTERNET, TELEPHONE, OR BY SIGNING, DATING AND RETURNING THE PROXY CARD INCLUDED IN THESE MATERIALS. IF YOU CHOOSE TO ATTEND THE ANNUAL MEETING, YOU MAY STILL VOTE YOUR SHARES IN PERSON, EVEN THOUGH YOU HAVE PREVIOUSLY VOTED OR RETURNED YOUR PROXY BY ANY OF THE METHODS DESCRIBED IN OUR PROXY STATEMENT. IF YOUR SHARES ARE HELD IN A BANK OR BROKERAGE ACCOUNT, PLEASE REFER TO THE MATERIALS PROVIDED BY YOUR BANK OR BROKER FOR VOTING INSTRUCTIONS.

ALL STOCKHOLDERS ARE EXTENDED AN INVITATION TO ATTEND THE ANNUAL MEETING.

By Order of the Board of Directors

William Clark
President and Chief Executive Officer
March 29, 2019

Genocea Biosciences, Inc.
100 Acorn Park Drive,
Cambridge, MA 02140

PROXY STATEMENT FOR ANNUAL MEETING OF STOCKHOLDERS
To Be Held On May 15, 2019 at 9:00 am EDT

This proxy statement (the “Proxy Statement”), along with the accompanying Notice of 2019 Annual Meeting of Stockholders, contains information about the Annual Meeting, including any adjournments or postponements of the Annual Meeting. We are holding the Annual Meeting at 9:00 a.m. local time, at Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, MA 02199.

On or about March 29, 2019, we made available this Proxy Statement and the attached Notice of 2019 Annual Meeting of Stockholders to all stockholders entitled to vote at the Annual Meeting, and we began sending the proxy card and the Important Notice Regarding the Availability of Proxy Materials to all stockholders entitled to vote at the Annual Meeting. Although not part of this Proxy Statement, we have also made available with this Proxy Statement our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 (the “Annual Report”), which includes our financial statements for the fiscal year ended December 31, 2018.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON May 15, 2019

This Proxy Statement and our Annual Report are available for viewing, printing and downloading at www.proxyvote.com. To view these materials, please have your 16-digit control number(s) available that appears on your proxy card.

Additionally, you can find a copy of our Annual Report on the website of the Securities and Exchange Commission (“SEC”) at www.sec.gov, or in the “Financial Filings - Annual Reports and Proxies” tab of the “Investors & Media” section of our website at www.genocea.com. You may also obtain a printed copy of our Annual Report, free of charge, by sending a written request to: Genocea Biosciences, Inc., 100 Acorn Park Drive, Cambridge, Massachusetts 02140, Attention: Secretary. Exhibits, if any, will be provided upon written request and payment of an appropriate processing fee.

GENERAL INFORMATION

When are this Proxy Statement and the accompanying material scheduled to be sent to stockholders?

On or about March 29, 2019, we began sending the Important Notice Regarding the Availability of Proxy Materials to all stockholders entitled to vote at the Annual Meeting.

Who is soliciting my vote?

The Board of Directors of the Company is soliciting your vote for the 2019 Annual Meeting of Stockholders.

When is the record date for the Annual Meeting?

The Company's Board of Directors has fixed the record date for the Annual Meeting as of the close of business on March 19, 2019.

How many votes can be cast by all stockholders?

A total of 112,393,445 shares of common stock of the Company were outstanding on March 19, 2019 and are entitled to be voted at the Annual Meeting. Each share of common stock is entitled to one vote on each matter.

How do I vote?

If you are a stockholder of record and your shares are registered directly in your name, you may vote:

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By Internet. Access the website at www.proxyvote.com and follow the instructions provided on the Important Notice Regarding Availability of Proxy Materials on the proxy card. Your shares will be voted in accordance with your instructions. You must specify how you want your shares voted, or your Internet vote cannot be completed and you will receive an error message.

By Telephone. Call 1-800-690-6903 toll-free and follow the instructions on the enclosed proxy card. Your shares will be voted in accordance with your instructions. You must specify how you want your shares voted, or your telephone vote cannot be completed.

By Mail. Complete and mail the enclosed proxy card to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY, 11717 in the enclosed postage prepaid envelope. Your proxy will be voted in accordance with your instructions. If you sign and return the enclosed proxy but do not specify how you want your shares voted, they will be voted (i) FOR the election as directors of the nominees named herein to the Company's Board of Directors, (ii) FOR the approval of the Reverse Stock Split Proposal; (iii) if the shareholders approve the Reverse Stock Split Proposal, FOR the approval of the amendment to the Company's restated certificate of incorporation to decrease the total number of shares of common stock that the Company is authorized to issue from 250,000,000 shares to 85,000,000 shares; (iv) FOR the ratification of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019, and (v) will be voted according to the discretion of the proxy holder named in the proxy card upon any other business that may properly be brought before the Annual Meeting and at all adjournments and postponements thereof.

In Person at the Annual Meeting. If you attend the Annual Meeting, be sure to bring a form of personal picture identification with you, and you may deliver your completed proxy card in person, or you may vote by completing a ballot, which will be available at the Annual Meeting.

If your shares of common stock are held in street name (held for your account by a broker or other nominee):

By Internet or By Telephone. You will receive instructions from your broker or other nominee if you are permitted to vote by Internet or telephone.

By Mail. You will receive instructions from your broker or other nominee explaining how to vote your shares.

In Person at the Annual Meeting. If you attend the Annual Meeting, in addition to picture identification, you should both bring an account statement or a letter from the record holder indicating that you owned the shares as of the record date, and contact the broker or other nominee who holds your shares to obtain a broker's proxy card and bring it with you to the Annual Meeting.

What are the Board's recommendations on how to vote my shares?

The Board of Directors recommends a vote:

Proposal 1: FOR ALL election of the two Class II directors.

Proposal 2: FOR approving the Reverse Stock Split Proposal

Proposal 3: if the shareholders approve the Reverse Stock Split Proposal, FOR approving the amendment to the Company's restated certificate of incorporation to decrease the total number of shares of common stock that the Company is authorized to issue from 250,000,000 shares to 85,000,000 shares.

Proposal 4: FOR ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year 2019.

Who pays the cost for soliciting proxies?

Genocea will bear the cost of solicitation of proxies. This includes the charges and expenses of brokerage firms and others for forwarding solicitation material to beneficial owners of our outstanding common stock. Genocea may solicit proxies by mail, personal interview, telephone, or via the Internet through its officers, directors and other management employees, who will receive no additional compensation for their services.

Can I change my vote?

You may revoke your proxy at any time before it is voted by notifying the Secretary in writing, by returning a signed proxy with a later date, by transmitting a subsequent vote over the Internet or by telephone prior to the close of the Internet voting facility or the telephone voting facility, or by attending the Annual Meeting and voting in person. If your stock is held in street name, you must contact your broker or nominee for instructions as to how to change your vote.

How is a quorum reached?

The presence, in person or by proxy, of holders of at least a majority of the total number of outstanding shares entitled to vote is necessary to constitute a quorum for the transaction of business at the Annual Meeting. Abstentions and "broker non-votes" (i.e., shares represented at the Annual Meeting held by brokers, bankers or other nominees as to which instructions have not been received from the beneficial owners or persons entitled to vote such shares and, with respect to one or more but not all issues, such brokers or nominees do not have discretionary voting power to vote such shares), if any, will be counted for purposes of determining whether a quorum is present for the transaction of business at the Annual Meeting.

What vote is required to approve each item?

