

Sage Therapeutics, Inc. 215 First Street Cambridge, MA 02142

NOTICE OF 2017 ANNUAL MEETING OF STOCKHOLDERS

Notice is hereby given that the 2017 Annual Meeting of Stockholders of Sage Therapeutics, Inc. will be held on Wednesday, June 7, 2017, at 9:00 a.m. Eastern Time, at our headquarters located at 215 First Street, Cambridge, Massachusetts 02142. The purpose of the meeting is the following:

- 1. to elect two directors, Michael Cola and Jeffrey M. Jonas, to serve as Class III directors until the 2020 annual meeting of stockholders and until their successors are duly elected and qualified, subject to their earlier death, resignation, or removal;
- 2. to ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017;
- 3. to hold a nonbinding advisory vote to approve the compensation paid to our named executive officers; and
- 4. to transact such other business as may properly come before the meeting or at any and all adjournments or postponements thereof.

The proposal for the election of directors relates solely to the election of Class III directors nominated by the Board of Directors.

Only Sage Therapeutics, Inc. stockholders of record at the close of business on April 10, 2017, will be entitled to vote at the meeting and any adjournment or postponement thereof.

We are pleased to take advantage of Securities and Exchange Commission rules that allow companies to furnish their proxy materials over the Internet. We are mailing to many of our stockholders a Notice of Internet Availability of Proxy Materials, or Notice, instead of a paper copy of our proxy materials and our 2016 Annual Report to Stockholders, or 2016 Annual Report. The Notice contains instructions on how to access those documents and to cast your vote via the Internet. The Notice also contains instructions on how to request a paper copy of our proxy materials and our 2016 Annual Report. All stockholders who do not receive a Notice will receive a paper copy of the proxy materials and the 2016 Annual Report by mail. This process allows us to provide our stockholders with the information they need on a more timely basis, while reducing the environmental impact and lowering the costs of printing and distributing our proxy materials.

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

By Order of the Board of Directors,

Jeffrey M. Jonas, M.D.
Chief Executive Officer, President and Director

Boston, Massachusetts April 28, 2017

TABLE OF CONTENTS

| GENERAL INFORMATION | 1 |
|--|----|
| OVERVIEW OF PROPOSALS | 4 |
| PROPOSAL 1 ELECTION OF DIRECTORS | 4 |
| CORPORATE GOVERNANCE | 8 |
| PROPOSAL 2 RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS | 12 |
| PROPOSAL 3 ADVISORY VOTE ON NAMED EXECUTIVE OFFICER COMPENSATION | 14 |
| TRANSACTION OF OTHER BUSINESS | 14 |
| EXECUTIVE OFFICER AND DIRECTOR COMPENSATION | 15 |
| SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT | 39 |
| EXECUTIVE OFFICERS | 41 |
| CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS | 42 |
| COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION | 43 |
| SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE | 43 |
| HOUSEHOLDING OF PROXY MATERIALS | 45 |

SAGE THERAPEUTICS, INC. PROXY STATEMENT FOR THE 2017 ANNUAL MEETING OF STOCKHOLDERS

GENERAL INFORMATION

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

We have elected to provide access to our proxy materials to our stockholders via the Internet. Accordingly, on or about April 28, 2017, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice of Internet Availability, and the proxy materials, including the Notice of 2017 Annual Meeting of Stockholders, this proxy statement and accompanying proxy card or, for shares held in street name (held for your account by a broker or other nominee), a voting instruction form. The 2016 Annual Report to Stockholders, or 2016 Annual Report, will be mailed or made available to stockholders on the Internet on the same date.

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

Pursuant to rules adopted by the Securities and Exchange Commission, or SEC, for most stockholders, we are providing access to our proxy materials over the Internet rather than printing and mailing the proxy materials. We believe following this process will expedite the receipt of materials and will help lower our costs and reduce the environmental impact of our annual meeting materials. Therefore, a Notice of Internet Availability will be mailed to holders of record and beneficial owners of our common stock starting on or around April 28, 2017. The Notice of Internet Availability will provide instructions as to how stockholders may access and review the proxy materials, including the Notice of Annual Meeting, proxy statement, proxy card and 2016 Annual Report, on the website referred to in the Notice of Internet Availability or, alternatively, how to request that a copy of the proxy materials, including a proxy card, be sent to them by mail. The Notice of Internet Availability will also provide voting instructions. In addition, stockholders of record may request to receive the proxy materials in printed form by mail or electronically by e-mail on an ongoing basis for future stockholder meetings. Please note that, while our proxy materials are available at the website referenced in the Notice of Internet Availability, and our Notice of Annual Meeting, proxy statement and 2016 Annual Report are available on our website, no other information contained on either website is incorporated by reference in or considered to be a part of this document.

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE ANNUAL STOCKHOLDERS MEETING TO BE HELD ON JUNE 7, 2017: This proxy statement, the accompanying proxy card or voting instruction card and our 2016 Annual Report are available at http://www.proxyvote.com.

In this Proxy Statement, the terms "Sage," "we," "us," and "our" refer to Sage Therapeutics, Inc. The mailing address of our principal executive offices is Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02.142.

Who is soliciting my vote?

Our Board of Directors, or Board of Directors, is soliciting your vote for the 2017 Annual Meeting of Stockholders, or Annual Meeting.

When is the record date for the Annual Meeting?

The record date for determination of stockholders entitled to vote at the Annual Meeting is the close of business on April 10, 2017.

How many votes can be cast by all stockholders?

There were 37,328,237 shares of our common stock, par value \$0.0001 per share, outstanding on April 10, 2017, all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting. Each stockholder of record is entitled to one vote for each share of our common stock held by such stockholder. None of our shares of undesignated preferred stock were outstanding as of April 10, 2017.

How do I vote?

In Person

If you are a stockholder of record, you may vote in person at the meeting. We will give you a ballot when you arrive. If you hold your shares through a bank or broker and wish to vote in person at the meeting, you must obtain a valid proxy from the firm that holds your shares.

By Proxy

If you do not wish to vote in person or will not be attending the meeting, you may vote by proxy. You can vote by proxy over the Internet by following the instructions provided in the Notice of Internet Availability, or, if you requested printed copies of the proxy materials by mail, you can vote by mailing your proxy as described in the proxy materials. If you complete and submit your proxy before the meeting, the persons named as proxies will vote the shares represented by your proxy in accordance with your instructions. If you submit a proxy without giving voting instructions, your shares will be voted in the manner recommended by the Board of Directors on all matters presented in this Proxy Statement, and as the persons named as proxies may determine in their discretion with respect to any other matters properly presented at the meeting. You may also authorize another person or persons to act for you as proxy in a writing, signed by you or your authorized representative, specifying the details of those proxies' authority. The original writing must be given to each of the named proxies, although it may be sent to them by electronic transmission if, from that transmission, it can be determined that the transmission was authorized by you.

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

How do I revoke my proxy?

You may revoke your proxy by (1) following the instructions on the Notice of Internet Availability and entering a new vote by mail or over the Internet before the Annual Meeting or (2) attending the Annual Meeting and voting in person (although attendance at the Annual Meeting will not in and of itself revoke a proxy). Any written notice of revocation or subsequent proxy card must be received by our Secretary prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be hand delivered to our Secretary or sent to our principal executive offices at Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142, Attention: Corporate Secretary.

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

How is a quorum reached?

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

Under the General Corporation Law of the State of Delaware, shares that are voted "abstain" or "withheld" and broker "non-votes" are counted as present for purposes of determining whether a quorum is present at the Annual Meeting.

How is the vote counted?

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

If your shares are held in "street name" by a brokerage firm, your brokerage firm is required to vote your shares according to your instructions. If you do not give instructions to your brokerage firm, the brokerage firm will still be able to vote your shares with respect to certain "discretionary" items, but will not be allowed to vote your shares with respect to "non-discretionary" items. Proposals 1 and 3 are "non-discretionary" items. If you do not instruct your broker how to vote with respect to those proposals, your broker may not vote for those proposals, and those votes will be counted as broker "non-votes." Proposal 2 is considered to be a discretionary item, and your brokerage firm will be able to vote on this proposal even if it does not receive instructions from you.

Who pays the cost for soliciting proxies?

We are making this solicitation and will pay the entire cost of preparing and distributing the Notice of Internet Availability and these proxy materials and soliciting votes. If you choose to access the proxy materials or vote over the Internet, you are responsible for any Internet access charges that you may incur. Our officers and employees may, without compensation other than their regular compensation, solicit proxies through further mailings, personal conversations, facsimile transmissions, e-mails, or otherwise. We have hired Broadridge Financial Solutions, Inc. to assist us in the distribution of proxy materials and the solicitation of votes described above. Proxy solicitation expenses that we will pay include those for preparation, mailing, returning, and tabulating the proxies. We have also hired The Proxy Advisory Group, LLC to perform informational support and assessment. While we may engage them to conduct proxy solicitation services, we have not yet engaged them for this purpose.

How are matters submitted for consideration at an annual meeting?

Stockholder proposals intended to be presented at the next annual meeting of our stockholders must satisfy the requirements set forth in the advance notice provision under our By-laws. To be timely for our next annual meeting of stockholders, any such proposal must be delivered in writing to our Secretary at 215 First Street, Cambridge, MA 02142 between the close of business on February 7, 2018, and March 9, 2018. If the date of the next annual meeting of the stockholders is scheduled to take place before May 8, 2018, or after August 6, 2018, notice by the stockholder must be delivered no later than the close of business on the later of (1) the 90th day prior to such annual meeting or (2) the 10th day following the day on which public announcement of the date of such meeting is first made.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders must also satisfy the SEC regulations under Rule 14a-8 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and be received not later than December 29, 2017. If the date of the annual meeting is moved by more than 30 days from the date contemplated at the time of the previous year's proxy statement, then notice must be received within a reasonable time before we begin to print and send proxy materials. If that happens, we will publicly announce the deadline for submitting a proposal in a press release or in a document filed with the SEC.

OVERVIEW OF PROPOSALS

This Proxy Statement contains three proposals requiring stockholder action. Proposal 1 requests the election of two Class III directors to the Board of Directors. Proposal 2 requests the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017. Proposal 3 requests a nonbinding advisory vote to approve the compensation of our named executive officers as disclosed in this Proxy Statement. Each of the proposals is discussed in more detail in the pages that follow.

PROPOSAL 1

ELECTION OF DIRECTORS

The Board of Directors is divided into three classes. One class is elected each year at the annual meeting of stockholders for a term of three years. Vacancies on the Board of Directors are filled exclusively by the affirmative vote of a majority of the remaining directors, even if less than a quorum is present, and not by stockholders. A director elected by the Board of Directors to fill a vacancy in a class shall hold office for the remainder of the full term of that class, and until the director's successor is duly elected and qualified or until his or her earlier resignation, death, or removal.

The terms of the Class III directors are scheduled to expire on the date of the upcoming Annual Meeting. Based on the recommendation of the Nominating and Corporate Governance Committee of the Board of Directors, or Nominating and Corporate Governance Committee, the Board of Directors' nominees for election by the stockholders are the following current Class III members: Michael Cola and Jeffrey M. Jonas. If elected, each nominee will serve as a director until the annual meeting of stockholders in 2020 and until his successor is duly elected and qualified, or until his earlier death, resignation, or removal.

The names of and certain information about the directors in each of the three classes are set forth below. There are no family relationships among any of our directors or executive officers.

It is intended that the proxy in the form presented will be voted, unless otherwise indicated, for the election of the Class III director nominees to the Board of Directors. If any of the nominees should for any reason be unable or unwilling to serve at any time prior to the Annual Meeting, the proxies will be voted for the election of such substitute nominee as the Board of Directors may designate.

Nominees for Class III Directors

The names of the nominees for Class III directors and certain information about each as of April 10, 2017 are set forth below.

| Name | Positions and Offices Held with Sage | Since | Age |
|------------------|---------------------------------------|-------|-----|
| Michael Cola | Director | 2014 | 57 |
| Jeffrey M. Jonas | Director, Chief Executive Officer and | | |
| | President | 2013 | 64 |

Directors Not Standing for Election or Re-Election

The names of and certain information as of April 10, 2017 about the members of the Board of Directors who are not standing for election or re-election at this year's Annual Meeting are set forth below.

| Name | Positions and Offices Held with Sage | Director Since | in Which Term Will Expire | Age |
|-------------------|--------------------------------------|-------------------|---------------------------|-----|
| Steven Paul, M.D. | Director | 2011 | Class I—2018 | 66 |
| Geno Germano | Director | 2016 | Class I— 2018 | 56 |
| Kevin P. Starr | Chairman of the Board of Directors | 2011 | Class II—2019 | 54 |
| James Frates | Director | 2014 | Class II—2019 | 49 |
| Howard Pien(1) | Director | 2014 | Class III—2017 | 59 |

(1) Mr. Pien has informed us that he will retire from the Board of Directors immediately prior to the Annual Meeting and we expect that he will continue to serve on the Board of Directors until such time. In connection with his resignation, the number of directors will be reduced to six and the number of Class III directors will be reduced to two.

Set forth below are the biographies of each director, as well as a discussion of the particular experience, qualifications, attributes, and skills that led our Board of Directors to conclude that each person nominated to serve or currently serving on our Board of Directors should serve as a director. In addition to the information presented below, we believe that each director meets the minimum qualifications established by the Nominating and Corporate Governance Committee.

Jeffrey M. Jonas, M.D. Dr. Jonas has served as our Chief Executive Officer and President and a member of our Board of Directors since August 2013. From 2012 to 2013, Dr. Jonas served as the President of the Regenerative Medicine Division of Shire plc, or Shire, and from 2008 to 2012 as Senior Vice President of Research and Development, Pharmaceuticals at Shire. From 2007 to 2008, Dr. Jonas served as the Executive Vice President of Ionis Pharmaceuticals, Inc., formerly known as ISIS Pharmaceuticals, Inc. and from 2006 to 2007 as Chief Medical Officer and Executive Vice President of Forest Laboratories, Inc. and from 1991 to 1996 in senior-level positions at Upjohn Laboratories. Dr. Jonas also founded AVAX Technologies, Inc. and SCEPTOR Industries, Inc., where he served as the Chief Executive Officer, President and a Director. Dr. Jonas has published more than 70 scientific papers and chapters, authored more than 100 books, scientific articles and abstracts, and has received numerous awards. Dr. Jonas received his B.A. from Amherst College and M.D. from Harvard Medical School. He completed a residency in psychiatry at Harvard Medical School, and he served as Chief Resident in psychopharmacology at McLean Hospital, Harvard Medical School. Dr. Jonas' qualifications to sit on our Board of Directors includes more than 20 years of experience on both the scientific and business sides of the pharmaceutical and healthcare industries, particularly in the CNS field.

James Frates. Mr. Frates has served as a member of our Board of Directors since May 2014. He is the Senior Vice President and Chief Financial Officer of Alkermes plc, having held that position since September 2011. From 2007 to 2011, Mr. Frates served as Senior Vice President and Chief Financial Officer of Alkermes, Inc. From 1998 to 2007, Mr. Frates served as Vice President, Chief Financial Officer and Treasurer of Alkermes, Inc. From 1996 to 1998, he was employed at Robertson, Stephens & Company, most recently as a Vice President in Investment Banking. Prior to that time, he was employed at Morgan Stanley & Co. From 2004 to 2009, Mr. Frates served on the board of directors of GPC Biotech AG, a biotechnology company, and was a national director of the Association of Bioscience Financial Officers from 2004 to 2009. Mr. Frates is also a Trustee of St. Paul's School and The Roxbury Latin School. We believe Mr. Frates' qualifications to sit on our Board of Directors include his leadership experience, financial expertise, business judgment and industry knowledge.

