ACCELERON PHARMA INC Form DEF 14A April 30, 2014

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

SCHEDULE 14A

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

)

Filed by the Registrant $\acute{\mathrm{y}}$

Filed by a Party other than the Registrant o

Check the appropriate box:

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

Acceleron Pharma Inc.

(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

ý No fee required.

- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
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 - (3) Filing Party:
 - (4) Date Filed:

Acceleron Pharma Inc.

128 Sidney Street Cambridge, MA 02139

NOTICE OF 2014 ANNUAL MEETING OF STOCKHOLDERS

The 2014 Annual Meeting of Stockholders of Acceleron Pharma Inc. (the "Company" or "Acceleron") will be held on June 20, 2014, at 11:00 a.m. local time, at Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, MA 02199 for the following purpose of considering two company-sponsored proposals:

1. To elect Jean M. George, Edwin M. Kania and George Golumbeski, Ph.D. as Class I directors, each for a three-year term;

2. To ratify the appointment of Ernst & Young, LLP as the independent registered public accounting firm for the Company for the fiscal year ending December 31, 2014.

We will also consider and act upon any other matters that properly come before the Annual Meeting or any adjournment or postponement thereof.

Our board of directors recommends that you vote "for" each of the nominees for Class I director (proposal no. 1) and "for" ratification of the proposed independent accounting firm (proposal no. 2).

Each outstanding share of the Company's common stock (NASDAQ: XLRN) entitles the holder of record at the close of business on April 21, 2014, to receive notice of and to vote at the Annual Meeting or any adjournment or postponement of the Annual Meeting.

Whether or not you expect to attend the meeting, we urge you to vote your shares by internet, telephone, or by signing, dating and returning the proxy card included in these materials. If you choose to attend the annual meeting, you may still vote your shares in person, even if you have previously voted or returned your proxy by any of the methods described in our proxy statement. If your shares are held in a bank or brokerage account, please refer to the materials provided by your bank or broker for voting instructions.

All stockholders are extended a cordial invitation to attend the meeting.

By Order of the Board of Directors

John L. Knopf, Ph.D. Chief Executive Officer, President and Director May 9, 2014

Acceleron Pharma Inc.

128 Sidney Street Cambridge, MA 02139

PROXY STATEMENT FOR 2014 ANNUAL MEETING OF STOCKHOLDERS To Be Held On Friday, June 20, 2014 at 11:00 am EDT

GENERAL INFORMATION

When are this proxy statement and the accompanying material scheduled to be sent to 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), voting instruction form, are scheduled to be sent to stockholders beginning on May 9, 2014.

Who is soliciting my vote?

The Board of Directors of the Company is soliciting your vote for the 2014 Annual Meeting of Stockholders.

When is the record date for the Annual Meeting?

The Company's Board of Directors has fixed the record date for the Annual Meeting as of the close of business on April 21, 2014.

How many votes can be cast by all stockholders?

A total of 31,450,419 shares of common stock of the Company were outstanding on April 21, 2014 and are entitled to be voted at the meeting. Each share of common stock is entitled to one vote on each matter.

How do I vote?

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

By Internet. You may vote by proxy via the internet at www.proxyvote.com by following the instructions provided on the notice of internet availability of proxy materials or the proxy card.

By Telephone. If you live in the United States or Canada, you may vote by proxy by calling toll-free 1-800-690-6903 and by following the instructions provided on the proxy card. You must have the control number that is on either the notice or the proxy card when voting.

By Mail. Complete and mail your proxy card in the postage prepaid envelope you receive, and return the proxy card to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717. Your proxy will be voted in accordance with your instructions. If you sign and return the enclosed proxy but do not specify how you want your shares voted, they will be voted **FOR** the election of the director nominees named herein to the Company's Board of Directors, and **FOR** the ratification of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2014 and will be voted according to the discretion of the proxy holder named in the proxy card upon any other business that may properly be brought before the meeting and at all adjournments and postponements thereof.

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

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

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

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

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

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

The Board of Directors recommends a vote:

Proposal 1: FOR election of Jean M. George, Edwin M. Kania and George Golumbeski, Ph.D. as Class I directors.

Proposal 2: FOR ratification of selection of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2014.

Who pays the cost for soliciting proxies?

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

Can I change my vote?

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

How is a quorum reached?

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

What vote is required to approve each item?

Directors are elected by a plurality of votes cast. A vote to abstain or a broker non-vote will have no direct effect on the outcome. A majority of votes cast is necessary for ratification of the selection of

Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2014 (Proposal 2). A vote to abstain will have no direct effect on the outcome.

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

Could other matters be decided at the Annual Meeting?

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

What happens if the meeting is postponed or adjourned?

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

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

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

Who should I call if I have any additional questions?

If you hold your shares directly, please call John Quisel, Secretary of the Company, at (617) 649-9200. If your shares are held in street name, please contact the telephone number provided on your voting instruction form or contact your broker or nominee holder directly.

PROPOSAL NO. 1 ELECTION OF DIRECTORS

In accordance with the Company's certificate of incorporation and bylaws, the Board of Directors is divided into three classes of approximately equal size. The members of each class are elected to serve a three-year term with the term of office of each class ending in successive years. Jean M. George, Edwin M. Kania Jr. and George Golumbeski, Ph.D. are the Class I directors whose terms expire at the Company's 2014 Annual Meeting of stockholders and each of Ms. George, Mr. Kania and Dr. Golumbeski has been nominated for and has agreed to stand for re-election to the Board of Directors to serve as a Class I director of the Company for three years and until their successors are duly elected and qualified or until their earlier death, resignation or removal.

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

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE FOR EACH OF THESE NOMINEES FOR CLASS I DIRECTOR

(PROPOSAL 1 ON YOUR PROXY CARD)

DIRECTORS AND CORPORATE GOVERNANCE

BOARD COMPOSITION AND STRUCTURE

Our certificate of incorporation states that our board shall consist of not fewer than three and not more than fifteen members, and the precise number of directors shall be fixed by a resolution of our board. Each director holds office until his or her successor is duly elected and qualified or until his or her death, resignation or removal. Our certificate of incorporation provides that our directors may be removed only for cause by the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of the outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. Any vacancy in the board, including a vacancy that results from an increase in the number of directors, may be filled by a vote of the majority of the directors then in office.

Our certificate of incorporation provides that our board of directors is divided into three classes of directors, with the classes as nearly equal in number as possible. Each of our directors identified below serves in the class indicated. Subject to any earlier resignation or removal in accordance with the terms of our restated certificate of incorporation and bylaws, our Class I directors will serve until the 2014 annual meeting of stockholders; our Class III directors will serve until the 2015 annual meeting of stockholders; and our Class III directors will serve until the 2016 annual meeting of stockholders. Any additional directorships resulting from an increase in the number of directors will be apportioned by our board among the three classes.

Our board of directors is currently comprised of 8 members, with one vacancy in class II resulting from the resignation of Anthony B. Evnin, Ph.D. on February 27, 2014. Below is a list of the names, ages as of March 31, 2014 and classification of the individuals who currently serve as our directors.

Name	Age	Position
Jean M. George	56	Director (Class I)
George Golumbeski, Ph.D.	56	Director (Class I)
Edwin M. Kania, Jr.	56	Director (Class I)
John L. Knopf, Ph.D.	61	Director (Class II); Chief Executive Officer and President
Terrance G. McGuire	58	Director (Class II)
Tom Maniatis, Ph.D.	70	Director (Class III)
Richard F. Pops	52	Director (Class III)
Joseph S. Zakrzewski	51	Director (Class III)
RAPHIES		

DIRECTOR BIOGRAPHIES

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

CLASS I DIRECTOR NOMINEES

Jean M. George has served as a member of our board of directors since 2005. Since 2002, Ms. George has been a Managing Director at Advanced Technology Ventures (ATV), and, concurrently since April 2013, Ms. George has been a Managing Director at LSV Capital Management. She joined ATV in 2002 and serves as the firm's East Coast lead partner for healthcare investments. Prior to joining ATV, Ms. George was a Director at BancBoston Ventures, where she led the health care team's investment activity in NuGenesis Technologies Corp., Microbia, Inc., Syntonix Pharmaceuticals, Inc. and Neurometrix, Inc. Before BancBoston Ventures, she worked at Genzyme Corporation from 1988 to 1998, where she held a variety of operational roles in marketing, product development, and business

development, including Vice President of Global Sales and Marketing. She also worked as a Vice President and Founder of Genzyme's Tissue Repair Division. She is currently a Director of one other public company, Zeltiq Aesthetics, Inc., and several private companies, including Calithera Biosciences, Hydra Biosciences, Inc., Thrasos Therapeutics and Catabasis Pharmaceuticals, Inc. Ms. George was a Director of Hypnion, Inc., Critical Therapeutics, Inc., Portola Pharmaceuticals, Inc. and Proteolix, Inc. She was named a member of the Scientific Advisory Board for the Massachusetts Life Sciences Center. Ms. George received a BS in biology from the University of Maine and an MBA from Simmons College Graduate School of Management. We believe that Ms. George's executive experience in the life sciences and therapeutic device industries qualifies her to serve as a member of our board of directors.

Edwin M. Kania, Jr. has served as a member of our board of directors since 2004. Since 2000, Mr. Kania has been a Managing Partner and the Chairman of Flagship Ventures, a Boston-based venture capital firm that he co-founded and that also manages the Applied Genomic Technology Capital Fund, L.P. (AGTC Fund) as well as funds raised by OneLiberty Ventures. Prior to co-founding Flagship Ventures, Mr. Kania was a Managing Partner at OneLiberty Ventures and its predecessor firm, Morgan Holland Ventures which he joined in 1985. Mr. Kania currently serves on the boards of several private companies. Mr. Kania has also served on the boards of Aspect Medical, EXACT Sciences and other public and private companies. Mr. Kania's direct investment experience covers over 100 companies, and he has been intimately involved in the launch and development of more than a dozen companies as the founding, lead or co-lead investor, and has on occasion assumed operating roles in support of management. Mr. Kania received a BS in physics from Dartmouth College and an MBA from Harvard Business School. We believe that Mr. Kania's extensive experience investing in, guiding and leading start-up and early phase companies qualifies him to serve as a member of our board of directors.