Directors are elected by a plurality of votes cast (Proposal 1). A vote to withhold or a broker non-vote will have no direct effect on the outcome. A majority of the shares outstanding as of the record date is necessary for approval of the Reverse Stock Split (Proposal 2) and for the amendment to the Company's restated certificate of incorporation to decrease the total number of shares of common stock that the Company is authorized to issue from 250,000,000 shares to 85,000,000 shares (Proposal 3). Abstentions and broker non-votes will have the effect of a negative vote on Proposal 2 and Proposal 3. A majority of votes cast is necessary for ratification of the selection of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019 (Proposal 4). A vote to abstain will have no direct effect on the outcome.

If there are insufficient votes to approve these proposals, your proxy may be voted by the persons named in the proxy card to adjourn the Annual Meeting in order to solicit additional proxies in favor of the approval of such proposals. If the Annual Meeting is adjourned or postponed for any purpose, at any subsequent reconvening of the Annual Meeting, your proxy will be voted in the same manner as it would have been voted at the original convening of the Annual Meeting unless you withdraw or revoke your proxy.

Could other matters be decided at the Annual Meeting?

Genocea does not know of any other matters that may be presented for action at the Annual Meeting. Should any other business come before the Annual Meeting, the persons named on the enclosed proxy will have discretionary authority to vote the shares represented by such proxies in accordance with their best judgment. If you hold shares through a broker, bank or other nominee as described above, they will not be able to vote your shares on any other business that comes before the Annual Meeting unless they receive instructions from you with respect to such matter.

What happens if the Annual Meeting is postponed or adjourned?

Your proxy may be voted at the postponed or adjourned Annual Meeting. You will still be able to change your proxy until it is voted.

What does it mean if I receive more than one proxy card or voting instruction form?

It means that you have multiple accounts at the transfer agent or with brokers. Please complete and return all proxy cards or voting instruction forms to ensure that all of your shares are voted.

Who should I call if I have any additional questions?

If you hold your shares directly, please call Derek Meisner, Secretary, at 617-876-8191. If your shares are held in street name, please contact the telephone number provided on your voting instruction form or contact your broker or nominee holder directly.

PROPOSAL NO. 1—ELECTION OF DIRECTORS

In accordance with the Company's restated certificate of incorporation and amended and restated by-laws, the Board of Directors is divided into three classes of approximately equal size. The members of each class are elected to serve a three-year term with the term of office of each class ending in successive years. Katrine Bosley and Michael Higgins are the Class II directors whose terms expire at the Annual Meeting. Both Ms. Bosley and Mr. Higgins have been nominated for and have agreed to stand for re-election to the Board of Directors to serve as a Class II director of the Company until the 2022 annual meeting of stockholders and until his or her successor is duly elected.

It is intended that, unless you give contrary instructions, shares represented by proxies will be voted for the election of the two nominees listed above as director nominees. Genoclea has no reason to believe that any nominee will be unable to serve. In the event that one or more nominees is unexpectedly not available to serve, proxies may be voted for another person nominated as a substitute by the Board of Directors, or the Board of Directors may reduce the number of directors to be elected at the Annual Meeting. Information relating to each nominee for election as director and for each continuing director, including his or her period of service as a director of Genoclea, principal occupation and other biographical material, is shown below.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE
FOR
ALL OF THESE NOMINEES FOR CLASS II DIRECTOR
(PROPOSAL 1 ON YOUR PROXY CARD)

DIRECTOR BIOGRAPHIES

Below sets forth information concerning our directors as of February 28, 2019. The biographical description of each director includes the specific experience, qualifications, attributes and skills that the Board of Directors would expect to consider if it were making a conclusion currently as to whether such person should serve as a director.

CLASS II DIRECTOR NOMINEES

Katrine Bosley, age 50, is a Class II director who has served as a member of our Board of Directors since March 2013 and as our chair from August 2013 until December 2018. Ms. Bosley served as the Chief Executive Officer of Editas Medicine Inc. ("Editas") from June 2014 through February 2019. Prior to Editas, Ms. Bosley was the Entrepreneur-in-Residence at The Broad Institute from September 2013 to May 2014. She served as Chief Executive Officer of Avila Therapeutics Inc. ("Avila"), from May 2009 to March 2012, when Avila was acquired by Celgene Corporation. Before Avila, she was Vice President, Strategic Operations at Adnexus Therapeutics Inc. ("Adnexus"), a BMS Company, and was Vice President, Business Development at Adnexus before that. She joined Adnexus from Biogen Idec where she held roles in business development, commercial operations, and portfolio strategy in the United States and Europe. In addition to serving as a director of our Company, Ms. Bosley currently serves as a director of Galapagos NV and Massachusetts Eye and Ear. She also is a member of the BIO Governing Board and Chair of the Emerging Companies Section of the Board. Ms. Bosley graduated from Cornell University with a B.A. in Biology. We believe that Ms. Bosley's experience as a chief executive officer of a biotechnology company and her breadth of experience in creating strategic and business development value qualifies her to serve as a member of our Board of Directors.

Michael Higgins, age 56, is a Class II director who has served as a member of our Board of Directors since February 2015. In January 2015, Mr. Higgins joined Polaris Partners as an Entrepreneur-in-Residence. Prior to joining Polaris Partners, Mr. Higgins served as Chief Operating Officer and Chief Financial Officer at Ironwood Pharmaceuticals ("Ironwood") from 2003 through 2014, playing a key role in Ironwood's evolution from a privately-funded discovery

organization through its initial public offering and the launch of its first commercial product. Under his leadership, Ironwood was able to raise more than one billion dollars to help support the development of the business during that period. Prior to his work at Ironwood, from 1997 through 2003, Mr. Higgins worked at Genzyme Corporation ("Genzyme") in a variety of leadership roles including Vice President, Corporate Finance and Vice President, Business Development. While at Genzyme, he was involved with multiple businesses including the Cell Therapy, Gene Therapy, and Orphan Disease business units. Previously, Mr. Higgins served as Chief Financial Officer of Procept, Inc., from 1992 to 1997, and led the company through its initial public offering. Mr. Higgins currently serves as a director of Pulmatrix, Inc. and Voyager Therapeutics. Mr. Higgins began his pharmaceutical career as a sales representative for Schering-Plough Corporation in 1986. Mr. Higgins earned his B.S. from Cornell University and holds an M.B.A. from the Amos Tuck School of Business at Dartmouth College. We believe that Mr. Higgins' financial and business expertise, including his diversified background as an executive officer in public pharmaceutical companies, qualifies him to serve as a member of our Board of Directors.

DIRECTORS NOT STANDING FOR ELECTION AT THE ANNUAL MEETING

Kenneth Bate, age 68, is a Class I director who has served as a member of our Board of Directors since September 2014 and our chair since December 2018. Mr. Bate has served as an independent consultant in the biotechnology field since 2012. From 2009 to 2012, Mr. Bate served as President and Chief Executive Officer of Archemix, Inc., a privately-held biotechnology company. From 2006 to 2009, Mr. Bate served in various positions at NitroMed, Inc., a pharmaceutical company, most recently as President and Chief Executive Officer. From 2002 to 2005, Mr. Bate served as Chief Financial Officer of Millennium Pharmaceuticals Inc., where he headed the commercial organization. Prior to joining Millennium Pharmaceuticals Inc., Mr. Bate co-founded JSB Partners, LLC, a banking and advisory services firm for biopharmaceutical and life sciences companies. From 1990 to 1996, he was with Biogen Inc., a biotechnology company, first as their Chief Financial Officer, and then as head of the commercial organization responsible for launching the multiple sclerosis business. Mr. Bate is currently a director of AVEO Pharmaceuticals, Catabasis Pharmaceuticals, Epizyme Inc., and Madrigal Pharmaceuticals. He holds an M.B.A. from The Wharton School of the University of Pennsylvania and a B.A. from Williams College. We believe that Mr. Bate's experience as a chief executive officer of multiple biotechnology companies, as well as his experience as a director of other companies, qualifies him to serve as a member of our Board of Directors.