Steven Paul, M.D. Dr. Paul has served as a member of our Board of Directors since September 2011. Dr. Paul is currently the President and Chief Executive Officer of Voyager Therapeutics, Inc., having held that position since September 2014. Since September 2010, Dr. Paul has also served as a venture partner at Third Rock

Ventures, LLC, or Third Rock Ventures, a life sciences venture capital firm focused on the formation, development and strategy of new companies. From 2011 to 2014, he was a professor of neuroscience, psychiatry and pharmacology at Weill Cornell Medical College. From 2003 to 2010, Dr. Paul, as the Executive Vice President of Eli Lilly and Company, or Eli Lilly, and President of Lilly Research Laboratories, was responsible for Eli Lilly's overall research and development efforts—helping to expand Eli Lilly's R&D efforts in oncology and biotechnology—resulting in a pipeline of approximately 70 new molecular entities. Dr. Paul spent 17 years at Eli Lilly, during which time he held several key leadership roles, including Vice President of Neuroscience (CNS) Research and Group Vice President of Discovery Research (all therapeutic areas) from 1993 to 2003. Prior to Eli Lilly, from 1988 to 1993 Dr. Paul served as Scientific Director of the National Institute of Mental Health (NIMH). Dr. Paul also served as Medical Director in the Commissioned Corps of the United States Public Health Service. Dr. Paul has been the recipient of many awards and honors, and has served on numerous committees and advisory boards. Dr. Paul has also authored or co-authored over 500 papers and book chapters. Dr. Paul is an elected fellow of the American Association for the Advancement of Science and a member of the Institute of Medicine of the National Academy of Sciences. He is also currently on the board of directors or is a trustee of several organizations, including Voyager Therapeutics, Inc., Alnylam Pharmaceuticals, Inc. and the Foundation for the NIH. Dr. Paul has also served as a member of the National Institute of General Medical Sciences (NIGMS) Advisory Council and was appointed by the Secretary of the Department of Health and Human Services (HHS) as a member of the advisory committee to the Director of the NIH from 2001-2006. Dr. Paul was also a member of the National Advisory Mental Health Council, NIMH, and is board certified by the American Board of Psychiatry and Neurology. Dr. Paul received his B.A. in Biology and Psychology from Tulane University, and his M.S. and M.D. degrees from the Tulane University School of Medicine. Dr. Paul's qualifications to sit on our Board of Directors include his extensive career in neuroscience and his leadership and managerial experiences at various pharmaceutical and biotechnology companies and healthcare organizations.

Michael F. Cola. Mr. Cola has served as a member of our Board of Directors since September 2014. He currently serves as President and Chief Executive Officer of Aevi Genomic Medicine, Inc., formerly Medgenics, Inc. Prior to joining Aevi, from 2005 to 2012, he served as president of specialty pharmaceuticals at Shire plc, a global specialty pharmaceutical company. Previously from 2000 to 2005, Mr. Cola also served as a growth capital provider and president of the life sciences group for Safeguard Scientifics, Inc., where he served as Chairman and Chief Executive Officer of Clarient, Inc., and Chairman of Laureate Pharma, Inc. In addition, Mr. Cola has held senior positions in product development and commercialization at AstraMerck and AstraZeneca. Mr. Cola received a B.A. in biology and physics from Ursinus College and an M.S. in biomedical science from Drexel University. He also serves on the board of directors of Vanda Pharmaceuticals Inc. and serves as chairman for the board of governors of the Boys & Girls Clubs of Philadelphia. We believe Mr. Cola's qualifications to sit on our Board of Directors include his extensive experience working for various pharmaceutical and biotechnology companies.

Kevin P. Starr. Mr. Starr has served as a member of our Board of Directors since September 2011. From October 2011 to August 2013, he also served as our interim Chief Executive Officer. In 2007, Mr. Starr co-founded Third Rock Ventures, a venture capital firm where he remains a partner. Mr. Starr served as the interim Chief Executive Officer of Decibel Therapeutics from October 2015 to July 2016. From 2003 to 2007, Mr. Starr undertook a number of entrepreneurial endeavors in the life science and entertainment industries. From 2001 to 2002, Mr. Starr served as chief operating officer of Millennium Pharmaceuticals, Inc. He also served as Millennium's chief financial officer from 1998 to 2002. Mr. Starr currently serves on the board of directors of Alnylam Pharmaceuticals, Inc., PanOptica, Inc., Decibel Therapeutics, Inc. and MyoKardia, Inc. Mr. Starr received an M.S. in corporate finance from Boston College and a B.S./B.A. in mathematics and business from Colby College. Mr. Starr's qualifications to serve on our Board of Directors include his executive management roles with responsibility over key financial and business planning functions and experience in the formation, development and business strategy of multiple start-up companies in the life sciences sector.

Geno Germano. Geno Germano has served as a member of our Board of Directors since July 2016. He served as President of Intrexon Corporation, a leader in engineering and industrialization of biology, from June 2016 to March 2017. As President, Mr. Germano was responsible for leading Intrexon's management team and

commercialization efforts utilizing the Intrexon's technology platform for biologically-based solutions across a broad range of industries including health, consumer, energy, environment and food. Prior to joining Intrexon, from 2014 to February 2016. Mr. Germano was Group President of the Global Innovative Pharma Business of Pfizer Inc., where he led a growing global \$14 billion business with market-leading medicines and an extensive portfolio of late-stage development candidates in several therapeutic areas including cardiovascular, metabolic disease, neuroscience, inflammation, immunology, and rare diseases. Mr. Germano was also Co-Chair of the Portfolio Strategy and Investment Committee at Pfizer, Inc. focused on maximizing the return on research and development investment across the Pfizer portfolio from 2013 to 2016. Previously, from 2009 through 2013, Mr. Germano served as President and General Manager of Pfizer's Specialty Care and Oncology business units where he led commercial, medical, and post proof-of-concept pipeline strategy and development across global markets, as well as held responsibility for driving P&L growth and pipeline value through disciplined portfolio management. In addition, while in this role he directed the integration of Wyeth and Pfizer Specialty Care and Vaccines Businesses and developed top talent within the organization focusing on the leadership team. Prior to joining Pfizer from 1993 to 2009, Mr. Germano held numerous executive and leadership roles at Wyeth Pharmaceuticals including President of Wyeth U.S., where he was responsible for delivery of operational results across four business units, as well as President of its Global Pharmaceutical and Women's Healthcare Business. Additionally, he served as a Director of Zoetis Inc. from March 2013 to July 2013. Mr. Germano is a member of the Group of Fifty (G50) and served on the Board of the Biotechnology Innovation Organization from 2009-2016. He also is a member of the Advisory Board of the Healthcare Businesswomen's Association. Since 2008, Mr. Germano has been a Trustee of the Albany College of Pharmacy. Mr. Germano received his Bachelor of Science in Pharmacy from Albany College of Pharmacy. We believe Mr. Germano's qualifications to serve on our Board of Directors include his over 30 years of experience in the pharmaceutical industry and his consistent track record of improving operating performance and increasing shareholder value, including across numerous leadership roles in multiple therapeutic categories and global markets at Pfizer, Wyeth and Johnson & Johnson.

Howard Pien. Mr. Pien has served as a member of our Board of Directors since March 2014. Mr. Pien was the Chairman of the Board and Chief Executive Officer of Medarex, Inc. from 2007 to its acquisition by Bristol-Myers Squibb Company in 2009. Prior to that, he was a private consultant from 2006 to 2007. Prior to 2006, he was President and Chief Executive Officer of Chiron Corporation from 2003 to its acquisition by Novartis in 2006, and before that Mr. Pien held positions of increasing responsibility at GlaxoSmithKline and its predecessor, SmithKline Beecham, at Abbott Laboratories and at Merck & Co. Mr. Pien currently serves on the board of directors of Indivior PLC (as non-executive Chairman), Juno Therapeutics, Inc. (as Chairman) and ImmunoGen, Inc. and Vanda Pharmaceuticals, Inc. (as Chairman from 2010 to 2014). Previously, Mr. Pien served on the board of directors of ViroPharma Incorporated (as lead independent director), Ikaria Holdings, Inc., Pharmaceutical Research and Manufacturers of America (PhRMA), Biotechnology Innovation Organization (BIO), and as an advisor to the life sciences practice of Warburg Pincus, a private equity firm. Mr. Pien received his MBA in finance from Carnegie Mellon University and his B.S. in civil engineering from Massachusetts Institute of Technology. We believe Mr. Pien's qualifications to sit on our Board of Directors include his extensive experience working for various pharmaceutical and biotechnology companies. Mr. Pien has informed us that he will retire from the Board of Directors immediately prior to the Annual Meeting, and we expect that he will continue to serve on the Board of Directors until such time.

Vote Required and Board of Directors' Recommendation

Directors will be elected by a plurality of the votes cast by the stockholders entitled to vote on this proposal at the Annual Meeting, which means that the two nominees receiving the most votes will be elected. Broker non-votes and proxies marked to withhold authority with respect to one or more Class III directors will not affect the outcome of the election.

The proposal for the election of directors relates solely to the election of Class III directors nominated by our Board of Directors.

Our Board of Directors recommends that stockholders vote FOR the election of each of the Class III director nominees listed above.

CORPORATE GOVERNANCE

Board and Committee Matters

Board Leadership and Independence. Our Board of Directors has determined that all members of the Board of Directors, except Dr. Jonas, are independent, as determined in accordance with the rules of the NASDAQ Stock Market, or NASDAQ. In making such independence determination, the Board of Directors considered the relationships that each such non-employee director has with us and all other facts and circumstances that the Board of Directors deemed relevant in determining his or her independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of our directors, our Board of Directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors or executive officers.

The positions of our Chairman of the Board of Directors, or Chairman of the Board, and Chief Executive Officer are presently separated. Separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of the Board to lead the Board of Directors in its fundamental role of providing advice to and independent oversight of management. Our Board of Directors recognizes the time, effort and energy that the Chief Executive Officer must devote to his position in the current business environment, as well as the commitment required to serve as the Chairman of the Board, particularly as the Board of Directors' oversight responsibilities continue to grow. Our Board of Directors also believes that this structure ensures a greater role for the non-management directors in the oversight of our company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of our Board of Directors. Our Board of Directors believes its administration of its risk oversight function has not been affected by its leadership structure. Although our By-laws do not require our Chairman of the Board and Chief Executive Officer positions to be separate, our Board of Directors believes that having separate positions is the appropriate leadership structure for us at this time.

Board Meetings and Committees. Our Board of Directors held six meetings during 2016. The directors regularly hold executive sessions at meetings of the Board of Directors. During 2016, none of our directors then in office attended less than 75% of the aggregate of all meetings of the Board of Directors and all meetings of the committees of our Board of Directors on which such director then served. Continuing directors and nominees for election as directors in a given year are required to attend the annual meeting of our stockholders, barring significant commitments or special circumstances.

Our Board of Directors currently has three standing committees: Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee. In 2016, the Board also had a Science and Technology Committee, which was changed to an informal forum in March 2017.

Audit Committee. The current members of the Audit Committee are Michael F. Cola, Steven Paul, M.D. and James Frates who serves as the Chairman of the Audit Committee. Our Board of Directors has determined that each member of the Audit Committee is independent for Audit Committee purposes as that term is defined in the rules of the SEC and the applicable NASDAQ rules, and have sufficient knowledge in financial and auditing matters to serve on the Audit Committee. Our Board of Directors has designated James Frates as an "Audit Committee financial expert," as defined under the applicable rules of the SEC.

The Audit Committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our consolidated financial statements;

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

The Audit Committee held four meetings during 2016. The Audit Committee operates under a written charter that satisfies the applicable standards of the SEC and NASDAQ. A copy of the Audit Committee charter is available on our website at http://investor.sagerx.com/corporate-governance.cfm.

Compensation Committee. The members of the Compensation Committee of our Board of Directors since March 2017 are Steven Paul, M.D., James Frates and Michael Cola, who serves as the Chairman of the Compensation Committee. Our Board of Directors has determined that each member of the Compensation Committee is "independent" as defined in the applicable NASDAQ rules. The Compensation Committee's responsibilities include:

- annually reviewing and making recommendations to our Board of Directors with respect to corporate goals relevant to the compensation of our executive officers;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and making recommendations to our Board of Directors with respect to determining the compensation of our Chief Executive Officer;
- reviewing and approving the compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and making recommendations to the Board of Directors with respect to director compensation; and
- reviewing and discussing with management the compensation discussion and analysis to be included in our annual proxy statement or Annual Report on Form 10-K.

During 2016 and through March 2017, the members of the Compensation Committee were Steven Paul, M.D., James Frates, and Howard Pien who served as the Chairman of the Compensation Committee. The Compensation Committee held five meetings during 2016. The Compensation Committee operates under a written charter adopted by the Board of Directors, which is available on our website at http://investor.sagerx.com/corporate-governance.cfm.

Nominating and Corporate Governance Committee. The current members of the Nominating and Corporate Governance Committee are Michael Cola and Geno Germano who currently serves as the Chairman of the Nominating and Corporate Governance Committee. Our Board of Directors has determined that each member is "independent" as defined in the applicable NASDAQ rules. The Nominating and Corporate Governance Committee's responsibilities include:

- developing and recommending to our Board of Directors criteria for Board of Director and committee membership;
- establishing procedures for identifying and evaluating Board of Director candidates, including nominees recommended by stockholders;
- reviewing the size and composition of the Board of Directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the Board of Directors;
- recommending to the Board of Directors the persons to be nominated for election as directors and to each of the board's committees;
- developing a mechanism by which violations of the code of business conduct and ethics can be reported in a confidential manner; and
- overseeing the evaluation of the Board of Directors.

Prior to March 2017, the members of the Nominating and Corporate Governance Committee were Howard Pien, Geno Germano and Michael Cola who served as the Chairman. The Nominating and Corporate Governance Committee held three meetings during 2016. The Nominating and Corporate Governance Committee operates pursuant to a written charter adopted by the Board of Directors, which is available on our website at http://investor.sagerx.com/corporate-governance.cfm.

The Nominating and Corporate Governance Committee considers candidates for Board of Director membership suggested by its members and the Chief Executive Officer. Additionally, in selecting nominees for directors, the Nominating and Corporate Governance Committee will review candidates recommended by stockholders in the same manner and using the same general criteria as candidates recruited by the committee and/or recommended by our Board of Directors. Any stockholder who wishes to recommend a candidate for consideration by the committee as a nominee for director should follow the procedures described later in this proxy statement under the heading "Stockholder Recommendations." The Nominating and Corporate Governance Committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our By-laws relating to stockholder nominations as described later in this proxy statement under the heading "Stockholder Recommendations."

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

Generally, the Nominating and Corporate Governance Committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisors, through the recommendations submitted by stockholders or through such other methods as the Nominating and Corporate Governance Committee deems to be helpful to identify candidates. Once candidates have been identified, the Nominating and Corporate Governance Committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the Nominating and Corporate Governance Committee. The Nominating and

Corporate Governance Committee may gather information about the candidates through interviews, detailed questionnaires, comprehensive background checks or any other means that the Nominating and Corporate Governance Committee deems to be appropriate in the evaluation process. The Nominating and Corporate Governance Committee then meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of our Board of Directors. Based on the results of the evaluation process, the Nominating and Corporate Governance Committee recommends candidates for the Board of Director's approval to fill a vacancy or as director nominees for election to the Board of Directors by our stockholders each year in the class of directors whose term expires at the relevant annual meeting.

Minimum Qualifications. The Nominating and Corporate Governance Committee will consider, among other things, the following qualifications, skills and attributes when recommending candidates for the Board of Directors' selection as nominees for the Board of Directors and as candidates for appointment to the Board of Directors' committees. The nominee shall have the highest personal and professional integrity, shall have demonstrated exceptional ability and judgment, and shall be most effective, in conjunction with the other nominees to the Board of Directors, in collectively serving the long-term interests of the stockholders.

In evaluating proposed director candidates, the Nominating and Corporate Governance Committee may consider, in addition to the minimum qualifications and other criteria for Board of Directors membership approved by the Board of Directors from time to time, all facts and circumstances that it deems appropriate or advisable, including, among other things, the skills of the proposed director candidate, his or her depth and breadth of professional experience or other background characteristics, his or her independence and the needs of the Board of Directors.

Stockholder Recommendations. Stockholders may submit recommendations for director candidates to the Nominating and Corporate Governance Committee by sending the individual's name and qualifications to our Secretary at Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142, who will forward all recommendations to the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee will evaluate any candidates recommended by stockholders against the same criteria and pursuant to the same policies and procedures applicable to the evaluation of candidates proposed by directors or management.