George Golumbeski, Ph.D. has served as a member of our board of directors since 2011. Since 2009, Dr. Golumbeski has been a Senior Vice President of Business Development for Celgene Corporation, where he is responsible for the full array of business development activities, including identification and evaluation of opportunities, structuring and negotiating transactions, in-licensing, M&A, out-licensing, and alliance management. At Celgene, these activities are focused primarily within the therapeutic areas of oncology and inflammation. From 2008 to 2009, Dr. Golumbeski served as the CEO of Nabriva Therapeutics AG. Prior to Nabriva, Dr. Golumbeski served as Vice President of Business Development, Licensing and Strategy for Novartis-Oncology. During his tenure at Novartis, Dr. Golumbeski's group closed a significant number of collaboration agreements which bolstered the development pipeline. Earlier in his career, Dr. Golumbeski held senior positions at Elan Pharmaceuticals and at Schwarz Pharma, where he led the effort to in-license rotigotine and lacosamide (now both approved agents). He currently serves on the board of directors of one other public company, Enanta Pharmaceuticals, Inc. Dr. Golumbeski received a BA in biology from the University of Virginia and a Ph.D. in genetics from the University of Wisconsin-Madison. We believe that Dr. Golumbeski's experience as an officer of other pharmaceutical companies, as well as Dr. Golumbeski's experience in research and development and corporate leadership positions, qualify him to serve as a member of our board of directors.

CURRENT DIRECTORS NOT STANDING FOR ELECTION AT THE ANNUAL MEETING

John L. Knopf, Ph.D. co-founded Acceleron in 2003 and is our Chief Executive Officer and President. Dr. Knopf served on our board of directors from 2003 to 2004, and has served from 2007 to the present. Prior to founding Acceleron, Dr. Knopf served as Site Head of the Wyeth Research facilities in Cambridge, MA and Vice President of Metabolic and Respiratory Disease. Dr. Knopf was an early key scientist at Genetics Institute (GI) from 1982 to 1998, where he participated in the development of pioneering biopharmaceutical products including the first treatment for hemophilia, recombinant factor VIII *Recombinate*® and helped establish GI as a premier biopharmaceutical

company. While at GI, he established a structure-based small molecule discovery group. Dr. Knopf is the author of several key scientific manuscripts in the area of signal transduction, and is named as an inventor of several patents. Dr. Knopf received a BS in biology from SUNY Stonybrook and his Ph.D. in biology at SUNY Buffalo. We believe Dr. Knopf's extensive experience and knowledge of biopharmaceuticals and our company qualifies him to serve as a member of our board of directors.

Tom Maniatis, Ph.D. co-founded Acceleron in 2003 and has served as a member of our board of directors and chair of our Scientific Advisory Board since 2003. Since 2010 he has been a Professor and Chair of the Department of Biochemistry & Molecular Biophysics at the Columbia University College of Physicians and Surgeons. Prior to working at Columbia, Dr. Maniatis was a professor at Harvard University where he studied the mechanisms of transcription and RNA splicing in eukaryotes. Dr. Maniatis currently serves on the board of one private company, Constellation Pharmaceuticals, Inc. Dr. Maniatis is also a co-founder of Genetics Institute and ProScript Inc., where he served on the board of directors. Dr. Maniatis is a member of the U.S. National Academy of Sciences, and has received numerous awards for his research contributions, including the Eli Lilly Research Award in Microbiology and Immunology, the Richard Lounsbery Award for Biology and Medicine from the U.S. and French National Academies of Science, and the 2012 Lasker-Koshland Special Achievement Award in Medical Science. Dr. Maniatis received a BA in biology, an MS in chemistry from the University of Colorado at Boulder, and a Ph.D. in molecular biology from Vanderbilt University. We believe Dr. Maniatis's extensive experience and knowledge of biopharmaceuticals and the biopharmaceutical industry qualify him to serve as a member of our board of directors.

Terrance G. McGuire has served as a member of our board of directors since 2005. Mr. McGuire co-founded Polaris Partners in 1996 and is currently one of their general partners. Prior to starting Polaris Partners, Mr. McGuire spent seven years at Burr, Egan, Deleage & Co., investing in early stage medical and information technology companies. He currently serves on the board of directors of two other public companies, Ironwood Pharmaceuticals and Trevena. He also serves on the boards of several private companies, including Adimab/Arsanis, Alector, Quantum Designs, Arsenal Medical/480 Biomedical, Editas, Iora Health, Life Line Screening, MicroCHIPS, NextCode, Pulmatrix, and SustainX. He has formerly served on the board of directors of Remon Medical Technologies, GlycoFi, Akamai Technologies, Aspect Medical Systems, Cubist Pharmaceuticals, Transform Pharma, and deCODE genetics, among others. Mr. McGuire is the former chairman of the National Venture Capital Association, chairman of the board of the Thayer School of Engineering at Dartmouth College, and a member of the boards of The David H. Koch Institute for Integrative Cancer Research at the Massachusetts Institute of Technology and The Arthur Rock Center for Entrepreneurship at Harvard Business School. Mr. McGuire earned a BS in physics and economics from Hobart College, an MS in engineering from The Thayer School at Dartmouth College, and an MBA from Harvard Business School. We believe that Mr. McGuire's extensive experience as a venture capitalist focused on the biotechnology industry, as well as Mr. McGuire's many years of experience helping companies evolve from the start-up phase to successful public companies qualify him to serve as a member of our board of directors.

Richard F. Pops has served as a member of our board of directors since 2004. Since 2011, Mr. Pops has served as Chief Executive Officer and Chairman of the board of Alkermes plc, the parent company of Alkermes. From 2009 to 2011, Mr. Pops served as Chief Executive Officer and Chairman of the Board of Alkermes, from 2007 to 2009 he served as the Chairman of the board of Alkermes, and from 1991 through 2007 he served as the Chief Executive Officer of Alkermes. Mr. Pops also serves on the board of directors of two other public companies, Neurocrine Biosciences, Inc. and Epizyme Inc., and on the board of directors for the Biotechnology Industry Organization (BIO) and Pharmaceutical Researcher and Manufacturers of America (PhRMA). He has previously served on the board of directors of Sirtris Pharmaceuticals from 2004 to 2008, and CombinatoRx, Inc. from 2001 to 2009. Mr. Pops also served on the board of directors of Reliant Pharmaceuticals, a privately held pharmaceutical company purchased by GlaxoSmithKline in 2007, and on the advisory board of Polaris

Venture Partners. He was a member of the Harvard Medical School Board of Fellows from 2002 through June 2012. Mr. Pops received a BA in economics from Stanford University. We believe that Mr. Pops leadership experience and industry knowledge qualify him to serve as a member of our board of directors.

Joseph S. Zakrzewski has served as a member of our board of directors since 2011. Since 2010 and through 2013, Mr. Zakrzewski had been Chairman and Chief Executive Officer of Amarin Corporation. From 2007 to 2010, Mr. Zakrzewski served as President and Chief Executive Officer of Xcellerex. From 2005 to 2007, Mr. Zakrzewski served as the Chief Operating Officer of Reliant Pharmaceuticals, overseeing the launch of Omacor®, a drug to treat elevated triglyceride levels. From 1988 to 2004, Mr. Zakrzewski served in a variety of positions at Eli Lilly and Company including as Vice President, Corporate Business Development from 2003 through 2004. In addition, Mr. Zakrzewski served as a Venture Partner with OrbiMed in 2010 and 2011. Mr. Zakrzewski also currently serves on the board of directors of two other public companies, Amarin and Insulet Corporation, and has also served on the board of directors of Xcellerex, Azelon/Zelos Therapeutics and Promedior. Mr. Zakrzewski received a BS in Chemical Engineering and an MS in Biochemical Engineering from Drexel University as well as an MBA in Finance from Indiana University. We believe that Mr. Zakrzewski's substantial experience as an executive officer of other pharmaceutical companies, as well as Mr. Zakrzewski's service on boards of directors of other pharmaceutical companies qualify him to serve as a member of our board of directors.

Director Independence

Under NASDAQ Rule 5605, a majority of a listed company's board of directors must be comprised of independent directors. In addition, NASDAQ rules require that, subject to specified exceptions, each member of a listed company's audit committee and compensation committee be independent and satisfy additional independence criteria set forth in Rule 10A-3 and 10C-1, respectively, under the Securities Exchange Act of 1934, or the Exchange Act. Under NASDAQ Rule 5605(a)(2), a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Based upon information requested from and provided by each director concerning their background, employment and affiliations, including family relationships, our board of directors has determined that each of Ms. George and Messrs. Golumbeski, Kania, Maniatis, McGuire, Pops and Zakrzewski, representing seven of our eight directors, is "independent" as that term is defined under NASDAQ Rule 5605(a)(2). Our board of directors also determined that each of the current members of our audit committee and our compensation committee satisfies the independence standards for such committee established by Rule 10A-3 and 10C-1 under the Exchange Act, the SEC rules and the NASDAQ rules, as applicable. In making such determination, our board of directors considered the relationships that each such non-employee director has with our Company and all other facts and circumstances deemed relevant in determining their independence.

The members of our board of directors were elected in compliance with the provisions of a voting agreement among us and our major stockholders. The voting agreement terminated upon the closing of our initial public offering on September 24, 2013, and at present we do not have any contractual obligations regarding the election of our directors. See "Certain Relationships and Related Party Transactions". There are no family relationships among any of our directors or executive officers.

Board Meetings and Attendance

The Board of Directors held five meetings during the year ended December 31, 2013. Each of the directors attended at least seventy-five percent (75%) of the meetings of the Board of Directors and

the committees of the Board of Directors on which he or she served during the year ended December 31, 2013 (in each case, which were held during the period for which he or she was a director and/or a member of the applicable committee).

The non-management directors met in executive session during each of four regularly scheduled Board of Directors meetings during the year ended December 31, 2013.

Board of Directors Leadership Structure

We have not designated a chair or a lead director for our Board of Directors meetings. The independent members of the Board of Directors have periodically reviewed the Board's leadership structure and have determined that Acceleron and our stockholders are well served with this structure.

The Board of Directors' Role in Risk Oversight

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

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

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

BOARD COMMITTEES

The Board of Directors has a standing Audit, Compensation and Nominating and Corporate Governance Committee, each of which is comprised solely of independent directors, and is described more fully below. Each of the Audit, Compensation and Nominating and Corporate Governance Committee operates pursuant to a written charter and each committee reviews and assesses the adequacy of its charter and submits its charter to the Board for approval. The charters for the Audit, Compensation and Nominating and Corporate Governance Committees are all available on our website (www.acceleronpharma.com) under "Investors" at "Corporate Governance."