Ali Behbahani, M.D., age 42, is a Class I director who has served as a member of our Board of Directors since February 2018. Since 2007, Dr. Behbahani has served in various positions on the healthcare team at New England Associates, most recently as General Partner. The healthcare team specializes in investments in the biopharmaceutical and medical device sectors. He is also currently a member of the board of directors of CRISPR Therapeutics, Adaptimmune and Nevro Corp. He has previously worked as a consultant in business development at The Medicines Company and held positions as a Venture Associate at Morgan Stanley Venture Partners from 2000 to 2002 and as a Healthcare Investment Banking Analyst at Lehman Brothers from 1998 to 2000. Dr. Behbahani conducted basic science research in the fields of viral fusion inhibition and structural proteomics at the National Institutes of Health and at Duke University. He holds an M.D. degree from The University of Pennsylvania School of Medicine and an M.B.A. from The University of Pennsylvania Wharton School. We believe Dr. Behbahani's experience in the biopharmaceutical industry, as well as his experience as a member on the boards of directors of multiple companies in the industry, qualifies him to serve as a member of our Board of Directors.

William Clark, age 50, is a Class III director who has served on our Board of Directors and as our President and Chief Executive Officer since February 2011. Previously he served as our Chief Business Officer from August 2010 to February 2011. Mr. Clark has served on our Board of Directors since February 2011. Prior to joining our Company, he served as Chief Business Officer at Vanda Pharmaceuticals, Inc. ("Vanda"), a biopharmaceutical company he co-founded in 2004. While at Vanda, he led the company's strategic and business development activities, and played a central role in multiple public and private financings. Prior to Vanda, Mr. Clark was a principal at Care Capital, LLC, a venture capital firm investing in biopharmaceutical companies, after serving in a variety of strategic and commercial roles at SmithKline Beecham (now GlaxoSmithKline). Mr. Clark holds a B.A. from Harvard University and an M.B.A. from The Wharton School at the University of Pennsylvania. We believe that Mr. Clark's operational and historical experience with our Company gained from serving as our Chief Executive Officer, President and member of our Board of Directors, combined with his prior experience at Vanda and in the venture capital industry focusing on biopharmaceutical companies, qualifies him to serve as a member of our Board of Directors.

Ronald Cooper, age 56, is a Class III director who has served as a member of our Board of Directors since June 2016. Mr. Cooper is President and CEO of Albireo Pharma ("Albireo"), a position that he was appointed to in June 2015. Mr. Cooper is a life sciences leader with a track record of growing and rejuvenating businesses, brands and organizations in the U.S. and Europe, ranging from entrepreneurial and resource-constrained, up to sales exceeding \$4.5 billion. Prior to Albireo, Mr. Cooper was with Bristol-Myers Squibb ("BMS") for over 25 years working in five different countries and holding positions of increasing responsibility in sales, marketing and general management,

culminating in President of Europe. In Europe, Mr. Cooper was responsible for over 30 countries with sales exceeding \$4.5 billion. While at BMS, Mr. Cooper was directly associated with several product successes, including Abilify®, Avapro®, Atripla®, Eliquis®, Orenicia®, Pravachol®, Plavix®, Reyataz®, Sustiva®, Sprycel® and Yervoy®. Mr. Cooper has successfully completed over a dozen business development deals including the creation of the first single tablet HIV/AIDS regimen partnership. Mr. Cooper is a graduate of St. Francis Xavier University in Canada. We believe that Mr. Cooper's experience in the pharmaceutical industry, along with his background as an executive officer of a public company, qualifies him to serve as a member of our Board of Directors.

Howard Mayer, M.D., age 56, is a Class I director who has served as a member of our Board of Directors since March 2017. Dr. Mayer was Senior Vice President and Chief Medical Officer at Shire plc and is currently in a transitional role as Head of the Rare Diseases Therapeutic Area Unit at Takeda. Dr. Mayer joined Shire in 2012 and is responsible for global clinical development across hematology, immunology, oncology, genetic diseases, GI/metabolic, neuroscience and ophthalmology therapeutic areas. From 2009 to 2012 he served as Chief Medical Officer at EMD Serono, a division of Merck KGaA. Prior to

that, he held a variety of global roles at Pfizer Inc. ("Pfizer"), including Head of Clinical Development and Medical Affairs for Virology/Infectious Diseases. Prior to joining Pfizer, he served as Director of Infectious Diseases Clinical Research at BMS for five years. Dr. Mayer obtained his B.A. from the University of Pennsylvania and his M.D. from Albert Einstein College of Medicine in New York, which was followed by an internship and residency at Mount Sinai Hospital and an Infectious Diseases fellowship at Harvard Medical School. Since 2011 he has served on the board of Autism Speaks in New England. In 2011 and 2017, he was honored by PharmaVoice as one of the 100 Most Inspiring People in the Life Sciences Industry. We believe that Dr. Mayer's scientific expertise, which includes clinical development experiences in both infectious disease and oncology, qualifies him to serve as a member of our Board of Directors.

George Siber, M.D., age 74, is a Class III director who has served as a member of our Board of Directors since 2007. From 1996 to 2007, Dr. Siber served as Executive Vice President and Chief Scientific Officer of Wyeth Vaccines ("Wyeth"). While at Wyeth, Dr. Siber oversaw the development and approval of multiple widely-used childhood vaccines, including: Prevnar, a pneumococcal vaccine which has achieved multibillion dollar revenues; Acel-Imune, an acellular pertussis vaccine; and Meningitec, a meningococcal meningitis vaccine. Prior to Wyeth, Dr. Siber was Director of the Massachusetts Public Health Biologic Laboratories and a Harvard Medical School Associate Professor of Medicine at Dana Farber Cancer Institute. During this time, Dr. Siber led the research and manufacturing of multiple vaccines and immune globulins including Respigam, a human immune globulin against respiratory syncytial virus. Since 2007, Dr. Siber has served on the boards of directors of several vaccine companies, including Crucell, Selecta Biosciences, Vedantra Pharmaceuticals and Affinivax Inc., and as a consultant or scientific advisory board member of ClearPath Vaccines Company, of which he is currently the Chief Scientific Officer, PaxVax, Vaxess Technologies, Inc., the Bill & Melinda Gates Foundation, PATH, the Wellcome Trust, the European Commission (on vaccinations), the National Institutes of Health, or NIH, and the Korean FDA. Dr. Siber serves as a member of the Board of Trustees of the International Vaccine Institute. Dr. Siber holds an M.D. degree from McGill University in Canada, received post-doctoral training in Internal Medicine at Rush-Presbyterian Hospital in Chicago and Beth Israel Hospital in Boston and Infectious Disease and vaccinology training at Children's Hospital and Beth Israel Hospital, Harvard Medical School Boston. We believe that Dr. Siber's experience in life sciences and vaccine industries and his experience overseeing the development of multiple vaccines, qualifies him to serve as a member of our Board of Directors.

BOARD OF DIRECTORS AND ITS COMMITTEES

The following table describes which directors serve on each of the committees of the Board of Directors as of March 1, 2019.

| Name | Nominating and Corporate Governance Committee | Compensation Committee | Audit Committee | |
|---------------------|---|------------------------|-----------------|-----|
| Kenneth Bate | | X | (1)X | |
| Ali Behbahani, M.D. | | X | | |
| Katrine Bosley | X | (1) | | |
| William Clark | | | | |
| Ronald Cooper | X | | X | |
| Michael Higgins | | | X | (1) |
| Howard Mayer, M.D. | | X | | |
| George Siber, M.D. | X | | | |

(1) Chair of the committee.