Stockholder Communications. The Board of Directors provides to every stockholder the ability to communicate with the Board of Directors, as a whole, and with individual directors on the Board of Directors through an established process for stockholder communication. For a stockholder communication directed to the Board of Directors as a whole, stockholders may send such communication to the attention of the Chairman of the Board via U.S. Mail or Expedited Delivery Service to: Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142, Attn: Chairman of the Board of the Directors. All such communications will be delivered to the Board of Directors or the applicable director or committee chair.

For a stockholder communication directed to an individual director in his or her capacity as a member of the Board of Directors, stockholders may send such communication to the attention of the individual director via U.S. Mail or Expedited Delivery Service to: Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142, Attn: [Name of Individual Director].

We will forward by U.S. Mail any such stockholder communication to each director, and the Chairman of the Board in his or her capacity as a representative of the Board of Directors, to whom such stockholder communication is addressed to the address specified by each such director and the Chairman of the Board, unless there are safety or security concerns that mitigate against further transmission.

Risk Oversight. Our Board of Directors oversees the management of risks inherent in the operation of our business and the implementation of our business strategies. Our Board of Directors performs this oversight role

by using several different levels of review. In connection with its reviews of the operations and corporate functions of our company, our Board of Directors addresses the primary risks associated with those operations and corporate functions. In addition, our Board of Directors reviews the risks associated with our company's business strategies periodically throughout the year as part of its consideration of undertaking any such business strategies.

Each of the committees of our Board of Directors also oversees the management of our risk that falls within the committee's areas of responsibility. In performing this function, each committee has full access to management, as well as the ability to engage advisors. Our Chief Financial Officer provides reports to the Audit Committee, and is responsible for identifying, evaluating and implementing risk management controls and methodologies to address any identified risks. In connection with its risk management role, our Audit Committee meets privately with representatives from our independent registered public accounting firm, and privately with our Chief Financial Officer. The Audit Committee oversees the operation of our risk management program, including the identification of the primary risks associated with our business and periodic updates to such risks, and reports to our Board of Directors regarding these activities.

Code of Business Conduct and Ethics. We have adopted a Code of Business Conduct and Ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. The current version of the Code of Business Conduct and Ethics is available on our website at http://investor.sagerx.com/corporate-governance.cfm. A copy of the Code of Business Conduct and Ethics may also be obtained, free of charge, upon a request directed to: Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142, Attention: SVP, General Counsel. We intend to disclose any amendment or waiver of a provision of the Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, or principal accounting officer, or persons performing similar functions, by posting such information on our website (available at sagerx.com) and/or in our public filings with the SEC.

Corporate Governance Guidelines. Our Board of Directors has adopted corporate governance guidelines to assist and guide its members in the exercise of their responsibilities. These guidelines should be interpreted in accordance with any requirements imposed by applicable federal or state laws or regulations, NASDAQ and our certificate of incorporation and By-laws. Our corporate governance guidelines are available in the corporate governance section of our website at http://investor.sagerx.com/corporate-governance.cfm. Although these corporate governance guidelines have been approved by our Board of Directors, it is expected that these guidelines will evolve over time as customary practice and legal requirements change. In particular, guidelines that encompass legal, regulatory or exchange requirements as they currently exist will be deemed to be modified as and to the extent that such legal, regulatory or exchange requirements are modified. In addition, the guidelines may also be amended by our Board of Directors at any time as it deems appropriate.

PROPOSAL 2

RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS

On the recommendation of the Audit Committee, our Board of Directors has appointed PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017. The Board of Directors recommends that stockholders vote for ratification of this appointment. If this proposal is not approved at the Annual Meeting, our Board of Directors will reconsider its appointment. Even if the appointment is ratified, the Audit Committee may, in its discretion, direct the appointment of a different independent registered accounting firm at any time during the year if the Audit Committee determines that such a change would be in our stockholders' best interests.

PricewaterhouseCoopers LLP has audited our financial statements for the fiscal years ended December 31, 2016, 2015 and 2014. We expect representatives of PricewaterhouseCoopers LLP to be present at the Annual Meeting, and available to respond to appropriate questions. They will have the opportunity to make a statement if they desire to do so.

PricewaterhouseCoopers LLP Fees

The following table sets forth fees billed for professional audit services and other services rendered to us by PricewaterhouseCoopers LLP and its affiliates for the fiscal years ended December 31, 2016 and December 31, 2015.

| | Fiscal 2016 | Fiscal 2015 |
|-------------------------|-------------|-------------|
| Audit Fees (\$) | 842,600 | 792,500 |
| Audit-Related Fees (\$) | _ | _ |
| Tax Fees (\$) | 50,105 | 22,764 |
| All Other Fees (\$) | 2,756 | |
| Total (\$) | 895,461 | 815,264 |
| | | |

Audit Fees. Audit fees consist of fees billed for professional services performed by PricewaterhouseCoopers LLP for the audit of our annual consolidated financial statements, the review of interim consolidated financial statements, and related services that are normally provided in connection with registration statements, including the registration statements for our follow-on offerings. Included in the 2015 audit fees are \$222,500 of fees billed in connection with our follow-on offerings completed in April 2015 and January 2016. Included in the 2016 audit fees are \$184,100 of fees billed in connection with our follow-on offerings completed in January 2016 and September 2016.

Audit-Related Fees. Audit related fees consist of fees billed by PricewaterhouseCoopers LLP for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements. There were no such fees incurred in 2016 or 2015.

Tax Fees. Tax fees consist of fees for professional services, including tax consulting and compliance performed by PricewaterhouseCoopers LLP.

All Other Fees. All other fees in 2016 consisted of fees for software programs, including a proprietary accounting research database. We did not incur any other fees for services performed for PricewaterhouseCoopers LLP in 2015.

Pre-Approval of Audit and Non-Audit Services

It is the policy of our Audit Committee that all services to be provided by our independent registered public accounting firm, including audit services and permitted audit-related and non-audit services, must be approved in advance by our Audit Committee.

All PricewaterhouseCoopers LLP services and fees in the fiscal years ended December 31, 2016 and 2015 were pre-approved by the Audit Committee or its properly delegated authority.

Vote Required and Board of Directors' Recommendation

The approval of Proposal 2 requires that a majority of the votes properly cast vote FOR this proposal. Shares that are voted "abstain" will not affect the outcome of this proposal.

Our Board of Directors recommends that stockholders vote FOR ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017.

PROPOSAL 3

ADVISORY VOTE ON NAMED EXECUTIVE OFFICER COMPENSATION

Our Board of Directors is committed to excellence in governance. As part of this commitment, and as required by Section 14A(a)(1) of the Exchange Act, our Board of Directors is providing our stockholders with an opportunity to cast a nonbinding, advisory vote to approve the compensation of our named executive officers.

As described below under "Executive Officer and Director Compensation—Compensation Discussion and Analysis," we have developed a compensation program that is designed to attract and retain key executives responsible for our success and motivate management to enhance long-term stockholder value. The executive compensation program is designed to reward short-term and long-term performance and to align the financial interests of executive officers with the interests of our stockholders. We believe our executive compensation program strikes an appropriate balance between the implementation of responsible, measured compensation practices and the effective provision of incentives for our named executive officers to exert their best efforts for our success.

We are asking for stockholder approval, on an advisory basis, of the compensation of our named executive officers as disclosed in this Proxy Statement, which includes the disclosures in the "Executive Officer and Director Compensation" section below, and the compensation tables and the narrative discussion following the compensation tables in this Proxy Statement. This vote is not intended to address any specific item of compensation, but rather the overall compensation of our named executive officers and the policies and practices described in this Proxy Statement. For the reasons discussed above, our Board of Directors unanimously recommends that our stockholders vote in favor of the following resolution:

"RESOLVED, that the Company's stockholders hereby approve, on an advisory basis, the compensation of the named executive officers, as disclosed in the Company's proxy statement for the 2017 Annual Meeting of Stockholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, Summary Compensation Table and the other compensation related tables and disclosure."

As this vote is advisory, it will not be binding upon our Board of Directors or the Compensation Committee and neither our Board of Directors nor our Compensation Committee will be required to take any action as a result of the outcome of this vote. However, our Compensation Committee will carefully consider the outcome of this vote when considering future executive compensation policies and decisions.

Vote Required

For approval, this proposal must receive the affirmative vote of the majority of shares properly cast on the proposal. Abstentions and broker non-votes will have no effect on Proposal 3.

Recommendation of the Board

Our Board of Directors recommends that stockholders vote FOR the advisory resolution approving our named executive officer compensation.

TRANSACTION OF OTHER BUSINESS

Our Board of Directors 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.

EXECUTIVE OFFICER AND DIRECTOR COMPENSATION

Compensation Discussion and Analysis

Our executive compensation programs are designed to attract, motivate and retain qualified and talented executives, motivating them to achieve our business goals, and rewarding them for superior short-term and long-term performance. In particular, our compensation programs are intended to reward the achievement of specified pre-determined quantitative and qualitative corporate and individual performance goals and objectives, and to align the interests of our senior management team with those of our stockholders in order to attain our ultimate objective of delivering important new medicines and increasing stockholder value.

Our Compensation Committee is responsible for overseeing our compensation and benefit plans and policies; administering our equity incentive plans; reviewing and approving annually all compensation decisions relating to our executive officers; and making recommendations to the full Board of Directors on compensation for our Chief Executive Officer and for the Board of Directors. The Compensation Committee considers recommendations from our Chief Executive Officer regarding the compensation of our executive officers other than himself. Our Compensation Committee has the authority under its charter to engage the services of a consulting firm or other outside advisor to assist it in designing our compensation programs and in making compensation decisions. Our compensation consultant in 2016 was Arnosti Consulting. Our Compensation Committee has assessed the independence of Arnosti Consulting consistent with NASDAQ listing standards, and has concluded that the engagement of Arnosti Consulting does not raise any conflict of interest.

This section discusses the principles underlying our policies and decisions with respect to the compensation of our executive officers who are named in the Summary Compensation Table below, or our "named executive officers," and all material factors relevant to an analysis of these policies and decisions. Our named executive officers are:

- Jeffrey M. Jonas, M.D., our President and Chief Executive Officer;
- Kimi Iguchi, our Chief Financial Officer and Treasurer;
- Albert J. Robichaud, Ph.D., our Chief Scientific Officer;
- Stephen J. Kanes, M.D., Ph.D., our Chief Medical Officer; and
- Anne Marie Cook, our Senior Vice President, General Counsel.

Executive Summary and Corporate Background

We are a clinical-stage biopharmaceutical company committed to developing and commercializing novel medicines to treat life-altering central nervous system, or CNS, disorders, where there are inadequate or no approved existing therapies. We are targeting CNS indications where patient populations are easily identified, clinical endpoints are well-defined, and development pathways are feasible.

Our executive compensation program is designed to:

- attract and retain qualified and talented executives;
- be fair, reasonable and market competitive;
- provide a strong link between performance and pay, and give us the ability to differentially invest in and reward top performance;
- be flexible to support our long-term growth strategy; and
- align the incentives of our executive officers with our corporate strategies, business objectives and the long-term interests of our stockholders, and promote long-term ownership by our executives.

To achieve these objectives, our Compensation Committee evaluates our executive compensation program with the goal of setting total compensation at levels that align with a total rewards strategy appropriate for our size and stage. Specifically, our Compensation Committee targets total cash compensation for our executive officers at or near market median for fixed compensation, with opportunity to achieve upper quartile positioning for exceptional company and individual performance. Our Compensation Committee targets total equity incentive compensation for our executive officers between the market median and the upper quartile of our peer group, with achievement of exceptional long-term company performance resulting in upper quartile value of incentives.

Because we have a pay-for-performance philosophy, actual compensation levels are correlated to the achievement of corporate goals and individual performance. As described below, during 2016, we made significant progress and exceeded many of our clinical development and business goals resulting in a strong year for us, including: successful completion of a Phase 2 clinical trial of SAGE-547 in postpartum depression, or PPD; receipt of breakthrough therapy designation from the U.S. Food and Drug Administration, or FDA, and PRIME designation from the European Medicines Agency, or EMA, for SAGE-547 in PPD; commencement of the Phase 3 clinical program for SAGE-547 in PPD; receipt of scientific advice from the EMA that our current Phase 3 clinical program in super-refractory status epilepticus, or SRSE, if successful, is expected to be sufficient to support a marketing authorization application, or MAA, to the EMA seeking approval of SAGE-547 for SRSE in the European Union, or EU; successful completion of Phase 1 clinical trials of SAGE-217, and advancing SAGE-217 development with initiation of Phase 2 clinical trials in four therapeutic indications—major depressive disorders, or MDD, PPD, essential tremor and Parkinson's disease; continued early-stage development of other compounds from our GABA program; continued development of our NMDA program with substantial completion of the non-clinical studies of SAGE-718 needed to advance SAGE-718 to clinical development; significant progress in our preparations for a potential commercial launch of SAGE-547 if we are successful in our development efforts, including supply chain readiness; successful completion of two financings; and continued building of a high-performance organization needed to deliver on our future goals.

Compensation Objectives and Philosophy

Our executive compensation programs are designed to attract, motivate and retain qualified and talented executives, motivating them to achieve our business goals and rewarding them for superior short-term and long-term performance. In particular, our compensation programs are intended to reward the achievement of specified pre-determined quantitative and qualitative corporate and individual performance goals and objectives, and to align the interests of our senior management team with those of our stockholders in order to attain our ultimate objective of increasing stockholder value while delivering important new medicines to patients.

Executive Compensation Elements

The primary elements of our executive compensation program are:

- base salary;
- annual performance-based cash incentives;
- equity incentive awards;
- severance and change in control benefits; and
- broad-based health, welfare and retirement benefits.

We award annual increases in base salary based upon an assessment of each executive's performance, the scope of his or her responsibilities and appropriate benchmarks. We determine annual performance-based cash incentives for our executive officers based on achievement of a combination of corporate goals and individual performance. We typically make equity grants to our executive officers upon commencement of their employment, annually following a review of their individual performance and in connection with any promotion.

The mix of compensation components is designed to reward annual results as well as to incentivize long-term company performance and create stockholder value.

Our Compensation Committee does not have a formal or informal policy for allocating a mix between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation. Instead, our Compensation Committee exercises its judgment to determine what it believes to be the appropriate level and mix of the various compensation components, after reviewing information provided by our compensation consultant and other relevant data. We generally strive to provide our executive officers with a balance of short-term and long-term incentives to encourage and reward consistently strong performance. Ultimately, the objective in providing the balance between long-term and current compensation is to ensure adequate base and short-term incentive compensation to attract and retain talent, while providing incentives to maximize long-term value for our company and our stockholders.

Defining and Comparing Compensation to Market Benchmarks

In making compensation decisions, our Compensation Committee reviews publicly available compensation data and survey data provided by our compensation consultant from a peer group of publicly traded, national and regional companies in the biopharmaceutical and biotechnology industries. Our Compensation Committee establishes our peer group, based on the recommendation of our compensation consultant, using a balance of the following criteria:

- companies whose stage of development (revenue and R&D expense) and market capitalization are similar, though not necessarily identical, to ours;
- companies with similar executive positions to ours;
- · companies against which we believe we compete for executive talent; and
- public companies based in the United States whose compensation and financial data are available in proxy statements or through widely available compensation surveys.

Based on these criteria, in October 2016 our Compensation Committee approved a revised peer group that we refer to as our 2016 Peer Group.

2016 Peer Group

Acceleron Pharma Inc Kite Pharma, Inc. Achillion Pharmaceuticals, Inc. Macrogenics, Inc. Aerie Pharmaceuticals, Inc. Ophthotech Corporation Agios Pharmaceuticals, Inc. Portola Pharmaceuticals, Inc. Amicus Therapeutics, Inc. Prothena Corporation, plc. Puma Biotechnology, Inc. Bluebird Bio, Inc. Sarepta Therapeutics, Inc. Cempra, Inc. Clovis Oncology, Inc. Spark Therapeutics, Inc. Dermira, Inc. Synergy Pharmaceuticals, Inc. Intra-Cellular Therapies, Inc. Ultragenyx Pharmaceutical Inc.

Juno Therapeutics, Inc.