The following table describes which directors serve on each of the Board of Directors' committees.

Name	Nominating and Corporate Governance Committee	Compensation Committee	Audit Committee
John L. Knopf, Ph.D.			
Jean M. George(1)	X(2)	Х
George Golumbeski, Ph.D.(1)			
Edwin M. Kania, Jr.(1)		2	X(2)
Tom Maniatis, Ph.D.		2	X
Terrance G. McGuire	Х		Х
Richard F. Pops			
Joseph S. Zakrzewski		2	X X(3)

(1)

Sitting for election in Proposal 1.

(2)

Chair of the committee.

(3)

Interim Chair of the Audit Committee. Upon the resignation of Dr. Evnin, Mr. Zakrzewski assumed the position of Interim Chair of the Audit Committee, effective March 6, 2014.

Audit Committee

Our audit committee is composed of Joseph S. Zakrzewski, Jean M. George and Terrance G. McGuire, with Mr. Zakrzewski serving as Interim Chair of the committee after the resignation of Dr. Evnin. Our board of directors has determined that Mr. Zakrzewski, Ms. George, and Mr. McGuire meet the independence requirements of Rule 10A-3 under the Exchange Act and the applicable listing standards of NASDAQ. Our board of directors has determined that Joseph S. Zakrzewski is an "audit committee financial expert" within the meaning of the Securities and Exchange Commission, or SEC, regulations and applicable listing standards of NASDAQ. The audit committee's responsibilities include:

appointing, approving the compensation of, and assessing the qualifications, performance and independence of our independent registered public accounting firm;

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

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

reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;

reviewing the adequacy of our internal control over financial reporting;

establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;

recommending, based upon the audit committee's review and discussions with management and the independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report on Form 10-K;

monitoring our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;

preparing the audit committee report required by the rules of the SEC to be included in our annual proxy statement;

viewing all related party transactions for potential conflict of interest situations and approving all such transactions; and

reviewing and discussing with management and our independent registered public accounting firm our earnings releases and scripts.

During the year ended December 31, 2013, the Audit Committee met six times. The report of the Audit Committee is included in this Proxy Statement under "Report of the Audit Committee."

Compensation Committee

Our compensation committee is composed of Edwin M. Kania, Jr., Tom Maniatis, Ph.D. and Joseph S. Zakrzewski, with Mr. Kania serving as Chair of the committee. Our board of directors has determined that each member of the compensation committee is "independent" as defined under the applicable listing standards of NASDAQ and meets the independence criteria set forth in Rule 10C-1. The compensation committee has the authority to delegate to subcommittees of the compensation committee any of the responsibilities of the full committee. The compensation committee's responsibilities include:

annually reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive officer;

evaluating the performance of our chief executive officer in light of such corporate goals and objectives and determining and approving the compensation of our chief executive officer;

reviewing and approving the compensation of our other executive officers;

appointing, compensating and overseeing the work of any compensation consultant, legal counsel or other advisor retained by the compensation committee;

conducting the independence assessment outlined in NASDAQ rules with respect to any compensation consultant, legal counsel or other advisor retained by the compensation committee;

annually reviewing and reassessing the adequacy of the committee charter in its compliance with the listing requirements of NASDAQ;

reviewing and establishing our overall management compensation, philosophy and policy;

overseeing and administering our equity compensation and other compensatory plans;

reviewing and approving our equity and incentive policies and procedures for the grant of equity-based awards and approving the grant of such equity-based awards;

reviewing and making recommendations to the board of directors with respect to director compensation; and

reviewing and discussing with management the compensation discussion and analysis to be included in our annual proxy statement.

During the year ended December 31, 2013, the Compensation Committee met four times.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee is composed of Jean M. George and Terrance G. McGuire, with Ms. George serving as Chair of the committee. A vacancy exists on the

committee after the resignation of Dr. Evnin. Our board of directors has determined that each member of the nominating and corporate governance committee is "independent" as defined under the applicable listing standards of NASDAQ. The nominating and corporate governance committee's responsibilities include:

developing and recommending to the board of directors criteria for board and committee membership;

establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;

identifying individuals qualified to become members of the board of directors;

recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;

developing and recommending to the board of directors a set of corporate governance principles;

articulating to each director what is expected, including reference to the corporate governance principles and directors' duties and responsibilities;

reviewing and recommending to the board of directors practices and policies with respect to directors;

reviewing and recommending to the board of directors the functions, duties and compositions of the committees of the board of directors;

reviewing and assessing the adequacy of the committee charter and submitting any changes to the board of directors for approval;

consider and report to the board of directors any questions of possible conflicts of interest of board of directors members;

provide for new director orientation and continuing education for existing directors on a periodic basis;

performing an evaluation of the performance of the committee; and

overseeing the evaluation of the board of directors and management.

During the year ended December 31, 2013, the Nominating and Corporate Governance Committee did not meet. The Nominating and Corporate Governance Committee was created in its present form in connection with the Company's public offering of September 19, 2013, and for the remainder of 2013 any responsibilities of the committee were satisfied by the full board of directors.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time during the prior three years been one of our officers or employees. 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. For a description of transactions between us and members of our compensation committee and affiliates of such members, please see "Certain Relationships and Related Party Transactions."

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. Our code of business conduct and ethics is available on our website. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website.

EXECUTIVE OFFICERS

Below is a list of the names, ages as of March 31, 2014 and positions, and a brief account of the business experience of the individuals who serve as our executive officers.

Name	Age	Position
John L. Knopf, Ph.D.	61	Chief Executive Officer and President; Director (Class II)
Kevin F. McLaughlin		Senior Vice President, Chief Financial Officer and
	57	Treasurer
Matthew L. Sherman, M.D.	58	Senior Vice President and Chief Medical Officer
Steven D. Ertel	44	Senior Vice President and Chief Business Officer
Ravindra Kumar, Ph.D.	54	Vice President and Chief Scientific Officer
John D. Quisel, J.D., Ph.D.	42	Vice President, General Counsel and Secretary
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EXECUTIVE OFFICER BIOGRAPHIES

Kevin F. McLaughlin joined Acceleron in November 2010 and is our Senior Vice President, Chief Financial Officer and Treasurer. He most recently served, from 2009 through 2010, as Senior Vice President and Chief Financial Officer of Qteros, Inc. He was a co-founder of Aptius Education, Inc. and from 2007 through 2009 he worked as the Chief Operating Officer and a director. From 1996 through 2007, Mr. McLaughlin held several executive positions with PRAECIS Pharmaceuticals, Inc. He joined PRAECIS as their first Chief Financial Officer where he had responsibility for private financings, partnership financings, the company's initial public offering and subsequent stock offering. Later, Mr. McLaughlin became COO, and then President and CEO, and he served as a member of the board of directors. In this capacity he was responsible for negotiating the sale of the company to GlaxoSmithKline. He began his career in senior financial roles at Prime Computer and Computervision Corporation. Mr. McLaughlin received a BS in business from Northeastern University and an MBA from Babson College.

Matthew L. Sherman, M.D. joined Acceleron in May 2006 and is our Senior Vice President and Chief Medical Officer. Previously, he served as Senior Vice President and Chief Medical Officer at Synta Pharmaceuticals where he was responsible for clinical research, clinical operations, biostatistics, data management, regulatory affairs, quality assurance and program management. Prior to that, Dr. Sherman worked at Genetics Institute and Wyeth Pharmaceuticals in various capacities including Therapeutic Area Director for Oncology. While at Wyeth, Dr. Sherman provided senior oncology and hematology leadership for worldwide clinical development for both small molecule and biologic therapeutics, including the submission and approval of Mylotarg® by the FDA. He has published numerous papers and book chapters in the field of oncology and clinical development and is named as an inventor of several patents. Dr. Sherman is board certified in Medical Oncology and Internal Medicine and held various clinical positions at Harvard Medical School with corresponding hospital appointments at the Dana-Farber Cancer Institute and Brigham and Women's Hospital. Dr. Sherman received an SB in chemistry from the Massachusetts Institute of Technology and an MD from Dartmouth Medical School.

Steven D. Ertel joined Acceleron in January 2006 and is our Senior Vice President and Chief Business Officer. Mr. Ertel established our business development function and currently leads our business development, commercial strategy and program management functions. Mr. Ertel has over 20 years of experience in the biotechnology industry at Vivus, Inc., Genentech, Inc., Biogen Idec, Inc., and Synta. His responsibilities at these companies included program management for preclinical and clinical stage programs, commercial strategy for clinical stage programs, market launch of a novel biologic agent, and business development. Mr. Ertel began his career in the venture capital industry at Oxford Bioscience Partners. Mr. Ertel received a BSE in biomedical engineering from Duke University and an MBA from the Wharton School at the University of Pennsylvania.

Ravindra Kumar, Ph.D. joined Acceleron in March 2004 and is currently our Vice President and Chief Scientific Officer. Dr. Kumar established and currently leads our discovery research. Previously, Dr. Kumar worked for 12 years at Genetics Institute and Wyeth Pharmaceuticals. At Genetics Institute, Dr. Kumar was a key member of the Small Molecule Drug Discovery group and was responsible for cell biology. Following the integration of discovery functions from GI and Wyeth Pharmaceuticals, Dr. Kumar served as Senior Scientist in the Biological Chemistry group. Dr. Kumar is the author of several key scientific manuscripts in the area of protein glycosylation and is named as an inventor of several patents. Dr. Kumar received his BS in chemistry from Rohilkhand University, his MS in chemistry from Meerut University, his Ph.D. from University of New Brunswick and he completed his post-doctoral fellowship at Albert Einstein College of Medicine, in Bronx, NY.

John D. Quisel, J.D., Ph.D. joined Acceleron in October 2006 and is our Vice President and General Counsel and Secretary. Prior to joining us, Dr. Quisel worked at the Boston office of Ropes & Gray LLP and, prior to that, the Boston office of Foley Hoag LLP. In his work at law firms, Dr. Quisel has, through strategic in-licensing and protection of internal research programs, assembled and licensed product and platform focused intellectual property portfolios for numerous biotechnology ventures. Over his entire career, Dr. Quisel's experience spans many aspects of biotechnology law, including the negotiation of intellectual property licenses and product development collaborations, patent prosecution and litigation. Dr. Quisel received an AB in biology from Harvard University, an MS in biology from Stanford University, a Ph.D. in biology from the Massachusetts Institute of Technology and a J.D. from Harvard Law School.