THE BOARD OF DIRECTORS AND ITS COMMITTEES

Director Independence

As required by the listing standards of The Nasdaq Capital Market ("Nasdaq"), the Board of Directors has affirmatively determined, upon the recommendation of the Nominating and Corporate Governance Committee, that each of our directors (other than William Clark, our President and Chief Executive Officer) is independent. To make this determination, our Board of Directors reviews all relevant transactions or relationships between each director and Genoclea, its senior management and its independent registered public accounting firm. During this review, the Board of Directors considers whether there are any transactions or relationships between directors or any member of their immediate family (or any entity of which a director or an immediate family member is an executive officer, general partner or significant equity holder) and members of our senior management or their affiliates. The Board of Directors consults with Genoclea's outside corporate counsel to ensure that the Board of Directors' determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent Nasdaq listing standards, as in effect from time to time.

Board Meetings and Attendance

The Board of Directors held nine meetings during the year ended December 31, 2018. Each of the directors, other than Howard Mayer and George Siber, attended at least 75% of the meetings of the Board of Directors and the committees of the Board of Directors on which he or she served during the year ended December 31, 2018 (in each case, which were held during the period for which he or she was a director and/or a member of the applicable committee). Each director who is up for election at an annual meeting of stockholders or who has a term that continues after such annual meeting is expected to attend the Annual Meeting. All of our then existing directors on the Board of Directors attended our 2018 annual meeting.

Board Committees

The Board of Directors has standing Audit, Compensation and Nominating and Corporate Governance Committees, each of which is comprised solely of independent directors, and is described more fully below. The charters for the Audit, Compensation and Nominating and Corporate Governance Committees are all available on our website (<http://ir.genoclea.com/>) under "Investors" at "Governance".

Audit Committee

Our Audit Committee is composed of Mr. Bate, Mr. Cooper, and Mr. Higgins, with Mr. Higgins serving as chair of the committee. Our Board of Directors has determined, upon the recommendation of the Nominating and Corporate Governance Committee, that each member of the Audit Committee meets the independence requirements of Rule 10A-3 under the Exchange Act of 1934, as amended (the "Exchange Act") and the applicable listing standards of Nasdaq. Our Board of Directors has determined that each of Mr. Bate, Mr. Cooper, and Mr. Higgins is an "audit committee financial expert" within the meaning of the SEC regulations and applicable listing standards of Nasdaq. Our Audit Committee operates pursuant to a written charter and it reviews and assesses the adequacy of its charter annually.

The Audit Committee's responsibilities include:

appointing, approving the compensation of, and assessing the qualifications, performance and independence of our independent registered public accounting firm by considering (i) evaluations of our independent registered public accounting firm by our management and internal auditors, (ii) our independent registered public accounting firm's

effectiveness of communications and working with the Audit Committee and our management and internal auditors, (iii) the length of time our independent registered public accounting firm has served as our independent auditors, (iv) the quality and depth of our independent registered public accounting firm's expertise and experience in the biotech and life sciences industries in light of the breadth, complexity and global reach of our business and (v) the advisability and potential impact of selecting a different independent registered public accounting firm;

pre-approving audit and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;

- reviewing the internal audit plan with the independent registered public accounting firm and members of management responsible for preparing our financial statements;

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- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns; recommending, based upon the Audit Committee's review and discussions with management and the Company's independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report;
- monitoring our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the Audit Committee report required by the rules of the SEC to be included in our annual proxy statement;
- viewing all related party transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing and discussing with management and our independent registered public accounting firm our earnings releases and scripts.

All audit and non-audit services to be provided to us by our independent registered public accounting firm must be approved in advance by the Audit Committee. During the year ended December 31, 2018, the Audit Committee met four times. The report of the Audit Committee is included in this Proxy Statement under "Audit Committee Report".

Compensation Committee

Our Compensation Committee is composed of Mr. Bate, Dr. Behbahani, and Dr. Mayer, with Mr. Bate serving as chair of the committee. The Board of Directors has determined, upon the recommendation of the Nominating and Corporate Governance Committee, that each member of the Compensation Committee is "independent" within the meaning of the rules and regulations of Nasdaq and the SEC. In addition, each member qualifies as an "outside director" within the meaning of Section 162(m) of the Internal Revenue Code and is a "non-employee director" within the meaning of the SEC rules. Our Compensation Committee operates pursuant to a written charter and it reviews and assesses the adequacy of its charter periodically.

The Compensation Committee's responsibilities include:

- annually reviewing and recommending to the Board of Directors for approval the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and recommending to the Board of Directors for approval the compensation of our Chief Executive Officer;
- reviewing and approving the compensation of our other executive officers;
- appointing, compensating and overseeing the work of any compensation consultant, legal counsel or other advisor retained by the Compensation Committee;
- conducting the independence assessment outlined in Nasdaq rules with respect to any compensation consultant, legal counsel or other advisor retained by the Compensation Committee;
- annually reviewing and reassessing the adequacy of the committee charter in accordance with the listing requirements of Nasdaq;
- reviewing and establishing our overall management compensation philosophy and policy;
- overseeing and administering our equity compensation and other incentive compensation programs;

- reviewing and approving our equity and incentive policies and procedures for the grant of equity-based awards and approving the grant of such equity-based awards;
- reviewing and making recommendations to the Board of Directors with respect to director compensation; and if applicable, producing the compensation committee report to be included in our annual proxy statement and/or Annual Report.

During the year ended December 31, 2018, the Compensation Committee met three times.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee is composed of Ms. Bosley, Mr. Cooper, and Dr. Siber, with Ms. Bosley serving as chair of the committee. Our Board of Directors has determined that each member of the Nominating and Corporate Governance Committee is "independent" within the meaning of the rules and regulations of Nasdaq. Our Nominating and Corporate Governance Committee operates pursuant to a written charter and it reviews and assesses the adequacy of its charter periodically.

The Nominating and Corporate Governance Committee's responsibilities include:

- developing and recommending to the Board of Directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating Board of Director candidates, including nominees recommended by stockholders;
- identifying individuals qualified to become members of the Board of Directors;
- recommending to the Board of Directors the persons to be nominated for election as directors and to each of the Board of Directors' committees;
- developing and recommending to the Board of Directors a set of corporate governance principles;
- articulating to each director what is expected, including reference to the corporate governance principles and directors' duties and responsibilities;
- reviewing and recommending to the Board of Directors practices and policies with respect to directors;
- reviewing and recommending to the Board of Directors the functions, duties and compositions of the committees of the Board of Directors;
- reviewing and assessing the adequacy of the committee charter and submitting any changes to the Board of Directors for approval;
- considering and reporting to the Board of Directors any questions of possible conflicts of interest of Board of Directors members;
- providing for new director orientation and continuing education for existing directors on a periodic basis;
- performing an evaluation of the performance of the committee; and
- overseeing the evaluation of the Board of Directors and management.

The Nominating and Corporate Governance Committee does not set specific, minimum qualifications that nominees must meet in order to be recommended to the Board of Directors, but rather believes that each nominee should be evaluated based on his or her individual merits, taking into account the needs of Genoclea and the composition of the Board of Directors. Additionally, neither the Nominating and Corporate Governance Committee nor the Board of Directors has a specific policy with regard to the consideration of diversity in identifying director nominees; however, both may consider the diversity of background and experience of a director nominee in the context of the overall composition of the Board of Directors at that time, such as diversity of knowledge, skills, experience, geographic location, age, gender, and ethnicity. Members of the Nominating and Corporate Governance Committee discuss and evaluate possible candidates in detail and suggest individuals to explore in more depth.

The Nominating and Corporate Governance Committee will consider candidates recommended by stockholders. Candidates recommended by stockholders are given appropriate consideration in the same manner as other candidates.

During the year ended December 31, 2018, the Nominating and Corporate Governance Committee met four times.

Board of Directors Leadership Structure

Mr. Bate has served as the chair of our Board of Directors since December 2018. Ms. Bosley previously served as the chair of our Board of Directors from August 2013 through December 2018. The independent members of the Board of Directors have periodically reviewed the Board of Directors' leadership structure and have determined that Genoclea and our stockholders are well served with this structure.