Our Compensation Committee reviews the companies in our peer group annually, based on agreed criteria regarding which companies should be included in the peer group, and makes adjustments as necessary to ensure the peer group continues to properly reflect the market in which we compete for talented executives. For example, the changes between our 2015 Peer Group and our 2016 Peer Group were the result of certain companies being acquired, certain companies moving to a different stage of development (revenue and R&D expense) or market capitalization, and other changes to better align the peer group.

Our 2015 peer group, or 2015 Peer Group, as approved by the Compensation Committee, was: Acceleron Pharma Inc, Achillion Pharmaceuticals, Inc., Agios Pharmaceuticals, Inc., Amicus Therapeutics, Inc., Cempra, Inc., Chimerix, Inc., Clovis Oncologoy, Inc., Dynavax Technologies Corp., Eagle Pharmaceuticals, Inc., Esperion Therapeutics, Inc., Heron Therapeutics, Inc. Insmed, Inc., Intra-Cellular Therapies, Inc., Juno Therapeutics, Inc., Kite Pharma, Inc., Ophthotech Corporation, Portola Pharmaceuticals, Inc., Puma Biotechnology, Inc., Relypsa, Inc., Sarepta Therapeutics, Inc., Spark Therapeutics, Inc., Tesaro, Inc., Ultragenyx Pharmaceutical Inc., Zafgen, Inc., Ziopharm Oncology Inc.

We believe that the compensation practices and levels of our 2016 Peer Group provided us with appropriate compensation benchmarks for evaluating the compensation of our executive officers based on 2016 performance. Notwithstanding the similarities of the 2016 Peer Group to us, due to the nature of our business, we compete for executive talent with many public companies that are larger and more established than we are, or that possess greater resources than we do, and with smaller private companies that may be able to offer greater equity compensation potential, as well as with prestigious academic and non-profit institutions. Our Compensation Committee takes these factors into account in assessing executive compensation.

To achieve our objectives, our Compensation Committee evaluates our executive compensation program with the goal of setting total compensation at levels that align with a total rewards strategy appropriate for our size and stage. Specifically, our Compensation Committee targets compensation for our executive officers as follows:

- base salaries at or near market median of our 2016 Peer Group and, for top performers, between the market median and 75th percentile;
- annual cash incentive opportunity at approximately the market median of our 2016 Peer Group with significant variability in actual payments based on corporate and individual performance;
- total annual equity incentive awards, provided in the form of stock options, targeting between median and upper quartile of our 2016 Peer Group for target performance with achievement of exceptional corporate and individual performance resulting in upper quartile values to promote long-term ownership; and
- total compensation for our executives targeted at or near the market median of compensation paid to similarly situated executives of the companies in our 2016 Peer Group and between market median and the 75th percentile for top performers.

Our Compensation Committee may consider other criteria, including market factors; the experience level of the executive; his or her total responsibilities; the executive's contributions in helping to achieve established corporate goals; and overall contributions and performance, in determining variations to this general target range.

Key Performance Factors in Determining Executive Compensation

As the biopharmaceutical industry is characterized by a very long product development cycle, including a lengthy research and development period and a rigorous approval phase involving human testing and governmental regulatory approval, many of the traditional benchmarking metrics, such as product sales, revenues and profits are inappropriate for a clinical-stage biopharmaceutical company, such as Sage. Instead, the specific performance factors our Compensation Committee considers when determining the compensation of our named executive officers include:

- key research and development achievements;
- initiation and progress of clinical trials for our product candidates;
- expansion of our manufacturing and operational capabilities on a global basis;
- achievement of regulatory milestones;
- new business initiatives including financings; and
- managing our growth while maintaining a high-performing organization and culture.

Annual corporate goals are proposed by our senior leadership team prior to the beginning of each year, and approved by our Board of Directors. During the last quarter of each year, our Compensation Committee, with the input of the senior leadership team, evaluates our corporate performance as compared to the corporate goals, and taking into account other corporate achievements and developments, assigns a corporate performance rating which is then assessed and approved by the full Board of Directors. Our Compensation Committee also evaluates the individual performance of our executive officers each year, with the input of our Board of Directors, in the case of our Chief Executive Officer's individual performance, and with the input of our Chief Executive Officer, in the case of the evaluation of the other executive officers. After the end of each year, our Compensation Committee determines executive compensation levels, or in the case of our Chief Executive Officer, recommends compensation levels to our Board of Directors, based on the overall corporate performance against the established corporate goals, as well as each individual executive officer's contributions to achievement of the corporate goals and individual performance. In addition, our Compensation Committee may apply its discretion, as it deems appropriate, in determining or recommending executive compensation.

In line with this process, our Compensation Committee assessed the performance of Jeffrey Jonas, our Chief Executive Officer, in 2016 based on the level of attainment of our corporate goals, and his leadership in execution of our strategic plans resulting in a substantial clinical-stage pipeline with strong drivers for future growth. In assessing the individual performance of our named executive officers, other than our Chief Executive Officer, the Compensation Committee, based on the input of our Chief Executive Officer, considered each such officer's individual contributions to completion of our goals, and the officer's individual achievements in helping to build the Company and execute on our strategy. These achievements include the following:

- In 2016, Dr. Kanes led our clinical and regulatory teams responsible for: successful completion of a Phase 2 clinical trial of SAGE-547 in PPD; receipt of breakthrough therapy designation from the FDA and PRIME designation from the EMA for SAGE-547 in PPD; commencement of the Phase 3 clinical program for SAGE-547 in PPD; receipt of scientific advice from the EMA that our current Phase 3 clinical program in SRSE, if successful, is expected to be sufficient to support a MAA submission to the EMA seeking approval of SAGE-547 for SRSE in the EU; successful completion of Phase 1 clinical trials of SAGE-217, and advancing SAGE-217 development with initiation of Phase 2 clinical trials in four therapeutic indications MDD, PPD, essential tremor and Parkinson's disease. He also made significant strides in building the clinical and medical science teams responsible for our expanding clinical activities and the medical affairs team responsible for permitted medical and scientific interactions and disease awareness activities.
- In 2016, Ms. Iguchi guided our financing activities, leading two successful follow-on public offerings, helping to finance our expanding clinical activities and diversifying our investor base. She also made significant strides in building the Finance, Corporate Communications and Investor Relations functions.
- In 2016, Dr. Robichaud led our successful research and non-clinical development efforts that
 culminated in: substantial completion of the non-clinical studies of SAGE-718 needed to advance
 SAGE-718 to clinical development; identification of a new early development candidate; advancement
 of translational sciences work related to SAGE-217; advanced work on additional compounds targeting
 GABA or NMDA receptors and expansion of our compound library; and continued development and
 implementation of our strategy for protection of intellectual property.
- In 2016, Ms. Cook led the continued building of the legal and compliance functions at Sage; provided
 oversight of all legal matters pertaining to the organization, including corporate governance, securities
 law matters, contracts, and intellectual property; provided legal input and advice as we prepare for a
 potential commercial launch of SAGE-547 if our development efforts are successful; and continued
 drafting and implementing our compliance policies and procedures to guide our current and planned
 activities.

In 2016, our Compensation Committee established the cash bonus opportunity for each member of our senior management team under the 2016 annual incentive program, representing a percentage of each individual's base

salary. The bonus targets for 2016 performance for our named executive officers were 50% for Dr. Jonas, and 35% for each of Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook. For 2016, our Chief Executive Officer's bonus was based entirely on performance relative to corporate goals and the bonuses paid to our other named executive officers were a function of both attainment of corporate goals and individual performance.

Our Compensation Committee typically grants annual equity awards, and determines changes in base salary and the amount of any cash incentive payments, at its first regularly scheduled meeting of the new year. Our Compensation Committee may also review the compensation of our executive officers throughout the course of the year. With respect to year-end reviews, any changes in base salary are effective at the beginning of the following year. The cash incentive payments awarded under our 2016 annual incentive bonus program were paid in February 2017.

Base Salary

Base salary is intended to provide compensation for day-to-day performance. The Compensation Committee believes that a competitive base salary is a necessary element of any compensation program that is designed to attract and retain talented and experienced executives. Base salaries for our executive officers are intended to be competitive with those received by other individuals in similar positions at the companies with which we compete for talent. Base salaries are originally established at the time the executive is hired based on individual experience, skills and expected contributions, our understanding of what executives in similar positions at peer companies are paid, and also negotiations during the hiring process. The base salaries of our executive officers are reviewed annually and may be adjusted to reflect market conditions and our executives' performance during the prior year as well as the financial position of the company, or if there is a change in the scope of the officer's responsibilities.

At the beginning of 2016, our Compensation Committee reviewed the base salary and overall compensation paid to Jeffrey Jonas, our Chief Executive Officer. Based on his accomplishments during the prior year and the comparison of his base salary to the base salary of chief executive officers in our 2015 Peer Group, the Compensation Committee recommended that our Board of Directors approve an increase in the annual base salary paid to Dr. Jonas from \$450,000 to \$486,000. Our Board of Directors agreed with the recommendation of the Compensation Committee.

At the beginning of 2016, our Compensation Committee approved salary increases in base salary for each of our other named executive officers serving at that time, based upon the executive officer's individual performance and the comparison of his or her base salary to the base salary of executive officers in comparable positions in our 2015 Peer Group. The table below sets forth the adjustments to base salary, in dollars and as a percentage, for each of our named executive officers serving at the beginning of 2016:

| Name | Base Salary | Base Salary | Increase (%) |
|-------------------------------|-------------|-------------|--------------|
| Jeffrey M. Jonas, M.D. | \$450,000 | \$486,000 | 8.0% |
| Kimi Iguchi | \$312,000 | \$324,480 | 4.0% |
| Albert J. Robichaud, Ph.D. | \$315,000 | \$365,699 | 8.5% |
| Stephen J. Kanes, M.D., Ph.D. | \$357,500 | \$393,250 | 10.0% |
| Anne Marie Cook(1) | \$360,000 | \$363,694 | 1% |

(1) Ms. Cook became our Senior Vice President, General Counsel in September 2015 and therefore the percentage increase is based upon her prorated 2015 service.

Performance-Based Cash Incentive Bonus Program

Our Compensation Committee has the authority to award annual performance-based cash incentive bonuses to our executive officers, and to make recommendations to the full Board of Directors for approval of performance-

based cash incentive bonuses for our Chief Executive Officer. The bonus targets for 2016 performance for our named executive officers were 50% for Dr. Jonas, and 35% for each of Dr. Kanes, Dr. Robichaud, Ms. Iguchi, and Ms. Cook.

In making its determination regarding awards under the 2016 annual cash incentive program, our Compensation Committee considered our success against our 2016 corporate goals. The 2016 corporate goals approved by our Board of Directors, and the relative weightings assigned to each goal at the beginning of the year, were as follows:

- Advance clinical pipeline (40%)
 - Complete Phase 2 Clinical Trial of SAGE-547 in PPD;
 - Finalize new drug application to be ready for possible future submission in 2017;
 - Obtain EMA Scientific Advice for SAGE-547 in SRSE and apply for orphan designation in EU;
 - Ensure US commercial supply chain locked in, and validation on track to support launch;
 - Complete single-ascending dose and multiple ascending dose Phase 1 clinical studies of SAGE-217;
 - Initiate Phase 2 clinical trial of SAGE-217; and
 - Open investigational new drug application, or IND, for SAGE-689, and initiate Phase 1 trial within 60 days of opening.
- Recognized leader in CNS disorders (20%)
 - Support two lead optimization programs; identify early development candidates;
 - Complete IND enabling studies on SAGE-718;
 - Develop translational neuroscience to deliver decision-enabling results for development programs;
 and
 - Ensure we are a recognized leader in CNS disorders through a robust communications plan through deliverables such as thought leader awareness, publications, presentations, patent filings, and public relations initiatives.
- Drive business performance (20%)
 - Develop and execute financing strategy to fund operations, including diversifying our stockholder base; and
 - Ensure launch readiness is on track for SAGE-547.
- People and organization leadership (20%)
 - Ensure we have the right talent in place to achieve our goals through (1) robust talent management and (2) staffing the organization with on-time hires of high-quality recruits as per the approved hiring plan; and
 - Build operating model and functional team to prepare for commercialization, strengthen organizational capabilities and infrastructure to execute against book of work and create an extraordinary culture and results.

Our Compensation Committee determined that we made significant progress and exceeded many of our clinical development and business goals in 2016, including:

- Successful completion of a Phase 2 clinical trial of SAGE-547 in PPD;
- Receipt of Breakthrough Therapy Designation from the FDA for SAGE-547 in PPD;
- Initiation of Phase 3 clinical trials of SAGE -547 in both severe PPD and moderate PPD;

- Receipt of PRIME designation from the EMA with respect to SAGE-547 in PPD;
- Receipt of scientific advice from the EMA that our current Phase 3 clinical program in SRSE, if successful, is expected to be sufficient to support a MAA submission to the EMA seeking approval of SAGE-547 for SRSE in the EU;
- Successful completion of Phase 1 clinical trials of SAGE-217;
- Advancing SAGE-217 development with initiation of Phase 2 clinical trials in four therapeutic indications— MDD, PPD, essential tremor and Parkinson's disease;
- Substantial completion of the non-clinical studies of SAGE-718 needed to advance SAGE-718 to clinical development;
- Continued advancement of our early stage drug discovery and translational science work;
- Successful completion of two financings;
- Significant progress in our preparations for a potential commercial launch of SAGE-547 if we are successful
 in our development efforts, including supply chain readiness; and
- Continued organization build-out across all functions of the high-performance organization needed to support advancement of a broad pipeline and launch preparation.

Based on our overall performance during 2016 in achieving our goals and in building strong value drivers for potential future growth, including the potential for eight clinical data read-outs in 2017, our Board of Directors assigned a corporate performance rating of 130% with respect to our corporate goals for 2016.

In February 2017, based on the above corporate goal achievement assessment, individual performance, as noted above, in the case of executive officers other than our Chief Executive Officer, and analysis of the data from our 2016 Peer Group, our Compensation Committee approved performance-based cash incentive bonuses to our named executive officers for 2016 performance in the amounts listed below with the full Board of Directors approving the performance-based cash incentive bonus to Dr. Jonas.

| Name | |
|-------------------------------|-----------|
| Jeffrey M. Jonas, M.D. | \$315,900 |
| Kimi Iguchi | \$147,638 |
| Albert J. Robichaud, Ph.D. | \$166,393 |
| Stephen J. Kanes, M.D., Ph.D. | \$178,929 |
| Anne Marie Cook | \$165,481 |

Equity Incentive Compensation

Our equity incentive compensation program is designed to:

- reward demonstrated leadership and performance;
- align our executive officers' interests with those of our stockholders;
- retain our executive officers;
- maintain competitive levels of executive compensation; and
- motivate our executive officers for outstanding performance.

The market for qualified and talented executives in the biopharmaceutical industry is highly competitive, and we compete for talent with many companies that have greater financial resources than we do. Accordingly, we believe equity compensation is a crucial component of any competitive executive compensation package we offer.

Historically, our equity awards have generally taken the form of stock options. We typically grant stock options to each of our executive officers upon commencement of employment; annually in conjunction with our review of individual performance; in connection with a promotion; or as a special incentive.

All stock option awards to our executive officers are approved by our Compensation Committee and, other than stock option awards to new hires, are typically granted at our Compensation Committee's first regularly scheduled meeting at the beginning of the year. Stock option awards vary among our executive officers based on their positions and annual performance assessments as well as the other factors that the Compensation Committee deems relevant. In addition, our Compensation Committee reviews all components of the executive's compensation to ensure that his or her total compensation is aligned with our overall philosophy and objectives. All stock options granted to our executives have exercise prices equal to the fair market value of our common stock on the date of grant, so that the recipient will not earn any compensation from his or her options until they are vested and unless our share price increases above the exercise price on the date of grant. Accordingly, this portion of our executive officers' compensation is at risk, and is directly aligned with stockholder value creation.