DIRECTOR COMPENSATION

In connection with our initial public offering in 2013, our board of directors adopted a non-employee director compensation policy that is designed to provide a total compensation package that enables us to attract and retain, on a long-term basis, high caliber non-employee directors. Under the policy, all non-employee directors will be paid cash compensation as set forth below:

	Annual Retainer
Board of Directors:	
All non-employee members	\$ 35,000
Additional retainer for Lead Independent Director	\$ 15,000
Audit Committee:	
Chair	\$ 15,000
Non-Chair members	\$ 7,500
Compensation Committee:	
Chair	\$ 10,000
Non-Chair members	\$ 5,000
Nominating and Corporate Governance Committee:	
Chair	\$ 7,500
Non-Chair members	\$ 3,750

Under our non-employee director compensation policy, each person who is initially appointed or elected to the board of directors will be eligible to receive a grant of stock options to purchase 20,000 shares of our common stock under our 2013 Equity Incentive Plan on the date he or she first becomes a non-employee director, which will vest quarterly in equal installments over a three-year period. In addition, each continuing non-employee director will be eligible to receive an annual option grant to purchase 10,000 shares of our common stock, which will vest in full on the first anniversary of the grant date. The options will be granted with an exercise price equal to the fair market value of a share of our common stock on the date of grant. In connection with the completion of our initial public offering in September 2013 and in recognition of new and increased duties of the board, in fiscal year 2013, each board member other than Dr. Golumbeski was granted a stock option to purchase 20,000 shares of our common stock.

The following table sets forth information concerning the compensation earned by our directors during 2013. Dr. Knopf, as an employee-director, and Dr. Golumbeski, pursuant to policy of Celgene Corporation, each receive no additional compensation for service as a director, and, consequently, are not included in this table. The compensation received by Dr. Knopf as an employee during 2013 is included in the "Summary Compensation Table" below.

Name	Fees Paid in Cash (\$)(1)	Option Awards (\$)(2)(3)	Total (\$)
Anthony B. Evnin, Ph.D.	13,438	308,441	321,878
Jean M. George	12,500	308,441	320,941
Edwin M. Kania, Jr.	11,250	308,441	319,691
Tom Maniatis, Ph.D.	25,000	308,441	333,441
Terrance G. McGuire	9,688	308,441	318,128
Richard F. Pops	31,250	308,441	339,691
Joseph S. Zakrzewski	30,625	308,441	339,066

(1)

Amounts represent annual cash compensation for services rendered by each member of the board of directors.

As of December 31, 2013, our directors held the following aggregate number of stock options: Dr. Evnin, 20,000; Ms. George, 20,000; Mr. Kania, 20,000; Mr. McGuire, 20,000; Dr. Maniatis, 47,500; Mr. Pops, 70,000; and Mr. Zakrzewski, 38,750. Dr. Golumbeski did not hold any stock options or other stock awards as of December 31, 2013.

(3)

(2)

Amounts shown reflect the grant date fair value of options awarded during fiscal 2013 determined in accordance with the Financial Accounting Standards Board, Accounting Standards Codification Topic 718, *Compensation Stock Compensation*. These amounts exclude the value of estimated forfeitures.

The following table sets forth as of December 31, 2013, the aggregate number of exercisable and unexercisable option awards outstanding held by our non-employee directors at that time:

	Option Awards			
Name	Exercisable	Unexercisable (#)		
Anthony B. Evnin, Ph.D.	1,667	18,333		
Jean M. George	1,667	18,333		
Edwin M. Kania, Jr.	1,667	18,333		
Tom Maniatis, Ph.D.	26,250	21,250		
Terrance G. McGuire	1,667	18,333		
Richard F. Pops	76,250	22,500		
Joseph S. Zakrzewski	18,855	19,895		

EXECUTIVE COMPENSATION

Overview

The following discussion relates to the compensation of our founder, Chief Executive Officer and President, John L. Knopf, Ph.D., and our two most highly compensated executive officers (other than our chief executive officer), Matthew L. Sherman, M.D., our Chief Medical Officer and Senior Vice President, and John D. Quisel, J.D., Ph.D., our General Counsel, Vice President and Secretary, who are collectively referred to in this Proxy Statement as our named executive officers. Each year, our compensation committee reviews and determines the compensation of our executive officers, including our named executive officers. Our executive compensation program is designed to attract and retain a highly skilled team of key executives and to align the compensation of our executives with the interests of our shareholders by rewarding the achievement of short- and long-term strategic financial goals, which we believe serves to enhance short- and long-term value creation for our shareholders.

Elements of Executive Compensation

The compensation of our named executive officers consists of base salary, annual cash bonuses, equity awards and employee benefits that are made available to all salaried employees. Our named executive officers are also entitled to certain compensation and benefits upon certain terminations of employment and certain change of control transactions pursuant to employment agreements. In addition to the factors discussed below, the compensation committee also considers information from Dr. Knopf, who as our Chief Executive Officer regularly discusses compensation issues with the Chairperson of the compensation committee and meets with the compensation committee to discuss these matters. Dr. Knopf also provides the compensation committee and board of directors with his evaluation of the performance of the named executive officers other than himself.

Base Salaries. Base salaries for our named executive officers are determined based on the scope of each officer's responsibilities along with his respective experience and contributions to the company. Base salaries for our named executive officers are determined annually by our compensation committee, subject to review by our board of directors. When reviewing base salaries for increase, our

compensation committee takes factors into account such as each officer's experience and individual performance, the company's performance as a whole, data from surveys of compensation paid by comparable companies, and general industry conditions, but does not assign any specific weighting to any factor. For fiscal 2013, our board of directors approved a base salary of \$380,662 for Dr. Sherman and \$319,300 for Dr. Quisel, representing an increase of 4.5% and 3.0%, respectively, from the base salary for each such executive in 2012. Dr. Knopf's base salary did not increase in 2013.

Annual Cash Bonuses. Our annual cash bonus program promotes and rewards the achievement of key strategic and business goals. For fiscal 2013, the target annual bonus as a percentage of base salary for each of Dr. Knopf, Dr. Sherman and Dr. Quisel remained at 50%, 30% and 30%, respectively.

At the beginning of fiscal 2013, our compensation committee established corporate performance goals, each having a designated weighting, that included key strategic and financial goals of the company relating to research and the company's clinical pipeline, process development and manufacturing, business development and the achievement of financial objectives. At the end of the 2013 fiscal year, our compensation committee met and evaluated the performance of the company against the specified performance goals. Based on its evaluation, our compensation committee recommended payment of 2013 annual bonuses at the target level for all employees covered under this program and above the target level for members of our management team, including our named executive officers, after considering the outstanding performance of the company performance goals above the target level in fiscal 2013 and the successful completion of important financing activities in fiscal 2013, including the successful completion of our initial public offering. Our board of directors approved the recommendations of our compensation committee and each of Drs. Knopf, Sherman and Quisel received a cash bonus for 2013 equal to \$300,000, \$171,315 and \$143,680, respectively, representing a payment of 75%, 45% and 45%, respectively, of each executive's base salary.

Equity Awards. Our named executive officers participate in our Acceleron Pharma Inc. 2003 Stock Option and Restricted Stock Plan, which we refer to as the "2003 Plan". Our named executive officers also participate in our Acceleron Pharma Inc. 2013 Equity Incentive Plan, which we refer to as the "2013 Equity Incentive Plan". Grants under the 2003 Plan and the 2013 Equity Incentive Plan, including those made to our named executive officers, generally consist of stock option awards subject to time-based vesting. Awards that are subject to time-based vesting generally vest either in quarterly installments over four years or vest as to 25% of the shares subject to the option after one year and thereafter continue to vest in quarterly installments over the following three years, generally subject to continued employment. During fiscal 2013, each of Drs. Knopf, Sherman and Quisel was awarded a stock option under the 2013 Equity Incentive Plan to purchase 110,000, 29,000 and 29,000 shares of our common stock, respectively, in each case vesting in equal quarterly installments over four common stock appreciates after grant. They also encourage retention through the use of time-based vesting. Pursuant to agreements with certain members of senior management, including our named executive officers, a portion of the executive's stock option and restricted stock awards may vest upon certain terminations of employment.

Benefits. We provide modest benefits to our named executive officers. These benefits and perquisites, such as participation in our 401(k) plan and basic health and welfare benefit coverage, are available to all of our eligible employees.

Employment Agreements and Change of Control Agreements. Drs. Knopf, Sherman and Quisel have entered into employment agreements with us that include severance, change of control, and restrictive covenant provisions. We believe that change of control arrangements provide our executives with

security that will likely reduce any reluctance they may have to pursue a change of control transaction that could be in the best interests of our stockholders. We also believe that reasonable severance and change of control benefits are necessary in order to attract and retain high-quality executive officers.

Summary Compensation Table

The following table sets forth information about certain compensation awarded or paid to our named executive officers for the 2013 fiscal year.

Name and Principal Position	Year	Salary (\$)(1)	Option Awards (\$)(2)	Non-Equity Incentive Plan Compensation (\$)(3)	All Other Compensation	Total (\$)
John L. Knopf, Ph.D.	2013	400,000	1,696,423	300,000	237,461(4)	2,633,884
Chief Executive Officer and	2012	400,000	1,355,300	200,000		1,955,300
President						
Matthew L. Sherman, M.D. Chief Medical Officer and Senior Vice President	2013 2012	380,662 364,270	447,239 124,550	171,315 109,281		999,216 598,101
John D. Quisel, J.D., Ph.D . General Counsel, Vice President and Secretary	2013 2012	319,300 310,000	447,239 158,415	143,680 93,000		910,219 561,415

(1)

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

(2)

Amounts shown reflect the grant date fair value of options awarded during each of fiscal 2012 and 2013 determined in accordance with the Financial Accounting Standards Board, Accounting Standards Codification Topic 718, *Compensation Stock Compensation*. These amounts exclude the value of estimated forfeitures. With respect to the performance-based option granted to Dr. Knopf in 2012, the amount included in the table assumes the highest level of performance is achieved.

(3)

Amounts shown reflect the cash bonus amount paid to the named executive officer for each of fiscal 2012 and 2013 that was earned based on company performance.

(4)

Represents income imputed to Dr. Knopf in connection with the forgiveness of the entire principal amount of a promissory note entered into by him and the Company, plus accrued interest. See " Executive Loan" below.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information regarding equity awards held by our named executive officers as of December 31, 2013.