The chair of the Board of Directors provides leadership to the Board of Directors and works with the Board of Directors to define its activities and the calendar for fulfillment of its responsibilities. The chair of the Board of Directors approves the meeting agendas after input from the Board of Directors and management, facilitates communication among directors and presides at meetings of our Board of Directors and stockholders.

The Board of Directors' Role in Risk Oversight

The Board of Directors plays an important role in risk oversight through direct decision-making authority with respect to significant matters as well as through the oversight of management by the Board of Directors and its committees. In particular, the Board of Directors administers its risk oversight function through (1) the review and discussion of regular periodic reports by the Board of Directors and its committees on topics relating to the risks that we face, (2) the required approval by the Board of Directors (or a committee of the Board of Directors) of significant transactions and other decisions, (3) the direct oversight of specific areas of our business by the Audit, Compensation and Nominating and Corporate Governance Committees, and (4) regular periodic reports from our independent registered public accounting firm and other outside consultants regarding various areas of potential risk, including, among others, those relating to our internal control over financial reporting and executive compensation. The Board of Directors also relies on management to bring significant matters impacting our Company to the attention of the Board of Directors.

Pursuant to the Audit Committee's charter, the Audit Committee is responsible for reviewing and discussing with management and the independent registered public accounting firm our system of internal controls, our critical accounting practices, and policies relating to risk assessment and management. As part of this process, the Audit Committee discusses our major financial risk exposures and steps that management has taken to monitor and control such exposure. In addition, the Audit Committee has established procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters, and the confidential, anonymous submissions by employees of concerns regarding questionable accounting or accounting matters.

Because of the role of the Board of Directors and the Audit Committee in risk oversight, the Board of Directors believes that any leadership structure that it adopts must allow it to effectively oversee the management of the risks relating to our operations. The Board of Directors acknowledges that there are different leadership structures that could allow it to effectively oversee the management of the risks relating to the Company's operations and believes its current leadership structure enables it to effectively provide oversight with respect to such risks.

Compensation Consultant

As a part of determining compensation for our named executive officers, the Compensation Committee engaged Pay Governance LLC (“Pay Governance”) as its independent compensation consultant for 2018. As its independent compensation consultant, Pay Governance provided analysis and recommendations to the Compensation Committee regarding:

- trends with respect to executive and director compensation;
- the development of a peer group used for compensation-related purposes;
- forms and levels of compensation for executives and directors;
- stock utilization and related metrics;
- employment and separation agreements with our executive officers; and
- the risk profile of our compensation programs.

When requested, consultants from Pay Governance attended meetings of the Compensation Committee, including executive sessions in which executive compensation matters were discussed. During 2018, Pay Governance reported to the Compensation

Committee and not to management, although Pay Governance met with management for purposes of gathering information for its analyses and recommendations.

Although the Board of Directors and the Compensation Committee considers the advice and recommendations of Pay Governance (or any other compensation consultant it might engage in the future) as related to our executive compensation program, the Board of Directors and the Compensation Committee ultimately make their own decisions about the compensation arrangements for our executive officers.

In determining whether to engage Pay Governance, the Compensation Committee considered the independence of Pay Governance, taking into consideration relevant factors, including the absence of other services provided to the Company by Pay Governance, the amount of fees the Company paid to Pay Governance as a percentage of Pay Governance's total revenues, the policies and procedures of Pay Governance that are designed to prevent conflicts of interest, any business or personal relationship of the individual compensation advisors employed by Pay Governance with any executive officer of the Company, any business or personal relationship of the individual compensation advisors employed by Pay Governance with any member of the Compensation Committee, and any stock of the Company owned by Pay Governance or the individual compensation advisors employed by Pay Governance (the "Independence Factors"). The Compensation Committee has determined, based on its analysis in light of all relevant factors, including the Independence Factors listed above, that the work of Pay Governance and the individual compensation advisors employed by Pay Governance as compensation consultants to the Compensation Committee did not create any conflicts of interest, and that Pay Governance was independent under the independence standards set forth in the Nasdaq listing standards promulgated pursuant to Section 10C of the Exchange Act.

Non-Employee Director Compensation Policy

Our Board of Directors adopted a non-employee director compensation policy that is designed to enable us to attract and retain, on a long-term basis, highly-qualified non-employee directors. Under the policy, as it may be amended from time to time, all non-employee directors will be paid cash compensation as set forth in the table below. Cash fees are prorated for partial years of service.

| | Annual Cash Fees |
|--|------------------------|
| Board of Directors: | |
| All non-employee members | \$ 35,000 |
| Additional retainer for chair | \$ 40,000 |
| Audit Committee: | |
| Members | \$ 7,500 |
| Additional retainer for chair | \$ 7,500 |
| Compensation Committee: | |
| Members | \$ 5,000 |
| Additional retainer for chair | \$ 5,000 |
| Nominating and Corporate Governance Committee: | |
| Members | \$ 3,500 |
| Additional retainer for chair | \$ 3,500 |

In early 2018, the Board of Directors, with the assistance of Pay Governance, reviewed and updated the Company's non-employee director compensation policy in light of our fourth quarter 2017 restructuring and subsequent January 2018 financing. Under our revised non-employee director compensation policy, effective April 9, 2018, each non-employee director who is initially appointed or elected to our Board of Directors is eligible to be granted options

to purchase 75,000 shares of our common stock under the Genoccea Biosciences Inc. Amended and Restated 2014 Equity Incentive Plan ("2014 Equity Plan") at the time of his or her initial appointment or election to our Board of Directors. These options vest annually in equal installments over a three-year period, generally subject to the non-employee director's continued service. In addition, each continuing non-employee director is eligible to be granted options to purchase 45,000 shares of our common stock under our 2014 Equity Plan on an annual basis, which vest in full on the first anniversary of the grant date, generally subject to the non-employee director's continued service through such date. These option grants are made on the date of the Company's annual meeting of stockholders for the relevant year or as soon thereafter as is reasonably practicable.

Director Agreements

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Dr. Siber

We entered into a consulting agreement with Dr. Siber dated May 16, 2007, as amended on June 30, 2009, December 16, 2010, June 15, 2011, June 5, 2013, June 15, 2015 and June 13, 2017. The consulting agreement provides for a monthly consulting fee of \$9,833 per month for consulting services performed by Dr. Siber related to strategic scientific and business development.

Dr. Siber has agreed not to solicit our employees, contractors and customers for a period of 12 months following the termination of the consulting agreement and is subject to covenants relating to the use and disclosure of confidential information and the assignment of inventions. Unless extended or earlier terminated, the term of the consulting agreement will expire on June 17, 2019.

Director Compensation

The following table sets forth information concerning the compensation earned by our non-employee directors during 2018. All of our non-employee directors were compensated for service on our Board of Directors under our non-employee director compensation policy and Dr. Siber receives additional compensation as set forth in his consulting agreement, in each case, as described above. Mr. Clark receives no additional compensation for his service as a director, and, consequently, is not included in this table. The compensation received by Mr. Clark as our President and Chief Executive Officer during 2018 is set forth in the “Summary Compensation Table” under the section “Executive Compensation”.

| Name | Fees earned or paid in cash \$(1) | Option awards \$(2)(3) | Total (\$) |
|---------------------|--------------------------------------|---------------------------|---------------|
| Kenneth Bate | 55,277 | 44,550 | 99,827 |
| Ali Behbahani, M.D. | 32,034 | 74,000 | 106,034 |
| Katrine Bosley | 80,043 | 44,550 | 124,593 |
| Ronald Cooper | 46,000 | 44,550 | 90,550 |
| Michael Higgins | 50,000 | 44,550 | 94,550 |
| Howard Mayer, M.D. | 40,000 | 44,550 | 84,550 |
| George Siber, M.D. | 161,974 | 44,550 | 206,524 |

(1) Amounts represent annual director fees and, in the case of Dr. Siber, include consulting fees, for services rendered, as described above. Consulting fees paid to Dr. Siber were paid in equal monthly installments and all other director fees were paid quarterly in arrears. Annual director fees paid to Dr. Behbahani for 2018 were prorated for his partial year of service.