In addition, the stock options granted to our executive officers typically vest over four years, which we believe provides an incentive to our executives to add value to the company over the long-term and to remain with Sage. Typically, the stock options we grant to our executives have a ten-year term, and vest as to 25% of the shares on the first anniversary of their hire date or date of grant and then monthly thereafter until the fourth anniversary of such date. A portion of the options granted to Dr. Jonas, Ms. Iguchi, Dr. Robichaud and Dr. Kanes in 2015 and to Ms. Cook in 2016 vest upon the achievement of clinical and regulatory milestones that we believe are aligned with potential value creation for our stockholders. Vesting of option grants to employees ceases upon termination of employment, and exercise rights typically cease three months following termination of employment, except in the case of death or disability. Prior to the exercise of an option, the stock option holder does not have any rights as a stockholder with respect to the shares subject to such option, including voting rights and the right to receive dividends or dividend equivalents.

Our insider trading policy expressly prohibits short sales and derivative transactions of our stock by our named executive officers, directors and specified other employees, including short sales of our securities, including short sales "against the box," purchases or sales of puts, calls or other derivative securities of the company or any derivative securities that provide the economic equivalent of ownership of any of our securities or an opportunity, direct or indirect, to profit from any change in the value of our securities, or other hedging or monetization transactions accomplished through the use of prepaid variable forwards, equity swaps, collars and exchange funds. In addition, our insider trading policy expressly prohibits our named executive officers, directors and specified other employees from purchasing our securities on margin, borrowing against company securities held in a margin account, or pledging our securities as collateral for a loan.

Equity incentive grants to our named executive officers are made at the discretion of the Compensation Committee under the terms of our 2014 Stock Option and Incentive Plan, or the 2014 Plan, except for equity incentive grants for the Chief Executive Officer which are approved by the full Board of Directors. In 2016, the Compensation Committee made stock option grants to our named executive officers as specified in the "Grants of Plan-Based Awards" table below. Stock options have exercise prices equal to at least fair market value of our common stock on the date of grant, and reward executive officers only if the stock price increases from the date of grant.

In determining the number of options to award to a named executed officer, the Compensation Committee typically considers a number of factors, including: the Company's performance against corporate goals during the preceding year; the named executive officer's performance against individual goals during the preceding year, and competitive levels of executive compensation for similarly situated executives based on analysis of data from the Company's applicable peer group.

The number of options granted to each named executive officer in 2016 was based on our strong performance in 2015, for which the Board of Directors had assessed a corporate goal achievement score of 125%; such named executive officer's individual performance in 2015; analysis of data from our 2015 Peer Group; and with respect to Dr. Jonas, Ms. Iguchi, Dr. Robichaud and Dr. Kanes, also took into account the number of options granted in 2015 with performance-based vesting. Ms. Cook was not an employee at the time of the 2015 grant of

performance-based options. Based on these factors, Dr. Jonas received a 2016 grant that, when combined with the previous performance grant, was at the upper quartile of our 2015 Peer Group and Ms. Iguchi, Dr. Kanes and Dr. Robichaud received a 2016 grant that, when combined with the previous performance grant, was at the median of our 2015 Peer Group. The option granted to Ms. Cook in 2016, similar to the options granted to the other named executive officers in 2015, included both a time-based component (50% of the grant) and a performance-based component (50% of the grant), and was also at the median of our 2015 Peer Group. The performance milestones for the performance-based options granted to the named executive officers typically cover potential value-creation events that span over several years, and are intended to align the interests of our named executive officers with those of our stockholders.

The following table sets forth information as of December 31, 2016 regarding shares of common stock that may be issued under our equity compensation plans, consisting of the 2011 Stock Option and Grant Plan, or the 2011 Plan, the 2014 Plan, our 2014 Employee Stock Purchase Plan, and our 2016 Inducement Equity Plan. As of the closing of our initial public offering, no additional equity awards were made under our 2011 Plan. The 2016 Inducement Equity Plan was approved by the Board of Directors in December 2016 for use commencing in 2017 exclusively in the grant of equity awards to individuals who were not previously an employee or non-employee director of the Company (or following a bona fide period of non-employment), as an inducement material to such individual's entering into employment with the Company, pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules.

| Plan Category | Number of securities to be issued upon exercise of outstanding options (#) | Weighted- average exercise price of outstanding options (\$) | securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column) |
|---|--|---|---|
| Equity compensation plans approved by security holders | 4,231,807(1) | \$29.99(2) | 927,764(3) |
| Equity compensation plans not approved by security holders(4) | | | 2,000,000 |
| Total | 4,231,807 | \$29.99 | 2,927,764 |

- (1) Includes 4,231,807 shares of common stock issuable upon the exercise of outstanding options.
- (2) Does not include purchase rights accruing under the 2014 Employee Stock Purchase Plan because the purchase right (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period.
- (3) As of December 31, 2016, there were 660,115 shares available for grant under the 2014 Plan and 267,649 shares available for grant under the 2014 Employee Stock Purchase Plan.
- (4) This amount is under the 2016 Inducement Equity Plan.

Stock Option Granting Practices

Delegation to Our Chief Executive Officer

Currently, all of our employees, including our named executive officers, are eligible to participate in our 2014 Plan. All new employees are granted stock options when they start employment either under the 2014 Plan or under the 2016 Inducement Equity Plan, and all continuing employees are eligible for stock option awards on an annual basis under the 2014 Plan based on performance and upon promotions to positions of greater responsibility. Our Compensation Committee has delegated to Dr. Jonas, our Chief Executive Officer, the authority to make stock option awards under our 2014 Plan within approved guidelines to new hires and in

connection with promotions, other than grants to the leadership team members, which include the named executive officers. The number of stock options he may grant under the 2014 Plan to any one individual must be within the range specifically set by our Compensation Committee for these awards. The exercise price of such stock options must be equal to the closing price of our common stock on NASDAQ on the first business day of the calendar month following the date of hire or promotion. With respect to stock option awards to new hires that are granted under the 2014 Plan, other than to leadership team members, Dr. Jonas typically provides that the award is to be granted to the new hire on the first business day of the calendar month following the date of his or her first date of regular employment. With respect to stock option awards made under the 2014 Plan in connection with promotions other than leadership team members, Dr. Jonas approves the award in connection with such promotion, and provides that the award is to be granted on the first business day of the calendar month following the date of such promotion. Dr. Jonas is required to maintain a list of stock options granted pursuant to such delegated authority, and report to our Compensation Committee regarding such awards. Awards made under the 2016 Inducement Equity Plan must be approved by the Compensation Committee through either a meeting, a written consent or the written approval of one of its designated members. Awards under the 2016 Inducement Equity Plan may only be made to individuals who were not previously an employee or non-employee director of ours (or following a bona fide period of non-employment), as an inducement material to such individual's entering into employment with the Company, pursuant to Rule 5635(c)(4) of the NASDAQ Listing Rules. Awards under the 2016 Inducement Equity Plan are typically granted to the new hire on the first business day of the calendar month following the date of his or her first date of regular employment.

Employee Benefits

In addition to the primary elements of compensation described above, the named executive officers also participate in the same broad-based employee benefits programs available to all of our employees, including health insurance, life and disability insurance, dental insurance and our 401(k) plan. We do not provide special benefits to our executive officers.

Other Compensation Program Features

In addition to our direct compensation elements, the following compensation program features are designed to align our executive team with stockholder interests and market best practices:

- we do not offer any tax gross-up payments to our executive team for any change-of-control payments;
- we prohibit our executive team from engaging in hedging transactions with our securities or pledging our securities; and
- we do not offer our executive team any substantially enhanced benefits or perquisites when compared to our overall employee population.

Compliance with IRS Code Section 162(m)

Section 162(m) of the Internal Revenue Code of 1986, as amended, generally disallows a tax deduction to public companies for compensation in excess of \$1 million per person paid to a company's chief executive officer and its three other officers (other than the chief/principal financial officer) whose compensation is required to be disclosed to stockholders pursuant to the Exchange Act by reason of being among the company's most highly compensated officers. Qualified performance-based compensation is not subject to the deduction limitation if specified requirements are met. We periodically review the potential effects of Section 162(m) and we consider whether to structure the performance-based portion of our executive compensation to comply with exemptions in Section 162(m), so that the compensation remains tax deductible to us. However, our Compensation Committee may, in its judgment, authorize compensation payments that do not comply with the exemptions in Section 162(m) when it believes that such payments are appropriate to attract, motivate and retain executive talent and are in our best interest and that of our stockholders.

Rule 10b5-1 Sales Plans

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

Executive Officer Stock Ownership Guidelines

Because of the importance of linking the interests of management and stockholders, in 2015, our Compensation Committee established stock ownership guidelines for our executive officers. These guidelines specify the number of shares that our executive officers must accumulate and hold within five years from the later of the effective date of implementation of the guidelines or the date the individual was hired or promoted to an executive officer position. Under the guidelines, ownership targets are set at a value greater than or equal to four times base salary in the case of our Chief Executive Officer, and greater than or equal to two times base salary in the case of our other executive officers. Unvested restricted stock and vested, unexercised in-the-money stock options count toward satisfying these ownership guidelines.

Compensation Risk Assessment

Our Compensation Committee periodically reviews and considers whether our compensation programs and policies create risks that are reasonably likely to have a material adverse effect on the Company. We believe that our executive compensation program does not encourage excessive or unnecessary risk taking. This is primarily due to the fact that our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals. We also have a Code of Business Conduct and Ethics in place to prevent conduct by our executive officers and other employees that is inconsistent with applicable laws and regulations. Disciplinary measures for violations of the Code of Business Conduct and Ethics may include a reduction or elimination of bonuses, termination of employment or restitution. In addition, the stock option agreements that govern stock options granted to our executive officers and other employees terminate in the event of termination of the individual's employment "for cause." As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

Report of the Compensation Committee on Executive Compensation

Our Compensation Committee has reviewed and discussed the "Compensation Discussion and Analysis" required by Item 402(b) of Regulation S-K with management. Based upon such review and discussions, our Compensation Committee recommended to our Board of Directors that such section be included in this proxy statement and incorporated by reference in our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on February 24, 2017.

By the Compensation Committee of the Board of Directors of Sage Therapeutics, Inc.,

Howard Pien (former Chairperson during fiscal year 2016) James Frates Steven Paul, M.D.

Executive Compensation

Summary Compensation Table

The following table sets forth the compensation earned during the fiscal years ended December 31, 2016, December 31, 2015 and December 31, 2014 for our chief executive officer, our chief financial officer and our next three highest-paid executive officers. We refer to these officers as our named executive officers.

| | | | Option Awards | | Non-equity incentive plan compensation | All Other Compensation | |
|--|------|------------|------------------|------------|--|---------------------------|------------|
| Name and Principal Position | Year | Salary(\$) | (\$)(1) | Bonus(\$) | (\$)(2) | (\$)(3) | Total(\$) |
| Jeffrey M. Jonas, M.D. | 2016 | 486,000 | 1,175,332 | _ | 315,900 | 11,118 | 1,988,350 |
| President and Chief Executive | 2015 | 450,000 | 9,310,667 | _ | 281,250 | 6,140 | 10,048,057 |
| Officer | 2014 | 425,000 | _ | 125,000(5) | 195,500 | 490 | 745,990 |
| Kimi Iguchi | 2016 | 324,480 | 295,809 | _ | 147,638 | 8,673 | 776,601 |
| Chief Financial Officer and | 2015 | 312,000 | 1,951,929 | _ | 134,316 | 12,002 | 2,410,247 |
| Treasurer | 2014 | 282,286 | 376,438 | _ | 103,500 | _ | 745,990 |
| Albert J. Robichaud, Ph.D. | 2016 | 365,699 | 491,792 | _ | 166,393 | 9,431 | 1,033,316 |
| Chief Scientific Officer | 2015 | 337,050 | 1,464,271 | _ | 147,459 | 12,651 | 1,961,431 |
| | 2014 | 300,000 | _ | _ | 99,000 | 1,275 | 400,275 |
| Stephen J. Kanes, M.D., Ph.D. | 2016 | 393,250 | 393,753 | _ | 178,929 | 2,405 | 968,337 |
| Chief Medical Officer | 2015 | 357,500 | 1,952,137 | _ | 156,406 | 12,156 | 2,478,199 |
| | 2014 | 325,000 | _ | 65,000(6) | 112,125 | 1,221 | 503,346 |
| Anne Marie Cook (4) | 2016 | 363,694 | 782,993 | _ | 165,481 | 9,549 | 1,321,716 |
| Senior Vice President, General Counsel | 2015 | 105,000 | 4,512,164 | 50,000(7) | 44,324 | 1,600 | 4,713,088 |

- (1) The amounts reported in the "Option awards" column above represent the grant date fair value of the stock options granted to such officers during 2014, 2015 and 2016 as computed in accordance FASB ASC, Topic 718, not including any estimates of forfeitures related to service-based vesting conditions. See note 8 of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K filed with the SEC on February 24, 2017 for a discussion of assumptions made by us in determining the grant date fair value of our option awards. Note that the amounts reported in this column reflect the accounting cost for these stock options, and do not correspond to the actual economic value that may be received by the named executive officers from the options.
- (2) 2016 amounts represent cash bonus payments paid in 2017 for performance in 2016. 2015 amounts represent cash bonus payments paid in 2016 for performance in 2015 and 2014 amounts represent cash bonus payments made in 2015 for performance in 2014.
- (3) For 2016, the amounts reported represent imputed income for company-paid life insurance and 401(k) matching contributions made by the Company.
- (4) Ms. Cook joined the Company as our Senior Vice President, General Counsel in September 2015 and therefore her 2015 salary reflects the time she was employed by us.
- (5) Represents a signing bonus paid to Dr. Jonas in accordance with his employment agreement.
- (6) Represents a relocation bonus paid to Dr. Kanes in accordance with his employment agreement.
- (7) Represents a signing bonus paid to Ms. Cook in accordance with her employment agreement.

Grants of Plan-Based Awards

The following table shows information regarding grants of plan-based awards during the fiscal year ended December 31, 2016 to our named executive officers.

| Name and Principal Position Jeffrey M. Jonas, M.D. President and Chief Executive Officer | Grant Date 2/8/16 | Estimated Possible Payouts Under Non-Equity Incentive Plan Awards Target (\$)(1) 243,000 | Estimated Payouts under Equity Incentive Plan Awards Target (#)(2) | All Other Option Awards: Number of Securities Underlying Options (#)(3) 60,000 | of Option Awards | Grant Date Fair Value of Stock and Option Awards(\$)(5) 1,175,332 |
|--|-------------------------|---|--|---|---------------------|--|
| Kimi Iguchi Chief Financial Officer and Treasurer | 2/8/16 | 113,568 | _ | 15,000 | 28.63 | 295,809 |
| Albert Robichaud, Ph.D. Chief Scientific Officer | 2/8/16 | 127,995 | _ | 25,000 | 28.63 | 491,792 |
| Stephen J. Kanes, M.D., Ph.D. Chief Medical Officer | 2/8/16 | 137,637 | _ | 20,000 | 28.63 | 393,753 |
| Anne Marie Cook Senior Vice President, General Counsel | 2/8/16 | 127,293 | 20,000 | 20,000 | 28.63 | 782,993 |

- (1) Represents the target amount of each executive's cash payments under our 2016 annual incentive program as established by the Compensation Committee and described in "Compensation Discussion and Analysis" above. Actual payments made for 2016 are provided in the "Summary Compensation Table."
- (2) Represents performance-based options granted in 2016. 50% of these options vested upon the achievement of a clinical milestone on December 8, 2016. The remaining 50% is eligible to vest upon the achievement of a regulatory milestone not yet achieved.
- (3) Represents options granted in 2016 with time-based vesting of which 25% vested on the first anniversary of the grant date, and the remainder will vest in equal installments over the 36 months following the first anniversary of the grant date.
- (4) The exercise price of these stock options was the closing price of our common stock on NASDAQ on the grant date.
- (5) Amounts represent the grant date fair value of the named executive officer's stock options granted in 2016, calculated in accordance with FASB ASC Topic 718, using a Black-Scholes valuation model. For purposes of these calculations, we have disregarded the estimate of forfeitures related to service-based or performance-based vesting conditions.