OPTION AWARDS

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 (\$)(5)	Option Expiration Date(6)
John L. Knopf, Ph.D.	12,500(1)		• • • •	0.40	2/2/2015
· • • •	12,500(2)			0.40	3/29/2016
	100,000(2)			1.80	1/31/2017
	262,500(2)			5.08	3/27/2018
	46,876(2)	3,124(2)		5.88	2/4/2020
	65,625(2)			3.88	12/2/2020
	25,000(2)			5.28	12/16/2021
	42,969(2)			5.28	11/13/2022
		37,500(3)		5.28	11/13/2022
		37,500(3)		5.28	11/13/2022
	3,125(4)			5.28	11/13/2022
		110,000(2)		24.11	12/5/2023
Matthew L. Sherman, M.D.	59,766(1) 32,812(2) 35,000(2) 28,125(2) 6,250(2) 6,250(2)	9,375(2) 6,250(2)		0.48 1.80 5.08 3.88 5.28 7.12 24.11	5/31/2016 1/31/2017 3/27/2018 12/2/2020 12/16/2021 12/12/2022 12/5/2023
John D. Quisel, J.D.,					
Ph.D.	27,500(1) 2,500(2) 7,500(2) 12,500(2) 25,000(2) 46,875(2) 9,374(2) 9,375(2) 3,125(2)	15,625(2) 9,376(2) 15,625(2)		0.92 1.80 5.08 5.88 5.88 5.28 5.28 5.28 7.12 24.11	11/15/2016 6/12/2017 3/27/2018 12/17/2018 12/2/2019 12/2/2020 12/16/2021 6/7/2022 12/12/2022 12/5/2023

(1)

Reflects time-based options to purchase shares of our common stock that vested as to 25% of the shares subject to the option on the first anniversary of the vesting commencement date and thereafter vested in equal quarterly installments over the following three years, subject to the executive's continued employment.

(2)

Reflects time-based options to purchase shares of our common stock that vest in equal quarterly installments over four years generally subject to the executive's continued employment.

(3)

Reflects time- and performance-based options granted to Dr. Knopf to purchase shares of our common stock that vest as to 1/12th of the shares subject to the option on the date that is three months from the date on which the company achieves a specified performance condition related either to a financial goal or clinical study milestone and that continue to vest thereafter on a quarterly basis over three years on each three-month anniversary of the initial vesting date. To the extent unvested, the option will fully vest on September 6, 2016, generally subject to Dr. Knopf's continued employment.

(4)

Reflects time- and performance-based options granted to Dr. Knopf to purchase shares of our common stock that vest as to 1/12th of the shares subject to the option on the date that is three months from the date on which the company achieves a specified performance condition related to a financial goal and that continue to vest thereafter on a quarterly basis over three years on each three-month anniversary of the initial vesting date. To the extent unvested, the option will fully vest on September 6, 2016, generally subject to Dr. Knopf's continued employment. On December 5, 2013, our board of directors determined that the performance goal had been met on September 24, 2013. As a result, 1/12th of the shares subject to the stock option vested on December 24, 2013, and the remainder of the shares will vest on each of the subsequent eleven three-month anniversaries of such date.

(5)

The exercise price of the stock options was not less than the fair market value of a share of our common stock on the date of grant, as determined by our board of directors based, in part, on an independent third party valuation with respect to the period prior to our initial public offering. Stock options granted in fiscal 2013 subsequent to us becoming a public company were granted with an exercise price equal to the closing price of a share of our common stock on the date the stock option was granted.

(6)

All stock options have a 10-year term measured from the date of grant.

Retirement Benefits

We do not maintain any qualified or non-qualified defined benefit plans or supplemental executive retirement plans that cover our named executive officers. We offer a tax-qualified retirement plan, which we refer to as our 401(k) plan, to eligible employees, including our named executive officers. Our 401(k) plan permits eligible employees to defer up to 100% of their annual eligible compensation, subject to certain limitations imposed by the Internal Revenue Service. Employees' elective deferrals are immediately fully vested and non-forfeitable under this plan. We may, but are not required to, make discretionary matching contributions and other employeer contributions on behalf of eligible employees under this plan. We made matching contributions on behalf of eligible employees in fiscal year 2013, but made no such contributions on behalf of our named executive officers.

Employment Agreements

We have entered into amended and restated employment agreements with each of Drs. Knopf, Sherman and Quisel, each providing for a 2013 base salary of \$400,000, \$380,662 and \$319,300, respectively, in each case subject to discretionary annual increases and a discretionary bonus based on performance goals in accordance with our annual cash bonus program. Each agreement also provides for certain payments and benefits upon a qualifying termination of the executive's employment and a change of control, as described below.

Change of Control. At the time of the consummation of a change of control, 50%, in the case of Dr. Knopf, and 25%, in the case of Drs. Sherman and Quisel, of any unvested stock options then held by the executive that were granted on or prior to the effective date of the executive's amended and restated employment agreement (referred to as the amendment date) will vest.

Termination of Employment Without Cause or for Good Reason Following a Change of Control. If, within one year after the consummation of a change of control, the executive's employment is terminated by us (or our successor) other than for cause or the executive terminates his employment for good reason (as such terms are defined in the executive's employment agreement): (1) we will pay the executive a lump sum payment equal to the product of 1.5 times, in the case of Dr. Knopf, or one times, in the case of Drs. Sherman and Quisel, (x) the sum of executive's then-current annual base salary plus 100% of the executive's target bonus for the year in which the termination occurs, (2) 100% of any unvested equity and equity-based awards held by the executive at the time of such termination will fully vest, and (3) if the executive elects under COBRA or any successor law to continue participation in our group health and/or dental plans in which the executive was participating prior to such termination, we will pay or, at our option reimburse the executive for, the full premium cost of that participation for 18 months, in the case of Dr. Knopf, or 12 months, in the case of Drs. Sherman and Quisel, following the date the executive's employment terminates or, if earlier, until the date the executive becomes eligible to enroll in such plans of a new employer. We will also pay the executive any base salary earned but not paid and any vacation time accrued but not used, in each case as of the termination date.

Termination of Employment Without Cause or for Good Reason. If the executive's employment is terminated by us other than for cause or the executive terminates his employment for good reason (as such terms are defined in the executive's employment agreement) under circumstances other than as described in the preceding paragraph: (1) we will continue to pay the executive his base salary for a period of 18 months, in the case of Dr. Knopf, or 12 months, in the case of Drs. Sherman and Quisel, in accordance with our payroll policy, (2) any unvested stock option awards the executive holds at the time of such termination of employment that are subject only to time-based vesting and that were granted on or prior to the amendment date will vest to the extent such stock option awards would have otherwise vested over the 12 months, nine months or six months, in the case of each of Dr. Knopf, Dr. Sherman, or Dr. Quisel, respectively, following such termination of employment, and (3) if the executive elects under COBRA or any successor law to continue participation in our group health and/or dental plans in which the executive was participating prior to such termination, we will pay or, at our option reimburse the executive for, the full premium cost of that participation for 18 months, in the case of Dr. Knopf, or 12 months, in the case of Dr. Sherman and Quisel. We will also pay the executive any base salary earned but not paid and any vacation time accrued but not used, in each case as of the termination date.

Termination of Employment Due to Death or Disability. If the executive's employment terminates due to the executive's death or disability, all unvested stock options then held by the executive that were granted on or prior to the amendment date will vest as of the date of termination. In the event of such a termination of employment due to disability, to the extent we do not maintain a disability plan providing for continuation of the executive's base salary for one year following the date of such termination, during this period we will pay the executive, at the time the executive's base salary would otherwise have been paid, an amount equal to the excess of 100% of the executive's base salary over the disability insurance benefits, if any, actually paid to the executive. We will also pay the executive any base salary earned but not paid and any vacation time accrued but not used, in each case as of the termination date.

Severance Subject to Release of Claims and Compliance With Restrictive Covenants. Our obligation to provide the executive with any severance payments or other benefits under the employment agreement is conditioned on the executive signing an effective release of claims in our favor and the executive's continued full performance of his obligations under the Employee Confidentiality, Non-Compete and Proprietary Information Agreement relating to confidentiality, noncompetition and nonsolicitation.

Other Termination of Employment. If the executive's employment is terminated for any reason other than by us without cause, by the executive for good reason, or due to the executive's death or disability, the executive will only be entitled to receive earned but unpaid base salary and any accrued but not used vacation as of the termination date.

280G Gross-up. In the event that a change in ownership or control of the company under Section 280G of the Internal Revenue Code of 1986, as amended, or the Code, and the regulations thereunder, occurs on or before the second anniversary of the amendment date, if any portion of the payments made pursuant to the executive's employment agreement or otherwise constitutes an "excess parachute payment" within the meaning of Section 280G of the Code, we will pay the executive an additional amount that, after the imposition of all taxes with respect to such gross-up payment equals the excise tax with respect to the excess parachute payment. If the change in ownership or control occurs after the second anniversary of the amendment date and any portion of the payments made pursuant to the employment agreement or otherwise constitutes an excess parachute payment, the executive will be entitled to receive an amount of such payments reduced so that no portion of the payments would constitute an excess parachute payment, or the amount otherwise payable to the executive under the employment agreement or otherwise reduced by all applicable taxes, including the excise tax, whichever amount results in the greater amount payable to the executive.

Executive Loan

We and Dr. Knopf were parties to a Secured Promissory Note dated January 28, 2008 and amended on November 13, 2012, pursuant to which we made a loan to Dr. Knopf with a principal balance of \$200,000 and an interest rate of 3.11% per annum. The outstanding balance of \$237,461, including principal and accrued and unpaid interest on the note, was forgiven immediately prior to the public filing of the registration statement in connection with our initial public offering.

Compensation Consultant

As a part of determining compensation for our named executive officers, the compensation committee has engaged Radford, an AON Hewitt Consulting company, as an independent compensation consultant. Radford provides analysis and recommendations to the compensation committee regarding:

trends and emerging topics with respect to executive compensation;

peer group selection for executive compensation benchmarking;

compensation practices for our peer group;

compensation programs for executives and all of our associates; and

stock utilization and related metrics.

When requested, Radford consultants attend meetings of the compensation committee, including executive sessions in which executive compensation issues are discussed. Radford reports to the compensation committee and not to management, although Radford meets with management for purposes of gathering information for its analyses and recommendations.