(2) As of December 31, 2018, our directors held the following aggregate number of options to purchase shares of our common stock: Mr. Bate held options to purchase 90,126 shares of our common stock, Dr. Behbahani held options to purchase 75,000 shares of our common stock, Ms. Bosley held options to purchase 117,008 shares of our common stock, Mr. Cooper held options to purchase 85,000 shares of our common stock, Mr. Higgins held options to purchase 85,084 shares of our common stock, Dr. Mayer held options to purchase 70,000 shares of our common stock, and Dr. Siber held options to purchase 160,376 shares of our common stock.

(3) Amounts in the table represent the aggregate grant date fair value of the options to purchase shares of our common stock granted during 2018. Dr. Behbahani was granted options to purchase 25,000 shares of our common stock in February 2018, upon his election to our Board of Directors. In June 2018, Dr. Behbahani was granted options to purchase an additional 50,000 shares of our common stock in order to align his compensation with our amended non-employee director compensation policy. These options will vest in equal installments on each of the first three anniversaries of the date of grant, generally subject to Dr. Behbahani's continued service. All of our other

non-employee directors were granted options to purchase 45,000 shares of our common stock in 2018, which options will vest in full on the one-year anniversary of their respective date of grant, generally subject to the non-employee director's continued service. These grant date fair value amounts were computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation — Stock Compensation (“ASC 718”), excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in Note 10 to our financial statements included in our Annual Report.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

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Our directors, executive officers and beneficial owners of more than 10% of our common stock are required under Section 16(a) of the Securities and Exchange Act of 1934 (the "Exchange Act"), to file reports of ownership and changes in ownership of our securities with the SEC. To our knowledge, based solely on review of these filings and written representations from the certain reporting persons, we believe that all filing requirements applicable to our officers, directors and beneficial owners of more than 10% of our common stock were complied with, except George Siber was delinquent in filing a Form 4 report in September 2018. Such filing has been made at the time of filing this proxy statement.

AUDIT COMMITTEE REPORT

The Audit Committee reviewed the Genoclea audited financial statements for the year ended December 31, 2018 and discussed these statements with management and Ernst & Young LLP, the Company's independent registered public accounting firm. Genoclea management is responsible for the preparation of the Company's financial statements and for maintaining an adequate system of disclosure controls and procedures and internal control over financial reporting for that purpose. Ernst & Young LLP is responsible for expressing an opinion on the conformity of the audited financial statements with generally accepted accounting principles, discussing their judgments as to the quality, not just the acceptability, of the Company's accounting principles and such other matters as are required to be discussed with the Audit Committee under generally accepted auditing standards. The Audit Committee is responsible for providing independent, objective oversight of the Company's accounting functions and internal controls.

The Audit Committee also received from, and discussed with, Ernst & Young LLP all communications required under the standards of the Public Company Accounting Oversight Board (the "PCAOB"), including the matters required to be discussed by Ernst & Young LLP with the Audit Committee, including the matters to be discussed by Statement on Auditing Standards 1301, Communications with Audit Committees Concerning Independence.

Ernst & Young LLP also provided the Audit Committee with the written disclosures and the letter required under the PCAOB, which requires that independent registered public accounting firms annually disclose in writing all relationships that in their professional opinion may reasonably be thought to bear on independence, to confirm their perceived independence and engage in a discussion of independence. The Audit Committee reviewed this disclosure and discussed with Ernst & Young LLP their independence from Genoclea.

Based on its discussions with management and our independent registered public accounting firm, and its review of the representations and information provided by management and our independent registered public accounting firm, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in the Genoclea Annual Report on Form 10-K for the year ended December 31, 2018, for filing with the SEC.

Respectfully submitted by the

Audit Committee,

Michael Higgins, Chair
Kenneth Bate
Ronald Cooper

EXECUTIVE COMPENSATION

Our named executive officers for the fiscal year ended December 31, 2018 were:

• William Clark, our President and Chief Executive Officer;
• Jessica Baker Fletcher, Ph.D., our Chief Scientific Officer;
• Pamela Carroll, Ph.D., our Senior Vice President, Immuno-Oncology; and
• Eric Hoffman, our former Chief Business Officer*.

*Mr. Hoffman resigned and entered into a separation agreement with the Company, each effective August 31, 2018. For a description of the agreement we entered into with him in connection with his resignation, see "Agreement with Mr. Hoffman" below.

Executive Compensation

Each year, our Compensation Committee considers a variety of factors in assessing the competitiveness of our executive compensation program and the individual compensation of each of our executives, including our named executive officers. These factors include the executive's experience and individual performance, the Company's performance as a whole, and data from surveys, as well as compensation paid at companies in our peer group, as described below, cost of living increases and general industry conditions. Our Compensation Committee does not assign any specific weighting to any one factor when making compensation decisions.

Market Benchmarks and Competitive Analysis

As discussed above, our Compensation Committee engaged Pay Governance as its independent compensation consultant for 2018. Pay Governance assisted the Compensation Committee in the development of a list of peer companies to be used for executive compensation-related purposes. In determining our peer companies, we selected companies that are publicly-traded, that operate in our industry and have a similar market capitalization, and that are of comparable size and scientific stage of development (among the group, market capitalizations ranged from approximately \$75 million to \$900 million). When making compensation decisions with respect to our named executive officers, our Compensation Committee considered data from peer companies as well as broader market compensation surveys provided by Pay Governance.

Elements of Executive Compensation

The compensation of our named executive officers consists of base salary, annual cash bonuses and equity awards, as well as employee benefits that are made available to our salaried employees generally. Mr. Clark is also entitled to compensation and benefits upon certain terminations of his employment, including following a change of control transaction, as described under "Employment Letter Agreements" below.

Base Salaries. Base salaries for our named executive officers are reviewed annually by our Compensation Committee and are set by our Board of Directors. When making its base salary recommendations to our Board of Directors, our Compensation Committee takes the factors described above into account, but does not assign any specific weighting to any one factor. Our Board of Directors determines each named executive officer's base salary after reviewing the Compensation Committee's recommendation with respect to such salaries. In fiscal year 2018, on the recommendation of our Compensation Committee, our Board of Directors approved a base salary of \$517,500 for Mr. Clark, \$348,148 for Dr. Fletcher, and \$340,650 for Mr. Hoffman, representing an increase of 3.5% from the base salary for each such executive in 2017. Dr. Carroll was appointed as an executive officer effective October 2, 2018. Her 2018 compensation prior to such appointment was determined in accordance with our policies for non-executive employees. Her base salary in 2018 was \$324,000, representing an increase of 3.1% from her base salary in 2017.

Annual Cash Bonuses. Our annual cash bonus program promotes and rewards the achievement of key strategic business goals and individual performance goals. For fiscal year 2018, the target annual bonus as a percentage of base salary was 50% for Mr. Clark, 40% for each of Dr. Fletcher and Mr. Hoffman, and 35% for Dr. Carroll. In the case of Mr. Clark, 100% of his annual bonus was based on the achievement of pre-established corporate performance goals and, in the case of Dr. Fletcher, Mr. Hoffman, and Dr. Carroll, their respective annual bonuses were based on the achievement of pre-established corporate performance goals and pre-established individual performance goals. Since Dr. Hoffman resigned effective August 31, 2018, he was not paid a fiscal year 2018 bonus.