Equity compensation

Outstanding equity awards at December 31, 2016

The following table sets forth information concerning the outstanding equity awards held by each of the named executive officers as of December 31, 2016.

| Name | Number of securities underlying unexercised options exercisable(#) | Number of securities underlying unexercised options unexercisable(#) | Equity Incentive Plan Awards: Number of securities underlying unexercised unearned options (#) | Option exercise price(\$) | Option expiration date | Number of shares or units of stock that have not vested (#) | Market value of shares or units of stock that have not vested (\$) |
|------------------|---|---|--|---------------------------------|------------------------------|--|---|
| Jeffrey M. Jonas | 288,059(1) | 116,928 | | \$ 0.45 | 8/12/2023 | _ | _ |
| | $86,250^{(2)}$ | 93,750 | | \$38.25 | 1/23/2025 | _ | _ |
| | 93,600(3) | _ | 50,400 | \$38.25 | 1/23/2025 | _ | _ |
| | (4) | 60,000 | _ | \$28.63 | 2/8/2026 | _ | _ |
| Kimi Iguchi | $4,929^{(5)}$ | 594 | _ | \$ 0.45 | 9/24/2023 | _ | _ |
| | 47,360(6) | 3,432 | | \$ 1.36 | 1/22/2024 | _ | _ |
| | 9,583(7) | 10,417 | _ | \$38.25 | 1/23/2025 | _ | _ |
| | 31,200(8) | _ | 16,800 | \$38.25 | 1/23/2025 | _ | _ |
| | (9) | 15,000 | _ | \$28.63 | 2/8/2026 | _ | _ |
| Albert Robichaud | $925^{(10)}$ | 6,010 | _ | \$ 1.36 | 1/22/2024 | _ | _ |
| | 7,187(11) | 7,813 | _ | \$38.25 | 1/23/2025 | _ | _ |
| | 23,400(12) | _ | 12,600 | \$38.25 | 1/23/2025 | _ | _ |
| | (13) | 25,000 | _ | \$28.63 | 2/8/2026 | _ | _ |
| Stephen J. Kanes | 79,697(14) | 32,403 | _ | \$ 0.45 | 7/23/2023 | _ | _ |
| | 4,629(15) | 2,145 | _ | \$ 1.36 | 1/24/2024 | _ | _ |
| | 9,583(16) | 10,417 | _ | \$38.25 | 1/23/2025 | _ | _ |
| | 31,200(17) | _ | 16,800 | \$38.25 | 1/23/2025 | _ | _ |
| | (18) | 20,000 | _ | \$28.63 | 2/8/2026 | _ | _ |
| Anne Marie Cook | 34,375(19) | 75,625 | _ | \$56.27 | 9/16/2025 | _ | |
| | (20) | 20,000 | | \$28.63 | 2/8/2026 | _ | _ |
| | $10,000^{(21)}$ | _ | 10,000 | \$28.63 | 2/8/2026 | _ | _ |

- (1) Represents an option to purchase shares of our common stock granted on August 12, 2013. The shares underlying these options vest as follows: 25% vested on August 12, 2014, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (2) Represents an option to purchase shares of our common stock granted on January 23, 2015. The shares underlying these options vest as follows: 25% vested on January 23, 2016, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (3) Represents an option to purchase shares of our common stock granted on January 23, 2015. 35% of the shares underlying these options vested upon the achievement of a clinical milestone on August 14, 2015 and 30% of the shares underlying these options vested upon the achievement of a clinical milestone on December 8, 2016. 35% of the shares underlying these options shall vest upon the achievement of a regulatory milestone not yet achieved.
- (4) Represents an option to purchase shares of our common stock granted on February 8, 2016. The shares underlying these options vest as follows: 25% vested on February 8, 2017, with the remainder of the shares vesting in equal monthly installments over the following three years.

- (5) Represents an option to purchase shares of our common stock granted on September 24, 2013. The shares underlying these option vest as follows: 12.5% vested on September 24, 2013, with the remainder of the shares vesting in equal monthly installments over the following 42 months.
- (6) Represents an option to purchase shares of our common stock granted on January 22, 2014. The shares underlying these options vest as follows: 37.5% vested in equal installments over a two year period that commenced three months after the grant date. 37.5% vested monthly commencing one month after the closing of our initial public offering. 25% vest in equal monthly installments over a four-year period that commenced immediately after the grant date.
- (7) Represents an option to purchase shares of our common stock granted on January 23, 2015. The shares underlying these options vest as follows: 25% vested on January 23, 2016, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (8) Represents an option to purchase shares of our common stock granted on January 23, 2015. 35% of the shares underlying these options vested upon the achievement of a clinical milestone on August 14, 2015 and 30% of the shares underlying these options vested upon the achievement of a clinical milestone on December 8, 2016. 35% of the shares underlying these options shall vest upon the achievement of a regulatory performance milestone not yet achieved.
- (9) Represents an option to purchase shares of our common stock granted on February 8, 2016. The shares underlying these options vest as follows: 25% vested on February 8, 2017, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (10) Represents an option to purchase shares of our common stock granted on January 22, 2014. The shares underlying these options vest in equal monthly installments over a four-year period that commenced immediately after the grant date.
- (11) Represents an option to purchase shares of our common stock granted on January 23, 2015. The shares underlying these options vest as follows: 25% vested on January 23, 2016, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (12) Represents an option to purchase shares of our common stock granted on January 23, 2015. 35% of the shares underlying these options vested upon the achievement of a clinical milestone on August 14, 2015 and 30% of the shares underlying these options vested upon the achievement of a clinical milestone on December 8, 2016. 35% of the shares underlying these options shall vest upon the achievement of a regulatory performance milestone not yet achieved.
- (13) Represents an option to purchase shares of our common stock granted on February 8, 2016. The shares underlying these options vest as follows: 25% vested on February 8, 2017, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (14) Represents an option to purchase shares of our common stock granted on July 23, 2013. The shares underlying these options vest as follows: 25% vested on July 18, 2014, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (15) Represents an option to purchase shares of our common stock granted on January 22, 2014. The shares underlying these options vest in equal monthly installments over a four-year period that commenced immediately after the grant date.
- (16) Represents an option to purchase shares of our common stock granted on January 23, 2015. The shares underlying these options vest as follows: 25% vested on January 23, 2016, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (17) Represents an option to purchase shares of our common stock granted on January 23, 2015. 35% of the shares underlying these options vested upon the achievement of a clinical milestone on August 14, 2015 and 30% of the shares underlying these options vested upon the achievement of a clinical milestone on December 8, 2016. 35% of the shares underlying these options shall vest upon the achievement of a regulatory performance milestone not yet achieved.
- (18) Represents an option to purchase shares of our common stock granted on February 8, 2016. The shares underlying these options vest as follows: 25% vested on February 8, 2017, with the remainder of the shares vesting in equal monthly installments over the following three years.

- (19) Represents an option to purchase shares of our common stock granted on September 16, 2015. The shares underlying these options vest as follows: 25% vested on July 18, 2014, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (20) Represents an option to purchase shares of our common stock granted on February 8, 2016. The shares underlying these options vest as follows: 25% vested on February 8, 2017, with the remainder of the shares vesting in equal monthly installments over the following three years.
- (21) Represents an option to purchase shares of our common stock granted on February 8, 2016. 50% of the shares underlying these options vested upon the achievement of a clinical milestone on December 8, 2016. 50% of the shares underlying these options shall vest upon the achievement of a regulatory performance milestone not yet achieved.

Option Exercises and Stock Vested

The following table shows the number of shares acquired upon exercise of stock options and the number of shares that vested under restricted stock awards held by each of our named executive officers during the year ended December 31, 2016.

| | Option Awards | | Stock Awards | |
|-------------------------------|--|---|---|--------------------------------------|
| Name | Number of shares acquired on exercise(#) | Value realized on exercise(\$)(1) | Number of shares acquired on vesting(#) | Value realized on vesting (\$)(2) |
| Jeffrey M. Jonas, M.D. | 20,000 | 918,800 | _ | _ |
| Kimi Iguchi | 4,000 | 183,760 | 16,530 | 632,504 |
| Albert J. Robichaud, Ph.D. | 15,287 | 642.207 | _ | _ |
| Stephen J. Kanes, M.D., Ph.D. | 21,000 | 783,720 | _ | _ |
| Anne Marie Cook | _ | _ | _ | _ |

- (1) Value realized on exercise of stock option awards does not represent proceeds from any sale of any common stock acquired upon exercise, but is determined by multiplying the number of shares acquired upon exercise by the difference between the exercise price of the option and the closing price of our common stock on NASDAQ at each time of exercise.
- (2) Value realized on vesting of restricted stock awards does not represent proceeds from the sale of vested common stock, but is determined by multiplying the number of shares that vested and the closing price of our common stock on NASDAQ on each vesting date.

Employment Agreements with Our Named Executive Officers

We have entered into an employment agreement or letter agreement with each of our named executive officers in connection with their employment with us. Except as noted below, these employment agreements and letter agreements provide for "at will" employment.

We entered into a letter agreement with Dr. Jonas in July 2013, and he assumed the role of Chief Executive Officer in August 2013. The agreement entitled Dr. Jonas to an initial base salary of \$425,000 and eligibility for performance-based variable cash compensation at a target of 40% of his base salary, based upon achievements agreed to between Dr. Jonas and the Board of Directors. Dr. Jonas received a signing bonus, with \$225,000 paid out during his first month of employment and an additional \$125,000 paid on the one year anniversary of his employment. Dr. Jonas was also granted an option to purchase 701,587 shares of our common stock with an exercise price equal to the fair market value of our common stock on the day of the option grant, with one quarter of such option vesting on the one year anniversary of Dr. Jonas' employment and the rest on a monthly basis for three years thereafter. Dr. Jonas received performance-based variable cash compensation of \$315,900 for 2016. As of March 31 2017, Dr. Jonas's base salary is \$600,000 and his performance-based variable cash compensation target is 60%.

We entered into a letter agreement with Ms. Iguchi in February 2013, and she assumed the role of Chief Financial Officer in March 2013. The agreement entitled Ms. Iguchi to an initial base salary of \$275,000. Ms. Iguchi was also granted an option to purchase 250,000 shares of our common stock with an exercise price equal to the fair market value of our common stock on the day of the option grant, with one eighth of such options vesting immediately, and the rest on a monthly basis for four years thereafter. Ms. Iguchi is also eligible for performance-based variable cash compensation up to a percentage of her base salary, based upon attainment of corporate and individual goals, as agreed between Ms. Iguchi and the Chief Executive Officer and as approved by the Compensation Committee. Ms. Iguchi received performance-based variable cash compensation of \$147,638 for 2016. As of March 31, 2017, Ms. Iguchi's base salary is \$356,928 and her performance-based variable cash compensation target is 40%.

We entered into a letter agreement with Dr. Robichaud in September 2011, and he assumed the role of Chief Scientific Officer in November 2011. The agreement entitled Dr. Robichaud to an initial base salary of \$300,000, based upon achievements agreed to between Dr. Robichaud and our Chief Executive Officer. Dr. Robichaud received a signing bonus, with \$65,000 paid out during his first month of employment and an additional \$50,000 paid on the one year anniversary of his employment. Dr. Robichaud was also granted an option to purchase 222,222 shares of our common stock with an exercise price equal to the fair market value of our common stock on the day of the option grant, with one quarter of such options vesting on the one year anniversary of Dr. Robichaud's employment and the rest on a monthly basis for three years thereafter. Dr. Robichaud is eligible for performance-based cash compensation at a target percentage of his base salary, based upon attainment of corporate and individual goals, as agreed between Dr. Robichaud and the Chief Executive Officer and as approved by the Compensation Committee. Dr. Robichaud received performance-based cash compensation of \$166,393 for 2016. As of March 31, 2017, Dr. Robichaud's base salary is \$393,127 and his performance-based cash compensation target is 40%.

We entered into a letter agreement with Dr. Kanes in May 2013, and he assumed the role of Chief Medical Officer in August 2013. The agreement entitled Dr. Kanes to an initial base salary of \$325,000. Dr. Kanes received a signing bonus, with \$65,000 paid out during his first month of employment, and an additional \$65,000 paid on the one year anniversary of his employment. Dr. Kanes was also granted an option to purchase 222,222 shares of our common stock with an exercise price equal to the fair market value of our common stock on the day of the option grant, with one quarter of such option vesting on the one year anniversary of Dr. Kanes' employment and the rest on a monthly basis for three years thereafter. Dr. Kanes is eligible for performance-based variable cash compensation of up to a percentage of his base salary, based upon attainment of corporate and individual goals, as agreed between Dr. Kanes and the Chief Executive Officer and as approved by the Compensation Committee. Dr. Kanes received performance-based variable cash compensation of \$178,929 for 2016. As of March 31, 2017, Dr. Kanes' base salary is \$426,676 and his performance-based variable cash compensation target is 40%.

We entered into a letter agreement with Ms. Cook in August 2015, and she assumed the role of Senior Vice President and General Counsel in September 2015. The agreement entitles Ms. Cook to an initial base salary of \$360,000. Ms. Cook received a signing bonus of \$50,000. Ms. Cook was also granted an option to purchase 110,000 shares of our common stock with an exercise price equal to the fair market value of our common stock on the day of the option grant, with one quarter of such option vesting on the one year anniversary of Ms. Cook's employment and the rest on a monthly basis for three years thereafter. Ms. Cook is also eligible for performance-based variable cash compensation up to a percentage of her base salary, based upon attainment of corporate and individual goals, as agreed between Ms. Cook and the Chief Executive Officer and as approved by the Compensation Committee. Ms. Cook received performance-based variable cash compensation of \$165,481 for 2016. As of March 31, 2017, Ms. Cook's base salary is \$376,423 and her performance-based variable cash compensation target is 40%.

Pension Benefits

None of the named executive officers participate in or have account balances in qualified or non-qualified defined benefit plans sponsored by us as of December 31, 2016, and, as a result, there is not a pension benefits table included in this Proxy Statement.

Nonqualified Deferred Compensation

None of the name executive officers participate in or have account balances in nonqualified defined contribution or nonqualified deferred compensation plans maintained by us as of December 31, 2016, and, as a result, there is not a nonqualified deferred compensation table included in this Proxy Statement.

Payments Provided upon Termination without Cause and Change in Control

We have entered into severance and change in control agreements, or severance agreements, with each of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook. Pursuant to their severance agreements, each of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook is eligible to receive certain payments and benefits in the event that such officer's employment is terminated by us without "cause" (as defined in the applicable severance agreement), or in the event that such officer terminates his or her employment with "good reason" (as defined in the applicable severance agreement).

In the event that Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi or Ms. Cook terminates his or her employment with "good reason" or is terminated without "cause," other than in the event of a change of control, he or she is eligible to receive 12 months of base salary continuation and 12 months of COBRA continuation medical benefits subsidized by us, provided that the terminated executive officer executes, and does not revoke, a separation agreement and release of us and our affiliates.

Pursuant to their severance agreements, in the event that any of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi, or Ms. Cook terminates his or her employment with "good reason" or is terminated without "cause" within the 12 month period following a "change in control" (as defined in the applicable severance agreement), such officer will be eligible to receive a lump-sum cash payment equal to (i) 12 months (in the case of Dr. Jonas) and 9 months (for all others) of the executive's base salary, (ii) a pro rata portion of that individual's target performance-based cash compensation for that fiscal year based on the number of days worked in that fiscal year at the time of termination, and (iii) 12 times the monthly employer health insurance contribution, in the case of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi, or Ms. Cook, provided that in each case, such individual executes and does not revoke a separation agreement and release of us and our affiliates. In addition, all stock options and other stock-based awards with time-based vesting held by such officer shall immediately accelerate and become fully exercisable or nonforfeitable as of the date of termination.

Definitions

For purposes of the severance agreement with each of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook, "cause" means:

- indictment for any felony, any crime involving the Company, or any crime involving fraud, moral turpitude or dishonesty;
- any unauthorized use or disclosure of the Company's proprietary information;
- any intentional misconduct or gross negligence on the officer's part which has a materially adverse effect on the Company's business or reputation; or
- the officer's repeated and willful failure to perform the duties, functions and responsibilities of the officer's position after a written warning from the Company.

For purposes of the severance agreements with each of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook, "good reason" means:

- a material diminution in the officer's responsibilities, authority or duties;
- a material diminution in the officer's base salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;
- a material change, defined as 50 miles or more, in the geographic location at which such officer is required to provide services to the Company, not including business travel and short-term assignments; or
- a material breach of the severance agreement by the Company.