In determining to engage Radford, the compensation committee considered the independence of Radford, taking into consideration relevant factors, including the absence of other services provided to the Company by Radford, the amount of fees the Company paid to Radford as a percentage of Radford's total revenue, the policies and procedures of Radford that are designed to prevent conflicts of interest, any business or personal relationship of the individual compensation advisors employed by Radford with an executive officer of the Company, any business or personal relationship the individual compensation advisors employed by Radford have with any member of the compensation committee,

and any stock of the Company owned by Radford or the individual compensation advisors employed by Radford. The compensation committee has determined, based on its analysis in light of all relevant factors, including the factors listed above, that the work of Radford and the individual compensation advisors employed by Radford as compensation consultants to the compensation committee has not created any conflicts of interest, and that Radford is independent pursuant to the independence standards set forth in the Nasdaq listing standards promulgated pursuant to Section 10C of the Exchange Act.

DIRECTOR NOMINATIONS AND COMMUNICATION WITH DIRECTORS

Director Nomination Process

The nominating and corporate governance committee recommends, and the board of directors nominates, candidates to stand for election as directors. Stockholders may also nominate persons to be elected as directors. If a stockholder wishes to nominate a person for election as director, he or she must follow the procedures contained in our bylaws and satisfy the requirements of Regulation 14A of the Exchange Act. To nominate a person to stand for election as a director at the annual meeting of stockholders for 2015, a stockholder must provide our Corporate Secretary with timely notice of the nomination. To be timely, the stockholder's notice must be delivered to or mailed and received by us not earlier than the close of business on the 120th day nor later than the close of business on the 90th day prior to the anniversary date of the prior year's annual meeting, except that if the annual meeting is set for a date that is not within 30 days before or after such anniversary date, we must receive the notice not later than the close of business on the tenth day following the day on which we first provide notice or public disclosure of the date of the meeting. The notice must include the following information:

As to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made:

the name and address of the stockholder giving the notice on whose behalf the nomination or proposal is made,

the class and number of shares of stock of the Company that are, directly or indirectly, owned beneficially or of record by the stockholder,

any option, warrant, convertible security, stock appreciation right or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class of shares of stock of the Company or with a value derived in whole or in part from the value of any class of shares of stock of the Company, whether or not such instrument or right shall be subject to settlement in the underlying class or series of capital stock of the Company or otherwise, each, a "Derivative Instrument," directly or indirectly owned beneficially or of record by such stockholder and any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of stock of the Company of the stockholder,

any proxy, contract, arrangement, understanding or relationship pursuant to which such stockholder has a right to vote any securities of the Company,

any proportionate interest in shares of the Company or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder is a general partner or beneficially owns, directly or indirectly, an interest in a general partner,

any performance-related fees (other than an asset-based fee) that such stockholder is entitled to based on any increase or decrease in the value of the shares of stock of the Company or Derivative Instruments,

any other information relating to such stockholder, if any, required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in an election contest pursuant to and in accordance with Section 14(a) of the Securities Act of 1933, or the Act, and the rules and regulations of the Securities and Exchange Commission thereunder,

a representation that the stockholder is a holder of record of the Company entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business or nomination,

a certification as to whether or not the stockholder has complied with all applicable federal, state and other legal requirements in connection with the stockholder's acquisition of shares of capital stock or other securities of the Company and the stockholder's acts or omissions as a stockholder (or beneficial owner of securities) of the Company, and

whether either the stockholder intends to deliver a proxy statement and form of proxy to holders of, in the case of a proposal, at least the percentage of the Company's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the Company's voting shares reasonably believed by such stockholder to be sufficient to elect such nominee or nominees or otherwise to solicit proxies or votes from stockholders in support of such proposal or nomination.

As to each nominee that the stockholder proposes for election or reelection as a director:

all information relating to such nominee that would be required to be disclosed in solicitations of proxies for the election of such nominee as a director pursuant to Regulation 14A under the Act and such nominee's written consent to serve as a director if elected,

a description of all direct and indirect compensation and other material monetary arrangements, agreements or understandings during the past three years, and any other material relationship, if any, between or concerning such stockholder, or any of their respective affiliates or associates, on the one hand, and the proposed nominee or any of his or her affiliates or associates, on the other hand, and

we may require any proposed nominee to furnish such other information as may be reasonably requested by us to determine the eligibility of the proposed nominee to serve as an independent director or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of the nominee.

Each director will be elected by the vote of the plurality of the votes cast by the holders of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

Additional information regarding requirements for stockholder nominations for next year's annual meeting is described in this Proxy Statement under "General Matters" Stockholder Proposals and Nominations."

Contacting the Board of Directors

Stockholders wishing to communicate with our board of directors may do so by writing to the board or to the non-employee members of the board as a group, at:

Acceleron Pharma Inc. 128 Sidney Street Cambridge, MA 02139 Attention: Secretary

The communication must prominently display the legend "BOARD COMMUNICATION" in order to indicate to the Secretary that it is a communication for the board. Upon receiving such a communication, the Secretary will promptly forward the communication to the relevant individual or group to which it is addressed. Certain items that are unrelated to the board's duties and responsibilities may be excluded, such as spam, junk mail and mass mailings, resumes and other forms of job inquiries, surveys and business solicitations or advertisements. The Secretary will not forward any communication determined in his or her good faith belief to be frivolous, unduly hostile, threatening, illegal or similarly unsuitable.

AUDIT COMMITTEE REPORT

The Audit Committee has reviewed the Acceleron audited consolidated financial statements for the year ended December 31, 2013 and has discussed these statements with management and Ernst & Young LLP, or Ernst & Young, the Company's independent registered public accounting firm. Acceleron management is responsible for the preparation of the Company's financial statements and for maintaining an adequate system of disclosure controls and procedures and internal control over financial reporting for that purpose. The independent registered public accounting firm audits the annual consolidated financial statements prepared by management, expresses an opinion as to whether those consolidated financial statements present fairly the consolidated financial position, results of operations and cash flows of Acceleron Pharma Inc. in conformity with U.S. generally accepted accounting principles and discusses any issues they believe should be raised with us. The Audit Committee is responsible for providing independent, objective oversight of the Company's accounting functions and internal controls.

The Audit Committee also received from, and discussed with, Ernst & Young the written disclosures and other communications that the Company's independent registered public accounting firm is required to provide to the Audit Committee, including the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (Communication with Audit Committees), as adopted by the Public Company Accounting Oversight Board, or PCAOB, in Rule 3200T, which we refer to as SAS 61.

Ernst & Young also provided the Audit Committee with the written disclosures and the letter required by Rule 3526 of the PCAOB. PCAOB Rule 3526 requires independent registered public accounting firms annually to disclose in writing all relationships that in their professional opinion may reasonably be thought to bear on independence, to confirm their perceived independence and engage in a discussion of independence. The Audit Committee has reviewed this disclosure and has discussed with Ernst & Young their independence from Acceleron.

Based on its discussions with management and our independent registered public accounting firm, and its review of the representations and information provided by management and our independent registered public accounting firm, the Audit Committee recommended to the Board of Directors that the audited consolidated financial statements be included in the Acceleron Annual Report on Form 10-K for the year ended December 31, 2013, for filing with the Securities and Exchange Commission.

Respectfully submitted by the Audit Committee,

Joseph S. Zakrzewski, Interim Chair Jean M. George Terrance G. McGuire

PROPOSAL NO. 2 RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We are asking our stockholders to ratify the Audit Committee's selection of Ernst & Young LLP, or Ernst & Young, as our independent registered public accounting firm for the fiscal year ending December 31, 2014. Ernst & Young has served as our independent registered public accounting firm since 2006.

The audit committee annually reviews the independent registered public accounting firm's independence, including reviewing all relationships between the independent registered public accounting firm and us and any disclosed relationships or services that may impact the objectivity and independence of the independent registered public accounting firm, and the independent registered public accounting firm's performance. Although ratification is not required by our bylaws or otherwise, the Board of Directors is submitting the selection of Ernst & Young to our stockholders for ratification as a matter of good corporate practice. If the selection is not ratified, the Audit Committee will consider whether it is appropriate to select another independent registered public accounting firm at any time during the year if the committee determines that such a change would be in the best interests of the Company and our stockholders.

We expect that a representative of Ernst & Young will attend the Annual Meeting and the representative will have an opportunity to make a statement if he or she so chooses. The representative will also be available to respond to appropriate questions from stockholders.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Registered Public Accounting Firm

The Audit Committee pre-approves all auditing services, internal control related services and permitted non-audit services (including the fees and terms thereof) to be performed by Ernst & Young, subject to the de minimis exception for non-audit services that are approved by the Audit Committee prior to the completion of an audit. The Audit Committee may delegate pre-approval authority to one or more members of the Audit Committee consistent with applicable law and listing standards, provided that the decisions of such Audit Committee member or members must be presented to the full audit committee at its next scheduled meeting.

Principal Accountant Fees and Services

We regularly review the services and fees of our independent accountants. These services and fees are also reviewed by the Audit Committee on an annual basis. The aggregate fees billed for the fiscal years ended December 31, 2013 and 2012 for each of the following categories of services are as follows:

Fee Category	2012	2013
Audit Fees	\$ 145,000	\$ 1,144,055
Audit Related Fees	\$	\$
Tax Fees	\$ 31,935	\$ 45,215
All Other Fees	\$	\$
Total Fees	\$ 176,935	\$ 1,189,270

Audit Fees. Consist of aggregate fees for professional services provided in connection with the annual audit of our consolidated financial statements, the review of our quarterly condensed consolidated financial statements, consultations on accounting matters directly related to the audit, and comfort letters, consents and assistance with and review of documents filed with the SEC.

Audit-Related Fees. Consist of aggregate fees for accounting consultations and other services that were reasonably related to the performance of audits or reviews of our consolidated financial statements and were not reported above under "Audit Fees". There were no audit-related fees for the years ended December 31, 2012 or 2013.

Tax Fees. Consist of aggregate fees for tax compliance, tax advice and tax planning services including the review and preparation of our federal and state income tax returns.

All Other Fees. Consist of aggregate fees billed for products and services provided by the independent registered public accounting firm other than those disclosed above. There were no other fees for the years ended December 31, 2012 or 2013.

The Audit Committee pre-approved all services performed since the pre-approval policy was adopted.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE FOR THE RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG AS THE COMPANY'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM.