At the beginning of fiscal year 2018, our Compensation Committee established the corporate performance goals for fiscal year 2018 and the weighting for each goal. These corporate performance goals included key strategic and financial goals related to business development collaborations and financings, cash management, the development and commencement of certain clinical and commercial programs, and other strategic objectives related to our clinical pipeline. Also at the beginning of fiscal year 2018, our Chief Executive Officer, working with Dr. Fletcher, Dr. Carroll, and Mr. Hoffman, established individual performance goals for each of these named executive officers and their weightings. These goals included, to the extent applicable to the executive, objectives related to oversight of clinical activities for compliance with laws, developing and conducting clinical programs and studies, research and development, managing studies according to schedule and within budgets, business and corporate development and demonstrating leadership with respect to direct reports.

In January 2019, our Compensation Committee met to review and consider the level of corporate and individual performance goals that were achieved for purposes of making its recommendation to our Board of Directors regarding the amount of the annual cash bonus earned by our named executive officers for fiscal year 2018. The Compensation Committee reviewed and evaluated our corporate performance against the pre-established corporate performance goals for the fiscal year, taking into consideration Mr. Clark's evaluation of our performance in 2018. With respect to the individual performance goals applicable to Dr. Fletcher and Dr. Carroll, our Compensation Committee also considered Mr. Clark's determination that Dr. Fletcher and Dr. Carroll had achieved 72% and 64%, respectively, of such individual performance goals. After reviewing the achievement of the fiscal year 2018 corporate performance goals, and after considering Mr. Clark's determination regarding the level of achievement of individual performance goals, our Compensation Committee recommended, and our Board of Directors approved, an 80% level of achievement of corporate performance goals, a 90% and 80% level of achievement of Dr. Fletcher's and Dr. Carroll's individual goals, and a fiscal year 2018 annual cash bonus of \$207,000 for Mr. Clark, \$100,300 for Dr. Fletcher, and \$72,600 for Dr. Carroll.

Equity Awards. Our named executive officers have each been granted stock options, including options intended to qualify as incentive stock options. Our 2014 Equity Plan was adopted by our Board of Directors in connection with our IPO. Prior to our IPO, Mr. Clark was granted equity awards under the Genoccea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan ("2007 Equity Plan"). Following the adoption of our 2014 Equity Plan and our IPO, all stock options and other equity-based awards have been granted under our 2014 Equity Plan and no future awards may be made under our 2007 Equity Plan.

Stock option awards serve to align the interests of our named executive officers with our stockholders because no value is created unless the value of our common stock appreciates after grant. Stock option awards also encourage retention through the use of time-based vesting conditions. We have from time to time in the past also granted stock options that are subject to performance-based vesting conditions, thereby incentivizing the achievement of key strategic goals.

In February 2018, Mr. Clark, Dr. Fletcher, Dr. Carroll, and Mr. Hoffman were each granted awards of time-based options to purchase 864,000, 300,000, 70,000, and 300,000 shares, respectively, of our common stock under our 2014 Equity Plan. In November 2018, Dr. Fletcher and Dr. Carroll, in recognition of their continued service to the Company, were each granted awards of time-based options to purchase 150,000 and 75,000 shares, respectively, of our common stock under our 2014 Equity Plan. These stock options vest in equal monthly installments over the 48 months following the date of grant, generally subject to the executive's continued employment. In connection with his resignation in August 2018, Mr. Hoffman forfeited all stock options held by him that were unvested as of the date of his termination of employment. Pursuant to his employment letter agreement, stock options held by Mr. Clark would vest automatically upon certain terminations of employment following a change of control. See "Employment Letter Agreements" below for additional details about Mr. Clark's agreement.

Benefits. We provide modest benefits to all of our salaried employees, including our executive officers, which are limited to participation in our 401(k) plan, our employee stock purchase plan, and health and welfare benefit coverage.

Employment Letter Agreement with Mr. Clark. We have entered into an employment letter agreement with Mr. Clark and Ms. Fletcher that includes severance and change of control protections. Prior to his termination of employment, Mr. Hoffman was also party to an employment letter agreement with us. Our named executive officers are also subject to restrictive covenants covering noncompetition, nonsolicitation and confidentiality. See “Employment Letter Agreements” below for additional details about these agreements.

Agreement with Mr. Hoffman. Mr. Hoffman's employment terminated effective August 31, 2018. In connection with his termination of employment, the Company agreed to pay to Mr. Hoffman nine months' of base salary continuation, subject to his execution of a letter agreement that included a release of claims in favor of the Company. Further, the Company agreed to

grant Mr. Hoffman an extension of an additional 90 days to exercise any stock options that were vested as of August 31, 2018, which means that he has until March 1, 2019 to exercise those options.

Summary Compensation Table

The following table sets forth information about compensation earned, awarded or paid to our named executive officers for fiscal years 2018 and 2017.

| Name and principal position | Year | Salary (\$)(1) | Option awards (\$)(2) | Nonequity incentive plan compensation (\$)(3) | All other compensation (\$)(4) | Total (\$) |
|--|------|-------------------|-----------------------------|---|--------------------------------------|---------------|
| William Clark, President and Chief Executive Officer | 2018 | 514,583 | 583,459 | 207,000 | 5,984 | 1,311,026 |
| | 2017 | 493,333 | 890,755 | 137,500 | 5,425 | 1,527,013 |
| Jessica Baker Fletcher, Ph.D., Chief Scientific Officer | 2018 | 346,186 | 279,300 | 100,300 | 7,758 | 733,544 |
| | 2017 | 334,479 | 309,290 | 66,602 | 7,733 | 718,104 |
| Pamela Carroll, Ph.D., Senior Vice President, Immuno-Oncology | 2018 | 322,372 | 85,626 | 72,600 | 7,391 | 487,989 |
| | 2017 | 313,525 | 61,858 | 76,122 | 7,049 | 458,554 |
| Eric Hoffman Former Chief Business Officer | 2018 | 225,180 | 202,590 | — | 118,176 | 545,946 |
| | 2017 | 327,275 | 309,290 | 57,927 | 9,000 | 703,492 |

(1) Salaries include amounts contributed by the named executive officer to our 401(k) plan.

Amounts shown reflect the aggregate grant date fair value of time-based options to purchase shares of our common stock awarded in the applicable fiscal year, computed in accordance with ASC 718, excluding the effect of

(2) estimated forfeitures. Assumptions used in the calculation of these amounts are included in Note 10 to our consolidated financial statements included in our Annual Report. As described under “Equity Awards” above, in connection with his resignation in August 2018, Mr. Hoffman forfeited all of his then-unvested stock options.

Amounts shown for Dr. Fletcher, Dr. Carroll, and Mr. Hoffman reflect the annual cash bonuses paid to the named

(3) executive officers that were earned based on the achievement of Company and individual performance goals, and in the case of Mr. Clark, based solely on the achievement of Company performance goals.

Amounts shown reflect employer matching contributions under our 401(k) plan for all of our named executive

(4) officers. For Mr. Hoffman, the amount shown for 2018 also includes \$113,550 in severance paid in connection with his termination of employment.