For purposes of the severance agreements with each of Dr. Jonas, Dr. Kanes, Dr. Robichaud, Ms. Iguchi and Ms. Cook, a "change in control" shall be deemed to have occurred upon the occurrence of any one of the following events:

- the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity;
- a merger, reorganization or consolidation pursuant to which the holders of the Company's outstanding voting power and outstanding stock immediately prior to such transaction do not own a majority of the outstanding voting power and outstanding stock or other equity interests of the resulting or successor entity (or its ultimate parent, if applicable) immediately upon completion of such transaction;
- the sale of all of the stock of the Company to an unrelated person, entity or group thereof acting in concert; or
- any other transaction in which the owners of the Company's outstanding voting power immediately
 prior to such transaction do not own at least a majority of the outstanding voting power of the
 Company or any successor entity immediately upon completion of the transaction other than as a result
 of the acquisition of securities directly from the Company.

Estimated Payment and Benefits Upon Termination or Change of Control

The amount of compensation and benefits payable to each named executive officer in various termination and change in control situations has been estimated in the tables below. The value of the option vesting acceleration was calculated for each of the tables below based on the assumption that the change in control and executive's employment termination occurred on December 31, 2016. The closing price of the Company's stock on NASDAQ as of December 30, 2016, the last trading day of 2016, was \$51.06, which was used as the value of the Company's stock in the change in control. The value of the option vesting acceleration was calculated by multiplying the number of unvested option shares subject to vesting acceleration as of December 31, 2016 by the difference between the closing price of the Company's stock as of December 30, 2016 and the exercise price for such unvested option shares.

Dr. Jeffrey Jonas

The following table describes the potential payments and benefits upon employment termination for Jeffrey M. Jonas, M.D., the Company's President and Chief Executive Officer, as if his employment terminated as of December 31, 2016.

| Executive Benefits and Payment upon Termination | Voluntary Resignation not For Good Reason | Voluntary Resignation For Good Reason | Termination by Company not for Cause | Termination By Company for Cause | Upon a Sale Event | Termination by Company without Cause or Voluntary Resignation for Good Reason in Connection with or Following Change in Control |
|--|--|--|--|--|----------------------------|--|
| Compensation: | | | | | | |
| Base salary | _ | \$486,000(1) | \$486,000(1) | _ | _ | \$486,000(2) |
| Cash incentive bonus | _ | _ | _ | _ | _ | \$243,000(3) |
| Stock options unvested and accelerated | _ | _ | _ | _ | _ | \$9,110,088(4) |
| Benefits and Perquisites: | | | | | | |
| Health care continuation | | \$19,746(5) | \$19,746(5) | _ | _ | \$19,746(5) |
| Total | 0 | \$505,746 | \$505,746 | 0 | 0 | \$9,858,834 |

- (1) 12 months of 2016 base salary continuation.
- (2) 12 months of base salary prior to the termination, payable in a lump sum.
- (3) Target bonus for 2016, assuming bonus compensation is fully earned and unpaid.
- (4) Acceleration of 100% of Dr. Jonas's then unvested options.
- (5) Cash payment equal to the COBRA health and dental insurance premiums for Dr. Jonas for 12 months.

Ms. Kimi Iguchi

The following table describes the potential payments and benefits upon employment termination for Kimi Iguchi, the Company's Chief Financial Officer and Treasurer, as if her employment terminated as of December 31, 2016.

| Executive Benefits and Payment upon Termination | Voluntary Resignation not For Good Reason | Voluntary Resignation For Good Reason | Termination by Company not for Cause | Termination By Company for Cause | Upon a Sale Event | Company without Cause or Voluntary Resignation for Good Reason in Connection with or Following Change in Control |
|---|--|--|--|--|----------------------------|--|
| Compensation: | | | | | | |
| Base salary | | \$324,480(1) | \$324,480(1) | _ | _ | \$243,360(2) |
| Cash incentive bonus | | _ | _ | _ | _ | \$113,568(3) |
| Stock options unvested and accelerated | _ | _ | _ | _ | _ | \$885,733(4) |
| Benefits and Perquisites: | | Φ12 040(5) | Φ12 0 40 (5) | | | Φ12 040(7) |
| Health care continuation | _ | \$13,849(5) | \$13,849(5) | _ | _ | \$13,849(5) |
| Total | 0 | \$338,329 | \$338,329 | 0 | 0 | \$1,256,509 |

- (1) 12 months of 2016 base salary continuation.
- (2) 9 months of base salary prior to the termination, payable in a lump sum.
- (3) Target bonus for 2016, assuming bonus compensation is fully earned and unpaid.
- (4) Acceleration of 100% of Ms. Iguchi's then unvested options.
- (5) Cash payment equal to the COBRA health and dental insurance premiums for Ms. Iguchi for 12 months.

Dr. Albert J. Robichaud

The following table describes the potential payments and benefits upon employment termination for Albert J. Robichaud, Ph.D., the Company's Chief Scientific Officer, as if his employment terminated as of December 31, 2016.

Termination by

Tormination by

| Voluntary Resignation not For Good Reason | Voluntary Resignation For Good Reason | Termination by Company not for Cause | Termination By Company for Cause | Upon a Sale Event | Company without Cause or Voluntary Resignation for Good Reason in Connection with or Following Change in Control |
|--|--|--|--|---|---|
| | | | | | |
| | \$365,699(1) | \$365,699(1) | | _ | \$274,274(2) |
| _ | | _ | _ | _ | \$127,995(3) |
| _ | _ | _ | _ | _ | \$1,120,938(4) |
| | ¢10.746(5) | ¢10.746(5) | | | ¢10.746(5) |
| 0 | \$385,445 | \$385,445 | 0 | 0 | \$19,746(5) \$1,542,952 |
| | Resignation not For Good Reason — — — — | Resignation not For Good Reason Resignation For Good Reason — \$365,699(1) — — — — — \$19,746(5) | Resignation not For Good Reason Resignation For Good Reason Termination by Company not for Cause — \$365,699(1) \$365,699(1) — — — — — — — \$19,746(5) \$19,746(5) | Resignation not For Good Reason Resignation by Company not for Cause Termination by Company for Cause — \$365,699(1) \$365,699(1) — — — — — — — — — — — — — — — | Resignation not For Good Reason Resignation by Company not for Cause Termination by Company for Cause Termination By Company for Cause Sale Event — \$365,699(1) \$365,699(1) — — — — — — — — — — — — — — — — — — — — — — — — — — — |

- (1) 12 months of 2016 base salary continuation.
- (2) 9 months of base salary prior to the termination, payable in a lump sum.
- (3) Target bonus for 2016, assuming bonus compensation is fully earned and unpaid.
- (4) Acceleration of 100% of Dr. Robichaud's then unvested options.
- (5) Cash payment equal to the COBRA health and dental insurance premiums for Dr. Robichaud for 12 months.

Dr. Stephen J. Kanes, M.D., Ph.D.

The following table describes the potential payments and benefits upon employment termination for Stephen J. Kanes, M.D., Ph.D., the Company's Chief Medical Officer, as if his employment terminated as of December 31, 2016.

| Executive Benefits and Payment upon Termination | Voluntary Resignation not For Good Reason | Voluntary Resignation For Good Reason | Termination by Company not for Cause | Termination By Company for Cause | Upon a Sale Event | Company without Cause or Voluntary Resignation for Good Reason in Connection with or Following Change in Control |
|---|--|--|--|--|----------------------------|--|
| Compensation: | | | | | | |
| Base salary | _ | \$393,250(1) | \$393,250(1) | _ | _ | \$294,937(2) |
| Cash incentive bonus | _ | | _ | _ | _ | \$137,637(3) |
| Stock options unvested and accelerated Benefits and Perquisites: | _ | _ | _ | _ | | \$2,543,772(4) |
| Health care continuation | | \$19,746(5) | \$19,746(5) | | | \$19,746(5) |
| Total | 0 | \$412,995 | \$412,995 | 0 | 0 | \$2,996,092 |

^{(1) 12} months of 2016 base salary continuation.

^{(2) 9} months of base salary prior to the termination, payable in a lump sum.

⁽³⁾ Target bonus for 2016, assuming bonus compensation is fully earned and unpaid.

⁽⁴⁾ Acceleration of 100% of Dr. Kanes's then unvested options.

⁽⁵⁾ Cash payment equal to the COBRA health and dental insurance premiums for Dr. Kanes for 12 months.

Ms. Anne Marie Cook

The following table describes the potential payments and benefits upon employment termination for Anne Marie Cook, the Company's Senior Vice President, General Counsel, as if her employment terminated as of December 31, 2016.

Termination by

| Executive Benefits and Payment upon Termination | Voluntary Resignation not For Good Reason | Voluntary Resignation For Good Reason | Termination by Company not for Cause | Termination By Company for Cause | Upon a Sale Event | Company without Cause or Voluntary Resignation for Good Reason in Connection with or Following Change in Control |
|--|--|--|--|--|----------------------------|--|
| Compensation: | | | | | | |
| Base salary | _ | \$363,694(1) | \$363,694(1) | _ | _ | \$272,770(2) |
| Cash incentive bonus | _ | _ | _ | _ | _ | \$127,293(3) |
| Stock options unvested and accelerated | _ | _ | _ | _ | _ | \$672,900(4) |
| Benefits and Perquisites: | | | | | | |
| Health care continuation | _ | \$ 7,006(5) | \$7,006(5) | _ | _ | \$7,006(5) |
| Total | 0 | \$370,700 | \$370,700 | 0 | 0 | \$1,079,969 |

- (1) 12 months of 2016 base salary continuation.
- (2) 9 months of base salary prior to the termination, payable in a lump sum.
- (3) Target bonus for 2016, assuming bonus compensation is fully earned and unpaid.
- (4) Acceleration of 100% of Ms. Cook's then unvested options.
- (5) Cash payment equal to the COBRA health and dental insurance premiums for Ms. Cook for 12 months.

Director Compensation

The following table sets forth a summary of the compensation we paid to our nonemployee directors during 2016. Other than as set forth in the table and described in the next sentence or more fully below, we did not pay any cash compensation, reimburse any expense of, make any equity awards or non-equity awards to, or pay any other compensation to any of the nonemployee members of our Board of Directors in 2016. We reimburse nonemployee directors for reasonable travel expenses. Dr. Jonas, our President and Chief Executive Officer, receives no compensation for his service as a director, and, consequently, is not included in this table. The compensation received by Dr. Jonas as an employee during 2016 is presented in the "Summary Compensation Table."

| Name(1) | Fees Earned or Paid in Cash (\$) | Option Awards (\$)(2) | All Other Compensation (\$) | Total (\$) |
|---------------------|--|--------------------------|-----------------------------------|---------------|
| Steven Paul, M.D. | 57,500 | 265,711 | _ | 323,211 |
| Kevin P. Starr | 70,000 | 265,711 | _ | 335,711 |
| Howard Pien | 48,000 | 265,711 | _ | 313,711 |
| James Frates | 55,000 | 265,711 | _ | 320,711 |
| Michael F. Cola | 60,000 | 265,711 | _ | 325,711 |
| Geno Germano(3) | 16,759 | 605,119 | _ | 621,879 |
| Robert T. Nelsen(4) | 8,750 | _ | _ | 8,750 |

⁽¹⁾ The aggregate number of stock option awards outstanding as of December 31, 2016 for the non-employee members of the Board of Directors was: Dr. Paul: 27,844, Mr. Starr: 27,844, Mr. Pien: 51,653, Mr. Frates: 51,653, Mr. Cola: 48,677, Mr. Germano: 20,883 and Mr. Nelsen: 0.

⁽²⁾ Amounts represent the aggregate grant-date fair value of option awards granted to our directors in 2016 computed in accordance with FASB ASC Topic 718. The assumptions used in the valuation of these awards

are consistent with the valuation methodologies specified in the notes to our consolidated financial statements and discussions in "Management's Discussion and Analysis of Financial Condition and Result of Operations." included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 as filed with the SEC. The amounts above reflect our aggregate accounting expense for these awards and do not necessarily correspond to the actual value that will be recognized by the directors.

- (3) Mr. Germano joined our Board of Directors in July 2016.
- (4) Mr. Nelsen resigned from our Board of Directors in March 2016.

In April 2014, our Board of Directors adopted a nonemployee director compensation policy, as amended on March 5, 2015 and on December 15, 2016, that is designed to provide a total compensation package that enables us to attract and retain, on a long-term basis, high caliber nonemployee directors. The March 5, 2015 amendment to our nonemployee director compensation policy added a cash retainer for service on the Science and Technology Committee, prior to which there had been none. The table below shows the cash retainers our directors are eligible to receive under our current nonemployee director compensation policy, as well as the cash retainers our directors were eligible to receive prior to the December 15, 2016 amendment to the policy.

| | prior to December 15, 2016 | as of December 15, 2016 |
|---|----------------------------|-------------------------|
| Board of Directors: | | |
| All nonemployee members | \$35,000 | \$40,000 |
| Additional retainer for Non-Executive Chairman of the Board | \$35,000 | \$40,000 |
| Audit Committee: | | |
| Chairman | \$15,000 | \$15,000 |
| Non-Chairman members | \$ 7,500 | \$ 7,500 |
| Compensation Committee: | | |
| Chairman | \$10,000 | \$10,000 |
| Non-Chairman members | \$ 5,000 | \$ 5,000 |
| Nominating and Corporate Governance Committee: | | |
| Chairman | \$ 7,500 | \$ 7,500 |
| Non-Chairman members | \$ 3,000 | \$ 3,000 |
| Science & Technology Committee:(1)(2) | | |
| Chairman | \$10,000 | \$10,000 |
| Non-Chairman members | \$ 5,000 | \$ 5,000 |

- (1) In 2016, the Board also had a Science and Technology Committee, which consisted of Jeffrey M. Jonas, M.D., Michael F. Cola and Steven Paul, M.D., with Michael F. Cola and Steven Paul, M.D. serving as co-chairs. The Science and Technology Committee was changed to an informal forum in March 2017.
- (2) Annual retainer as of May 5, 2015.

Under the nonemployee director compensation policy, each person who is initially appointed or elected to the Board of Directors will be eligible for an option grant to purchase up to 20,883 shares of our common stock under our stock option plan on the date he or she first becomes a nonemployee director, of which one third of such option will vest on the one year anniversary of the grant date and the rest on a monthly basis for two years thereafter. In addition, on the date of the annual meeting of stockholders, each continuing nonemployee director who has served on the Board of Directors for a minimum of six months will be eligible to receive an annual option grant to purchase up to 14,000 shares of our common stock (13,922 shares prior to December 15, 2016), which will vest in full upon the earlier of the first anniversary of the date of grant or the date of the following annual meeting of stockholders. All of the foregoing options will have an exercise price per share equal to the fair market value of a share of common stock on the date of grant.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding beneficial ownership of our common stock as of March 31, 2017, for: each person known to us to be the beneficial owner of more than five percent of our outstanding common stock; each of our named executive officers; each of our directors and nominees; and all of our directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Except as noted by footnote, and subject to community property laws where applicable, we believe, based on the information provided to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by them.