(PROPOSAL 2 ON YOUR PROXY CARD)

BENEFICIAL OWNERSHIP OF COMMON STOCK

The following table sets forth certain information as of March 31, 2014 (unless otherwise specified), with respect to the beneficial ownership of our common stock by each person who is known to own beneficially more than 5% of the outstanding shares of common stock, each person currently serving as a director, each nominee for director, each named executive officer (as set forth in the Summary Compensation Table above), and all directors and executive officers as a group.

Shares of common stock subject to options, restricted stock units or other rights to purchase which are now exercisable or are exercisable within 60 days after March 31, 2014 are to be considered outstanding for purposes of computing the percentage ownership of the persons holding these options or other rights but are not to be considered outstanding for the purpose of computing the percentage ownership of any other person. As of March 31, 2014, there were 31,339,135 shares of common stock outstanding. Unless otherwise indicated, the address for each beneficial owner is c/o John Quisel, 128 Sidney Street, Cambridge, MA 02139.

Name and address of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned
5% or greater stockholders:	•	·
Polaris Venture Partners, and related funds(1)	3,317,136	10.5%
1000 Winter Street, Suite 3350		
Waltham, MA 02451		
Venrock Partners, and related funds(2)	2,622,435	8.3%
55 Cambridge Parkway, Suite 100		
Cambridge, MA 02142		
Advanced Technology Ventures, and related funds(3)	2,662,092	8.5%
500 Boylston Street, Suite 1380		
Boston, MA 02116		
Celgene Corporation(4)	3,511,866	11.2%
86 Morris Avenue		
Summit, NJ 07901		
Flagship Ventures(5)	2,276,479	7.3%
1 Memorial Drive		
Cambridge, MA 02142		
OrbiMed Advisors LLC(6)	2,272,819	7.2%
601 Lexington Avenue, 54th Floor		
New York, NY 10022		
FMR LLC	1,803,400	5.8%
245 Summer Street		
Boston, MA 02210		
Directors and named executive officers:	0.01 /0.5	
John L. Knopf, Ph.D.(7)	821,407	2.6%
Jean M. George(8)	2,665,425	8.5%
George Golumbeski, Ph.D.		
Edwin M. Kania, Jr.(9)	2,284,679	7.3%
Terrance G. McGuire(10)	3,320,469	10.5%
Tom Maniatis, Ph.D.(11)	294,077	*
Richard F. Pops(12)	78,958	*
Joseph S. Zakrzewski(13)	22,083	*
Matthew L. Sherman, M.D.(14)	232,126	*
John Quisel, J.D., Ph.D.(15)	152,983	*
All executive officers and directors as a group (13 persons)(16)	13,079,878	39.8%

*

Represents beneficial ownership of less than one percent of our outstanding common stock.

Consists of (i) 3,077,388 shares of common stock and warrants to purchase 180,518 shares of common stock held by Polaris Venture Partners IV, L.P. and (ii) 55,846 shares of common stock and warrants to purchase 3,384 shares of common stock held by Polaris Venture Partners Entrepreneurs' Fund IV, L.P. (together with Polaris Venture Partners IV, L.P., the Polaris Funds). North Star Venture Management 2000, LLC directly or indirectly provides investment advisory services to various venture capital funds, including the Polaris Funds. Each of the Polaris Funds has the sole voting and investment power with respect to the shares of the Company directly held by the applicable Polaris Fund. The respective general partners of the Polaris Funds may be deemed to have sole voting and investment power with respect to the shares held by such funds. The respective general partners disclaim beneficial ownership of all the shares held by the Polaris Funds except to the extent of their proportionate pecuniary interests therein. The members of North Star Venture Management 2000, LLC (the Polaris Management Members) are also members of Polaris Venture Management Co., IV, L.L.C. (the general partner of each of the Polaris Funds). As members of the general partner and North Star Venture Management 2000, LLC, the Polaris Management Members may be deemed to share voting and investment powers for the shares held by the Polaris Funds. The Polaris Management Members disclaim beneficial ownership of all such shares held by the funds except to the extent of their proportionate pecuniary interests therein. Mr. Terrance G. McGuire, a director of the Company, has an assignee interest in Polaris Venture Management Co. IV, L.L.C. To the extent that he is deemed to share voting and investment powers with respect to the shares held by the Polaris Funds, Mr. McGuire disclaims beneficial ownership of all the shares held by the funds except to the extent of his proportionate pecuniary interest therein.

(2)

(1)

Consists of (i) 414,360 shares of common stock and warrants to purchase 20,963 shares of common stock held by Venrock Partners, L.P. (Venrock Partners), (ii) 2,032,352 shares of common stock and warrants to purchase 102,795 shares of common stock held by Venrock Associates IV, L.P. (Venrock IV) and (iii) 49,440 shares of common stock and warrants to purchase 2,525 shares of common stock held by Venrock Entrepreneurs Fund IV, L.P. (Venrock Entrepreneurs, and together with Venrock Partners and Venrock IV, the Venrock Entities). The sole general partner of Venrock IV is Venrock Management IV, LLC (VM4). The sole general partner of Venrock Partners is Venrock Partners Management, LLC (VPM). The sole general partner of Venrock Entrepreneurs is VEF Management IV, LLC (VEFM4). VM4, VPM and VEFM4 disclaim beneficial ownership over all shares held by the Venrock Entities, except to the extent of their indirect pecuniary interests therein.

(3)

Consists of (i) 2,018,586 shares of common stock and warrants to purchase 119,322 shares of common stock held by Advanced Technology Ventures VII, L.P. (ATV VII), (ii) 81,002 shares of common stock and warrants to purchase 4,788 shares of common stock held by Advanced Technology Ventures VII (B), L.P. (ATV VII-B), (iii) 38,934 shares of common stock and warrants to purchase 2,301 shares of common stock held by Advanced Technology Ventures VII (C), L.P. (ATV VII-C), (iv) 12,025 shares of common stock and warrants to purchase 711 shares of common stock held by ATV Entrepreneurs VII, L.P. (ATV VII-E), (v) 337,565 shares of common stock and warrants to purchase 19,916 shares of common stock held by Advanced Technology Ventures VI, L.P. (ATV VI), (vi) 21,543 shares of common stock and warrants to purchase 1,271 shares of common stock held by ATV Entrepreneurs VI, L.P. (ATV VI-E) and (vii) 4,128 shares of common stock held by ATV Alliance 2003, L.P. (ATV A 2003). ATV Associates VII, L.L.C (ATV A VII) is the general partner of ATV VII, ATV VII-B, ATV VII-C and ATV VII-E and exercises voting and dispositive authority over the shares held by ATV VII, ATV VII-B, ATV VII-C and ATV VII-E. Voting and dispositive decisions of ATV A VII are made collectively by Michael A. Carusi, Jean M. George (one of our directors), Steven N. Baloff, Robert C. Hower and William C. Wiberg (collectively, the ATV A VII Managing Directors). ATV A VII and each of the ATV A VII Managing Directors disclaim beneficial ownership of the shares held by ATV VII, ATV VII-B, ATV VII-C and ATV VII-E except to the extent of their pecuniary interest therein. ATV Associates VI, L.L.C (ATV A VI) is the general partner of ATV VI and ATV VI-E and exercises voting and dispositive authority over the shares held by ATV VI and ATV VI-E. Voting and dispositive decisions of ATV A VI are made collectively by Michael A. Carusi, Steven N.

Baloff, Pieter J. Schiller, Robert C. Hower and William C. Wiberg (collectively, the ATV A VI Managing Directors). ATV A VI and each of the ATV A VI Managing Directors disclaim beneficial ownership of the shares held by ATV VI and ATV VI-E except to the extent of their pecuniary interest therein. ATV Alliance Associates, L.L.C. (ATV Alliance, LLC) is the general partner of ATV A 2003 and exercises voting and dispositive authority over the shares held by ATV A 2003. Voting and dispositive decisions of ATV Alliance, LLC are made by Jean M. George (one of our directors). ATV Alliance, LLC and Jean M. George disclaim beneficial ownership of the shares held by ATV A 2003 except to the extent of their pecuniary interest therein.

(4)

Includes 38,979 shares of common stock that can be acquired upon the exercise of warrants to purchase shares of our common stock.

(5)

Consists of (i) 2,146,720 shares of common stock held by Applied Genomic Technology Capital Fund, L.P. (AGTC Fund) and (ii) 129,759 shares of common stock held by AGTC Advisors Fund, L.P. (AGTC). NewcoGen Group, Inc., or NewcoGen Inc., is the general partner of AGTC Partners, L.P., which is the general partner of each of AGTC and AGTC Fund. NewcoGen Inc. is a wholly-owned subsidiary of Flagship Ventures Management, Inc. Noubar B. Afeyan, Ph.D. and Edwin M. Kania, Jr. are the directors of Flagship Ventures Management, Inc. and may be deemed to have beneficial ownership with respect to all shares held by AGTC and AGTC Fund. Mr. Kania, one of our directors, and Dr. Afeyan disclaim beneficial ownership over shares held by AGTC and AGTC Fund except to the extent of their pecuniary interest therein.

(6)

Consists of (i) 509,989 shares of common stock and warrants to purchase 33,229 shares of common stock held by OrbiMed Private Investments II, LP (OPI II), (ii) 1,362,080 shares of common stock and warrants to purchase 88,749 shares of common stock held by OrbiMed Private Investments II (QP), LP (OPI QP), (iii) 178,679 shares of common stock and warrants to purchase 24,151 shares of common stock held by OPI QP. OrbiMed Advisors LLC, or OrbiMed, a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the managing member of OrbiMed Capital GP II LLC, which is the general partner of OPI II and OPI QP (collectively, the OrbiMed Funds). Mr. Samuel D. Isaly is the managing member of and owner of a controlling interest in OrbiMed. Accordingly, OrbiMed and Mr. Isaly may be deemed to have voting and investment power over the shares held by OrbiMed Funds noted above. OrbiMed and Mr. Isaly disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.

(7)

Includes 601,407 shares of common stock that can be acquired upon the exercise of outstanding options.

(8)

Consists of shares held by the ATV Entities. By virtue of the relationships described in footnote 3 above, Ms. George may be deemed to share beneficial ownership in the shares held by the ATV Entities. Ms. George disclaims beneficial ownership of the shares referred to in footnote 3 above. Includes 3,333 shares of common stock that can be acquired upon the exercise of outstanding options.