Outstanding Equity Awards at Fiscal Year-End

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

| Name | Option Awards | | Equity incentive plan awards: | | Option Exercise Price (\$)(5) | Option Expiration Date(6) |
|-------------------------|---|---|---|--|-------------------------------|---------------------------|
| | Number of securities underlying unexercised options (#) exercisable | Number of securities underlying unexercised options (#) unexercisable | number of securities underlying unexercised options (#) | number of securities underlying unearned options (#) | | |
| William Clark | 24,716 | (1) — | — | — | \$ 2.86 | 12/17/2020 |
| | — | — | 39,807 | (2) | \$ 2.86 | 12/17/2020 |
| | 340,568 | (1) — | — | — | \$ 2.02 | 2/17/2021 |
| | 133,602 | (3) — | — | — | \$ 3.45 | 7/25/2023 |
| | 81,670 | (4) — | — | — | \$ 3.45 | 7/25/2023 |
| | 132,250 | (1) 5,750 | (1) — | — | \$ 9.08 | 2/26/2025 |
| | 203,999 | (1) 84,001 | (1) — | — | \$ 3.09 | 2/2/2026 |
| Jessica Fletcher, Ph.D. | 132,000 | (1) 156,000 | (1) — | — | \$ 4.67 | 2/28/2027 |
| | 180,000 | (1) 684,000 | (1) — | — | \$ 0.98 | 2/8/2028 |
| | 11,402 | (1) — | — | — | \$ 12.00 | 2/4/2024 |
| | 14,397 | (1) — | — | — | \$ 12.10 | 2/20/2024 |
| | 28,750 | (1) 1,250 | (1) — | — | \$ 9.08 | 2/26/2025 |
| | 70,833 | (1) 29,167 | (1) — | — | \$ 3.09 | 2/2/2026 |
| | 45,826 | (1) 54,174 | (1) — | — | \$ 4.67 | 2/28/2027 |
| Pamela Carroll, Ph.D. | 62,490 | (1) 237,510 | (1) — | — | \$ 0.98 | 2/8/2028 |
| | 3,125 | (1) 146,875 | (1) — | — | \$ 0.73 | 11/6/2028 |
| | 36,250 | (4) 23,750 | (4) — | — | \$ 4.31 | 7/18/2026 |
| | 9,158 | (1) 10,842 | (1) — | — | \$ 4.67 | 2/28/2027 |
| | 14,580 | (1) 55,420 | (1) — | — | \$ 0.98 | 2/8/2028 |
| Eric Hoffman (7) | 1,562 | (1) 73,438 | (1) — | — | \$ 0.73 | 11/6/2028 |
| | 187,965 | (4) — | — | — | \$ 7.85 | 12/15/2024 |
| | 21,874 | (1) — | — | — | \$ 9.08 | 2/26/2025 |
| | 62,499 | (1) — | — | — | \$ 3.09 | 2/2/2026 |
| | 37,494 | (1) — | — | — | \$ 4.67 | 2/28/2027 |
| | 37,494 | (1) — | — | \$ 0.98 | 2/8/2028 | |

(1) Reflects time-based options to purchase shares of our common stock that vest in 48 equal monthly installments following the date of grant, generally subject to the executive's continued employment.

(2) Reflects performance-based options to purchase shares of our common stock that vest as to 100% of the shares subject to the stock option upon the company's achievement of specified strategic financing or development milestones, generally subject to Mr. Clark's continued employment. These performance-based stock options remain unvested as the performance condition has not yet been achieved.

Reflects time-based options to purchase shares of our common stock that vested as to 1/8th of the shares subject to (3) the stock option on the date of grant and that continue to vest in equal monthly installments over 42 months following the date of grant, generally subject to the executive's continued employment.

Reflects time-based options to purchase shares of our common stock that vest as to 25% of the shares subject to the (4) stock option on the vesting commencement date (approximately 12 months from the grant date) and thereafter vest in equal monthly installments over the following 36 months, generally subject to the executive's continued employment.

The exercise price of each option is not less than the fair market value of a share of our common stock on the date (5) of grant, as determined by our Board of Directors. For stock options granted following our IPO, the exercise price is the closing price of a share of our common stock as reported on Nasdaq on the date of grant of the stock option.

(6) All options have a 10-year term measured from the date of grant.

(7) As described under "Equity Awards" above, in connection with his resignation in August 2018, Mr. Hoffman forfeited all stock options that were held by him that were unvested as of his termination of employment.

Retirement Benefits

We do not maintain any qualified or non-qualified defined benefit plans or supplemental executive retirement plans. We offer a tax-qualified defined contribution retirement plan, which we refer to as our 401(k) plan, to eligible employees, including our currently-employed named executive officers. Our 401(k) plan permits eligible employees to defer their annual eligible compensation subject to the limitations imposed by the Internal Revenue Service. We may, but are not required to, make discretionary profit-sharing contributions on behalf of eligible employees under this plan. In fiscal year 2015, we commenced making an employer match of 50% for the first 6% of employee contributions and have continued to do so. Employer matching contributions vest over a four-year period starting with the employee's date of hire.

Employment Letter Agreements

We have entered into employment letter agreements with Mr. Clark, which was amended and restated on January 16, 2014 and became effective prior to our IPO, and Ms. Fletchner, which became effective on January 16, 2014 and was amended on September 12, 2016. Each individual's employment letter agreements provide for an initial base salary and target annual bonus as well as severance payments and benefits upon certain terminations of each individual's employment as described below. The terms "change of control," "cause," "good reason" and, in the case of Mr. Clark, "disability" referred to below are defined in their employment letter agreements.

Termination of Employment without Cause or for Good Reason Following a Change of Control. If, within 12 months after a change of control, Mr. Clark or Ms. Fletchner's employment is terminated by us without cause or either individual terminates their employment for good reason, all stock options or other equity awards then held by Mr. Clark or Ms. Fletchner, as applicable, will fully vest. In addition, Mr. Clark and Ms. Fletchner will be entitled to receive base salary and payment of COBRA premiums for 18 and 15 months, respectively, following such individual's termination of employment.

Termination of Employment without Cause or for Good Reason. If the Mr. Clark or Ms. Fletchner's employment is terminated by us without cause or either of Mr. Clark or Ms. Fletchner terminates their employment for good reason other than following a change of control as described above, Mr. Clark and Ms. Fletchner, as applicable, will be entitled to receive base salary and payment of COBRA premiums for 12 and 9 months, respectively, following such termination of employment.

Termination of Employment Due to Death or Disability. If Mr. Clark or Ms. Fletchner's employment is terminated by us due to either individual's disability or death, we will pay Mr. Clark (or, if applicable, the his estate) or Ms. Fletchner, as applicable, a portion of each individual's target annual cash bonus for the year in which such termination

of employment occurs, prorated based on the number of days that each individual was employed during such year until the date of such termination.

Severance Subject to Release of Claims. Our obligation to provide Mr. Clark and Ms. Fletcher with any severance payments or other benefits under their employment letter agreement is conditioned on each individual signing and not revoking an effective release of claims in our favor.

Other Termination of Employment. If Mr. Clark or Ms. Fletcher's employment is terminated for any reason other than by us without cause, by either individual for good reason, or due to either individual's death or disability, Mr. Clark and

Ms. Fletcher, as applicable, will only be entitled to receive earned but unpaid base salary and any accrued but not used vacation as of the termination date.

280G Better-of Provision. In the event of a change in ownership or control of our Company under Section 280G of the Internal Revenue Code of 1986, as amended (the "Code"), and the regulations thereunder, if any portion of the payments made pursuant to Mr. Clark's or Ms. Fletcher's employment letter agreement (or otherwise) constitute an "excess parachute payment" within the meaning of Section 280G of the Code, each individual, as applicable, will be entitled to receive an amount of such payments reduced so that no portion of the payments would constitute an excess parachute payment, or the amount otherwise payable to the each individual under the employment letter agreement (or otherwise) reduced by all applicable taxes, including the excise tax imposed under Section 4999 of the Code, whichever amount results in the greater amount payable to each individual on an after-tax basis.

Prior to his termination of employment, Mr. Hoffman was also party to an employment letter agreement with us. As described under "Agreement with Mr. Hoffman" above, Mr. Hoffman received certain payments and benefits in connection with his termination of employment. Dr. Carroll has an employment agreement with us but is not otherwise entitled to severance payments or benefits in connection with a termination of her employment.

As a condition to their employment with us, each of our named executive officers was required