The table lists applicable percentage ownership based on 37,306,701 shares of our common stock outstanding as of March 31, 2017. The number of shares beneficially owned includes shares of our common stock that each person has the right to acquire within 60 days of March 31, 2017, including upon the exercise of stock options. These stock options shall be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of our common stock owned by such person but shall not be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of our common stock owned by any other person.

| | Shares Ben Owne | |
|--|--------------------|---------|
| Name and Address of Beneficial Owner(1) | Number | Percent |
| 5% Stockholders | | |
| Third Rock Ventures II, L.P.(2) | 1,892,916 | 5.1% |
| Entities Affiliated with Fidelity Investment(3) | 5,575,076 | 14.9% |
| BlackRock, Inc.(4) | 2,836,641 | 7.6% |
| T. Rowe Price Associates, Inc.(5) | 2,558,333 | 6.9% |
| The Vanguard Group(6) | 2,429,516 | 6.5% |
| OppenheimerFunds, Inc.(7) | 1,936,075 | 5.2% |
| Named Executive Officers and Directors | | |
| Jeffrey M. Jonas, M.D.(8) | 680,143 | 1.8% |
| Named Executive Officers | | |
| Albert J. Robichaud, Ph.D.(9) | 198,471 | * |
| Kimi Iguchi(10) | 168,255 | * |
| Stephen J. Kanes, M.D., Ph.D.(11) | 205,302 | * |
| Anne Marie Cook (12) | 62,083 | * |
| Other Directors | | |
| Steven Paul, M.D.(13) | 704,773 | 1.9% |
| Kevin P. Starr(14) | 190,896 | * |
| Howard Pien(15) | 37,731 | * |
| James Frates(16) | 42,731 | * |
| Michael F. Cola(17) | 31,283 | * |
| Geno Germano (18) | 5,801 | * |
| All directors and executive officers as a group (11 persons)(19) | 2,327,469 | 6.1% |

- * Indicates beneficial ownership of less than one percent.
- (1) Unless otherwise indicated, the address for each beneficial owner is c/o Sage Therapeutics, Inc., 215 First Street, Cambridge, Massachusetts 02142.
- (2) The address for Third Rock Ventures II, L.P. ("TRV LP") is 29 Newbury Street, 3rd Floor, Boston, MA 02116. Based solely on a Form 4 filed by Kevin Starr on January 25, 2017, consisting of 1,892,916 shares of common stock. All shares are held directly by TRV LP. Each of Third Rock Ventures II GP, L.P. ("TRV GP"), the general partner of TRV LP, Third Rock Ventures II GP, LLC ("TRV LLC"), the general partner

- of TRV GP, and Mark Levin, Kevin Starr and Robert Tepper, the managers of TRV LLC, may be deemed to have voting and investment power over the shares held of record by TRV LP.
- (3) The address for Fidelity Management & Research Company, or Fidelity, is 245 Summer Street, Boston, Massachusetts 02210. A wholly owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, Fidelity is the beneficial owner of shares of common stock as a result of acting as investment adviser to various investment companies, or Fidelity Funds, registered under Section 8 of the Investment Company Act of 1940. Based solely on a Schedule 13G filed by FMR LLC on February 14, 2017, consists of 5,575,076 shares of common stock held by entities affiliated with FMR LLC. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the. Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B stockholders have entered into a stockholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the stockholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Fidelity Funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees.
- (4) The address of BlackRock Inc. ("BlackRock") is 55 East 52nd Street, New York, NY 10055. BlackRock is the parent holding company of BlackRock (Luxembourg) S.A., BlackRock (Netherlands) B.V., BlackRock Advisors, LLC, BlackRock Asset Management Canada Limited, BlackRock Asset Management Ireland Limited, BlackRock Asset Management Schweiz AG, BlackRock Capital Management, BlackRock Financial Management, Inc., BlackRock Fund Advisors, BlackRock Institutional Trust Company, N.A., BlackRock Investment Management (Australia) Limited, BlackRock Investment Management (UK) Ltd, BlackRock Investment Management, LLC, BlackRock Japan Co Ltd. Based solely on a Schedule 13G filed on January 30, 2017, consisting of 2,836,641 shares of common stock.
- (5) The address of T. Rowe Price Associates, Inc. ("T Rowe") is 100 E. Pratt Street, Baltimore, MD, 21202. Based solely on a Schedule 13G filed on February 7, 2017, consisting of 2,558,333 shares of common stock.
- (6) The address of The Vanguard Group ("Vanguard") is 100 Vanguard Blvd., Malvern, PA 19355. Includes 58,462 shares beneficially owned by Vanguard Fiduciary Trust Company, a wholly-owned subsidiary of Vanguard, and 3,100 shares beneficially owned by Vanguard Investments Australia, Ltd., a wholly-owned subsidiary of Vanguard. Vanguard, Vanguard Fiduciary Trust Company and Vanguard Investments Australia, Ltd. have sole voting power over 60,062 shares, shared voting power over 1,500 shares, sole dispositive power over 2,369,554 shares and shared dispositive power over 59,962 shares Based solely on a Schedule 13G filed on February 9, 2017.
- (7) The address of the OppenheimerFunds, Inc. ("Oppenheimer") is 225 Liberty Street, New York, NY 10281. Based solely on a Schedule 13G filed on February 14, 2017, consisting of 1,936,075 shares of common stock.
- (8) Consists of 101,654 shares of our common stock owned directly, and 578,489 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (9) Consists of 155,273 shares of our common stock owned directly, and 43,198 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (10) Consists of 66,498 shares of our common stock owned directly, and 101,757 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (11) Consists of 47,889 shares of our common stock owned directly, and 157,413 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (12) Consists of 62,083 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (13) Consists of 690,851 shares of our common stock owned directly, and 13,922 shares of our common stock subject to options exercisable within 60 days of March 31, 2017.

- (14) Consists of 176,974 shares of Common Stock owned by Mr. Starr directly, and 13,922 shares of common stock subject to options exercisable within 60 days of March 31, 2017. Does not include shares owned by TRV LP. Investment decisions with respect to the shares held by TRV LP are made by an investment committee at TRV GP comprised of Mark Levin, Kevin Starr, and Bob Tepper. No stockholder, director, officer, manager, member or employee of TRV GP or TRV LLC has beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of any shares held by TRV LP.
- (15) Consists of 37,731 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (16) Consists of 5,000 shares of common stock owned directly, and 37,731 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (17) Consists of 31,283 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (18) Consists of 5,801 shares of common stock subject to options exercisable within 60 days of March 31, 2017.
- (19) Consists of 1,244,139 shares of common stock owned directly, and 1,083,330 shares of common stock subject to options exercisable within 60 days of March 31, 2017.

EXECUTIVE OFFICERS

The following table identifies our executive officers, and sets forth their current positions at Sage and their ages as of April 10, 2017.

| Name | Age | Position |
|-------------------------------|-----|---|
| Jeffrey M. Jonas, M.D. | 64 | President, Chief Executive Officer and Director |
| Stephen J. Kanes, M.D., Ph.D. | 52 | Chief Medical Officer |
| Albert J. Robichaud, Ph.D. | 56 | Chief Scientific Officer |
| Kimi Iguchi | 54 | Chief Financial Officer |
| Thomas D. Anderson | 61 | Chief Commercial Strategy Officer |
| Anne Marie Cook | 55 | Senior Vice President, General Counsel, Secretary |

You should refer to "*Proposal 1: Election of Directors*" above for information about our President and Chief Executive Officer, Jeffrey M. Jonas, M.D. Biographical information for our other executive officers, as of April 10, 2017, is set forth below.

Stephen J. Kanes, M.D., Ph.D. Dr. Kanes has served as our Chief Medical Officer since July 2013. From 2012 to 2013, he served as the Chair of the neuroscience safety knowledge group at AstraZeneca plc, or AstraZeneca. From 2011 to 2013, Dr. Kanes served as the Executive Director—Therapeutic Area Clinical Director for the inflammation, neuroscience and respiratory GMED Division of AstraZeneca. From 2008 to 2012, Dr. Kanes served as the Medical Science Senior Director for the neuroscience established brands and emerging anesthesia Group Product Team and in other positions of increasing responsibility in the Neuroscience Discovery Medicine, early and late development groups of AstraZeneca. From 1999 to 2006, Dr. Kanes served as a practicing psychiatrist. Dr. Kanes was a faculty member in the Psychiatry Department at the University of Pennsylvania School of Medicine, where he continues to serve as an adjunct assistant professor of psychiatry. Dr. Kanes has authored or co-authored more than 30 peer-reviewed publications, and has served as an ad hoc reviewer for the journals Neuropsychopharmacology, American Journal of Medical Genetics, and Biological Psychiatry. Dr. Kanes received his B.A. from the University of Pennsylvania and both his Ph.D. and M.D. from State University of New York—Stony Brook. Dr. Kanes completed his psychiatry residency at Yale-New Haven Medical Center and postdoctoral fellowship at the University of Pennsylvania.

Albert J. Robichaud, Ph.D. Dr. Robichaud has served as our Chief Scientific Officer since November 2011. From 2010 to 2011, he was Vice President of Chemistry and Pharmacokinetic Sciences at Lundbeck, Inc., where he was responsible for the drug discovery, analytical, computational and pharmacokinetics departments focused on

synaptic transmission and neuroinflammation. From 2002 to 2010, Dr. Robichaud was Senior Director and Head of the Neuroscience Discovery Chemistry department of Wyeth Research. During his tenure there, his group successfully delivered more than 15 drug candidates into clinical development in a broad range of neuroscience indications. Dr. Robichaud has co-authored more than 125 manuscripts and abstracts, and is a co-inventor on 45 patents and patent applications. Dr. Robichaud earned a B.S. in chemistry from Rensselaer Polytechnic Institute, a Ph.D. in organic chemistry from the University of California, Irvine and was an American Chemical Society postdoctoral fellow at Colorado State University.

Kimi Iguchi. Ms. Iguchi has served as our Chief Financial Officer since March 2013. From 2011 to 2013, Ms. Iguchi provided financial consulting services to various companies. From 2008 to 2011, Ms. Iguchi served as the Chief Operating Officer, North America for Santhera Pharmaceuticals Holding AG. From 2004 to 2007, Ms. Iguchi held the role of Vice President of Finance at Cyberkinetics Neurotechnology Systems, Inc. From 1998 to 2004, Ms. Iguchi was the Senior Director of Financial Reporting and Analysis at Millennium Pharmaceuticals, Inc., and from 1996 to 1998 was the Senior Manager, External Reporting at Biogen, Inc. From 1987 to 1995, Ms. Iguchi also worked as a business assurance manager at PricewaterhouseCoopers LLP. Ms. Iguchi received her B.A. in chemistry from Drew University and an M.B.A. from Northeastern University.

Thomas D. Anderson. Mr. Anderson has served as our Chief Commercial Strategy Officer since April 2014. From 2004 to 2014, Mr. Anderson served as Senior Vice President, Corporate Strategy and Commercial Assessment at Shire Pharmaceuticals Group where he held positions of increasing responsibility. Prior to that, he was Executive Director, Market Research, Business Information at Janssen Pharmaceutics Inc., President and CEO, Anderson Corporation, President and CEO, Ranir-DCP Corporation, Executive Vice President/COO, Lander Company, Inc. and Product Director, Janssen Pharmaceuticals, Inc. Mr. Anderson received his MBA in finance from Mendoza College of Business Administration at the University of Notre Dame and his B.S. in civil engineering from Lehigh University.

Anne Marie Cook. Ms. Cook has served as our Senior Vice President, General Counsel since September 2015 and corporate Secretary since December 2015. Prior to joining us, she served from December 2011 to September 2015 as Senior Vice President, General Counsel of Aegerion Pharmaceuticals, Inc., a biopharmaceutical company. From December 2008 to December 2011, Ms. Cook was a partner at the law firm Choate Hall & Stewart LLP, where she represented both private and public corporations in the life sciences industry in structuring and negotiating strategic transactions and providing general legal support in connection with the research, development and commercialization of pharmaceutical products. From April 2007 to December 2008, Ms. Cook was a Principal at the law firm Miller Canfield P.L.C. From September 2005 until April 2007, Ms. Cook served as General Counsel and Senior Vice President, Business and Corporate Development, and Secretary of ViaCell, Inc., a biotechnology company. Prior to joining ViaCell, Ms. Cook spent thirteen years at Biogen Idec Inc., most recently as Vice President, Chief Corporate Counsel. Ms. Cook holds a B.S. degree from Tufts University and a J.D. degree from the University of Notre Dame Law School.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

There have been no transactions or series of similar transactions since January 1, 2016, other than compensation arrangements, entered into to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed \$120,000; 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 any of the foregoing persons or any affiliated entity, had or will have a
 direct or indirect material interest.

In connection with the completion of our initial public offering, or IPO, in July 2014, we adopted a related party policy that requires all future transactions between us and any director, executive officer, holder of 5% or more

of any class of our capital stock or any member of the immediate family of, or entities affiliated with, any of them, or any other related persons (as defined in Item 404 of Regulation S-K) or their affiliates, in which the amount involved is equal to or greater than \$120,000, be approved in advance by our Audit Committee. Any request for such a transaction must first be presented to our Audit Committee for review, consideration and approval. In approving or rejecting any such proposal, our Audit Committee is to consider the relevant facts and circumstances available and deemed relevant to the Audit Committee, including, but not limited to, the extent of the related party's interest in the transaction, and whether the transaction is on terms no less favorable to us than terms we could have generally obtained from an unaffiliated third party under the same or similar circumstances.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During 2016, Howard Pien, Steven Paul, M.D. and James Frates served on our Compensation Committee, which was chaired by Howard Pien. As of March, 2017, Michael Cola, Steven Paul, M.D. and James Frates serve on our Compensation Committee, which is chaired by Michael Cola. None of the members of our Compensation Committee has at any time during the last three years been one of our officers or employees or had any relationship requiring disclosure under Item 404 of Regulation S-K. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the Board of Directors or Compensation Committee of any entity that has one or more executive officers serving on our Board of Directors or Compensation Committee.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our officers and directors and persons who beneficially own more than 10% of our outstanding common stock (collectively, "Reporting Persons") to file reports of beneficial ownership and changes in beneficial ownership with the SEC. Reporting Persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. Based solely on our review of copies of such filings we believe that all such persons complied on a timely basis with all Section 16(a) filing requirements during the fiscal year ended December 31, 2016, except that Drs. Kanes, Paul and Robichaud, Messrs. Anderson and Jonas, and Mses. Cook and Iguchi each did not timely file a Form 4 with respect to one transaction due to an administrative error. Additionally, during the fiscal year ended December 31, 2015, Dr. Paul did not timely file a Form 4 with respect to one transaction.

Audit Committee Report

The Audit Committee operates under a written charter approved by the Board of Directors, which provides that its responsibilities include the oversight of the quality of our financial reports and other financial information and its compliance with legal and regulatory requirements; the appointment, compensation, and oversight of our independent registered public accounting firm, PricewaterhouseCoopers LLP, including reviewing their independence; reviewing and approving the planned scope of our annual audit; reviewing and pre-approving any non-audit services that may be performed by PricewaterhouseCoopers LLP; the oversight of our internal audit function; reviewing with management and our independent registered public accounting firm the adequacy of internal financial controls; and reviewing our critical accounting policies and estimates and the application of accounting principles generally accepted in the United States of America.

The Audit Committee oversees our financial reporting process on behalf of the Board of Directors. Management is responsible for our internal controls, financial reporting process, and compliance with laws and regulations and ethical business standards. PricewaterhouseCoopers LLP is responsible for performing an independent audit of our consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). The Audit Committee's main responsibility is to monitor and oversee this process.

The Audit Committee reviewed and discussed our audited financial statements for the fiscal year ended December 31, 2016, with management. The Audit Committee discussed with PricewaterhouseCoopers LLP the matters required to be discussed by Public Company Accounting Oversight Board ("PCAOB") AU380, Communications with Audit Committees, and SEC Regulation S-X Rule 207, Communications with Audit Committees. The Audit Committee has 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 public accounting firm's communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm the independent registered public accounting firm's independence.

The Audit Committee considered any fees paid to PricewaterhouseCoopers LLP for the provision of non-audit related services and does not believe that these fees compromise PricewaterhouseCoopers LLP's independence in performing the audit.

Based on the review and discussions referred to above, the Audit Committee recommended to the Board of Directors that such audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2016, for filing with the SEC.

The information contained in this report shall not be deemed to be (1) "soliciting material," (2) "filed" with the SEC, (3) subject to Regulations 14A or 14C of the Exchange Act, or (4) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

THE AUDIT COMMITTEE

James Frates, Chairman Michael F. Cola Steven Paul, M.D.

HOUSEHOLDING OF PROXY MATERIALS

Some banks, brokers, and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of the Notice of Internet Availability of Proxy Materials, Proxy Statement, and Annual Report to Stockholders for the year ended December 31, 2016, as applicable, is being delivered to multiple stockholders sharing an address unless we have received contrary instructions. We will promptly deliver a separate copy of any of these documents to you if you write to us at 215 First Street, Cambridge, Massachusetts 02142, Attention: Secretary or call us at (617) 299-8380. If you want to receive separate copies of the Notice of Internet Availability of Proxy Materials, Proxy Statement, or Annual Report to Stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address or telephone number.