(9)

Consists of shares held by AGTC or AGTC Fund. By virtue of the relationships described in footnote 5 above, Mr. Kania may be deemed to share beneficial ownership in the shares held by AGTC or AGTC Fund. Mr. Kania disclaims beneficial ownership of the shares referred to in footnote 5 above. Includes 3,333 shares of common stock that can be acquired upon the exercise of outstanding options.

(10)

Consists of shares held by Polaris Venture Partners or related funds. By virtue of the relationships described in footnote 1 above, Mr. McGuire may be deemed to share beneficial ownership in the shares held by Polaris Venture Partners or related funds. Mr. McGuire disclaims beneficial ownership of the shares referred to in footnote 1 above. Includes 3,333 shares of common stock that can be acquired upon the exercise of outstanding options.

(11)

Includes 28,646 shares of common stock that can be acquired upon the exercise of outstanding options.

(12)	Includes 50,208 shares of common stock that can be acquired upon the exercise of outstanding options.
(13)	Includes 22,083 shares of common stock that can be acquired upon the exercise of outstanding options.
(14)	Includes 174,704 shares of common stock that can be acquired upon the exercise of outstanding options.
(15)	Includes 152,983 shares of common stock that can be acquired upon the exercise of outstanding options.
(16)	Includes 1,549,720 shares of common stock that can be acquired upon the exercise of outstanding options.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions, since January 1, 2013, to which we have been a party, in which the amount involved exceeded or will exceed \$120,000, and in which any related person had a direct or indirect material interest.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers. These agreements will require us to indemnify these individuals and, in certain cases, affiliates of such individuals, to the fullest extent permissible under Delaware law against liabilities that may arise by reason of their service to us or at our direction, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

Registration Rights Agreement

In connection with our Series F preferred stock financing, on December 22, 2011, we entered into an amended and restated registration rights agreement with the holders of all of our then-outstanding shares of preferred stock including certain of our named executive officers and entities with which certain of our directors are affiliated. The agreement provides that these holders, for so long as they may hold registrable securities, as defined in the agreement, have the right to demand that we file a registration statement with respect to the common stock issued upon conversion of our preferred stock. These holders may also request that shares of common stock held by them be included in certain registration statements that we are otherwise filing.

Right of First Refusal and Co-Sale Agreement

In connection with our Series F preferred stock financing, on December 22, 2011, we entered into an amended and restated right of first refusal and co-sale agreement with the holders of all of our then-outstanding shares of preferred stock including certain of our named executive officers and entities with which certain of our directors are affiliated. Pursuant to the terms of this agreement, in the event of a proposed sale of shares of our common or preferred stock, the seller was required to first offer such shares to the company and to the other investors, subject to certain conditions and restrictions. This agreement terminated upon the completion of our initial public offering on September 24, 2013.

Voting Agreement

In connection with our Series F preferred stock financing on December 22, 2011, we entered into an amended and restated voting agreement with the holders of all of our then-outstanding shares of preferred stock including certain of our named executive officers and entities with which certain of our

directors are affiliated, with respect to the election of directors and certain other matters. All of our current directors were elected pursuant to the terms of this agreement. This agreement terminated upon the completion of our initial public offering on September 24, 2013.

Investor Rights Agreement

In connection with our Series F preferred stock financing, on December 22, 2011, we entered into an amended and restated investor rights agreement with the holders of all of our then-outstanding shares of preferred stock including certain of our named executive officers and entities with which certain of our directors are affiliated. Pursuant to the terms of this agreement, we granted our investors certain information rights as well as the right to participate pro rata in any future private financing rounds. This agreement terminated upon the completion of our initial public offering on September 24, 2013.

Transactions with Our Executive Officers, Directors and 5% Stockholders

On March 13, 2013, we repurchased shares of our common and preferred stock, as well as warrants to purchase shares of our common stock, from UBS Juniper Crossover Fund, LLC, an affiliate of OrbiMed Advisors, for \$300,000 in aggregate.

On January 28, 2008, we entered into a secured promissory note with our chief executive officer, which was amended on November 13, 2012, with a principal balance of \$200,000 and an interest rate of 3.11% per annum. The note was secured by a pledge of shares of the company's stock under a pledge agreement dated January 28, 2008. The terms of the note provided that it would mature on January 28, 2014, or be forgiven upon the occurrence of certain corporate events, including the filing of a registration statement with the SEC. The outstanding principal balance and accrued and unpaid interest on the note was forgiven on August 7, 2013. See "Executive Compensation Executive Loan".

Related Person Transactions Policy

We have adopted a related person transaction approval policy that governs the review of related person transactions. Pursuant to this policy, if we want to enter into a transaction with a related person or an affiliate of a related person, our General Counsel will review the proposed transaction to determine, based on applicable NASDAQ and SEC rules, if such transaction requires pre-approval by the audit committee and/or board of directors. If pre-approval is required, such matters will be reviewed at the next regular or special audit committee and/or board of directors meeting. We may not enter into a related person transaction unless our General Counsel has either specifically confirmed in writing that no further reviews are necessary or that all requisite corporate reviews have been obtained.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our executive officers and directors and persons who own more than 10% of a registered class of our equity securities to file initial reports of ownership and reports of changes in ownership with the SEC. Such persons are required by regulation of the SEC to furnish us with copies of all Section 16(a) forms they file. Based solely on our review of the copies of such forms or written representations from certain reporting persons received by us with respect to fiscal year 2013, we believe that our executive officers and directors and persons who own more than 10% of a registered class of our equity securities have complied with all applicable filing requirements.



GENERAL MATTERS

Code of Business Conduct and Ethics and Corporate Governance Guidelines

Acceleron has adopted a Code of Business Conduct and Ethics for its directors, officers and employees, including its Chief Executive Officer and President and Chief Operating Officer. A copy of the Company's Code of Business Conduct and Ethics may be accessed free of charge by visiting the Company's website at *www.acceleronpharma.com* and going to the "Investors Corporate Governance" section or by requesting a copy in writing from John Quisel, Secretary, at our Cambridge, Massachusetts office. Acceleron intends to post on its website any amendment to, or waiver under, a provision of the Code of Business Conduct and Ethics that applies to certain of its executive officers within four business days following the date of such amendment or waiver.

A copy of the Corporate Governance Guidelines may also be accessed free of charge by visiting the website at *www.acceleronpharma.com* and going to the "Investors Corporate Governance" section or by requesting a copy from John Quisel, Secretary, at our Cambridge, Massachusetts office.

Availability of Certain Documents

A copy of our 2013 Annual Report on Form 10-K has been posted on the internet along with this Proxy Statement. We will mail without charge, upon written request, a copy of our 2013 Annual Report on Form 10-K excluding exhibits. Please send a written request to our Corporate Secretary at:

Acceleron Pharma Inc. 128 Sidney Street Cambridge, MA 02139 Attention: Secretary

Only one copy of this proxy statement is being delivered to multiple stockholders sharing an address, unless we have received contrary instructions from one or more of the stockholders. We will undertake to deliver promptly, upon written or oral request, a separate copy to a stockholder at a shared address to which a single copy of the proxy statement was delivered. You may make a written or oral request by sending a written notification to our Secretary at the address above, providing your name, your shared address, and the address to which we should direct the additional copy of the proxy statement. Multiple stockholders sharing an address who have received one copy of the proxy statement and would prefer us to mail each stockholder a separate copy of future mailings should contact us at our principal executive offices. Additionally, if current stockholders with a shared address, notification of that request may also be made through our principal executive offices.

Stockholder Proposals and Nominations

Requirements for Stockholder Proposals to be Considered for Inclusion in our Proxy Materials. To be considered for inclusion in next year's proxy statement, stockholder proposals must be received by our Secretary at our principal executive offices no later than the close of business on January 9, 2015.

Requirements for Stockholder Proposals to be Brought Before an Annual Meeting. Our bylaws provide that, for stockholder nominations to the board of directors or other proposals to be considered at an annual meeting, the stockholder must have given timely notice thereof in writing to the Secretary at Acceleron Pharma Inc., 128 Sidney Street, Cambridge, MA 02139. To be timely for the 2015 annual meeting, the stockholder's notice must be delivered to or mailed and received by us not earlier than the close of business on the 120th day nor later than the close of business on the 90th day prior to the anniversary date of the prior year's annual meeting, except that if the annual meeting is set for a date that is not within 30 days before or after such anniversary date, we must receive the notice not later

than the close of business on the tenth day following the day on which we first provide notice or public disclosure of the date of the meeting. Assuming the date of our 2015 annual meeting is not so advanced or delayed, stockholders who wish to make a proposal at the 2015 annual meeting must notify us no earlier than February 20, 2015 and no later than March 23, 2015. Such notice must provide the information required by our bylaws with respect to each matter the stockholder proposes to bring before the 2015 annual meeting.

Other Matters

As of the date of this Proxy Statement, the board of directors does not intend to present any matters other than those described herein at the Annual Meeting and is unaware of any matters to be presented by other parties. If other matters are properly brought before the meeting for action by the stockholders, proxies will be voted in accordance with the recommendation of the board or, in the absence of such a recommendation, in accordance with the judgment of the proxy holder.

Directions to Annual Meeting

Directions to the 2014 Annual Meeting of Stockholders, to be held at Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, MA 02199 are set forth below:

From North of Boston: From Route 93 take exit 26, Leverett Connector/Storrow Drive, and follow to the Copley Square exit on the left. Take a right onto Beacon Street and follow to Exeter Street. Take a left onto Exeter Street and follow 11 blocks. Take a right on Huntington Avenue. The Prudential Center Garage will be on the right.

From West of Boston: Follow the Mass Pike eastbound into Boston (the Mass Pike is accessible from Route 128/I-95). Get off at exit 22, Copley Square/Prudential Center. Follow signs for Prudential Center. This will take you directly to the Prudential Center Garage entrance, which will be on your right.

From South of Boston: From Route 93 take exit 18, Massachusetts Avenue. Follow sign to Massachusetts Avenue and turn right. Follow Massachusetts Avenue for about 2 miles to Huntington Avenue. Take a right on Huntington Avenue. Take a left on Belvidere Street. The Prudential Center garage entrance will be on your right before Sovereign Bank.

From Logan Airport: Access Boston via the Sumner Tunnel and exit onto Route 93 North. Take exit 26, Leverett Connector/Storrow Drive, and follow to the Copley Square exit on the left. Take a right onto Beacon Street and follow to Exeter Street. Take a left onto Exeter Street and follow 11 blocks. Take a right on Huntington Avenue. The Prudential Center Garage will be on the right.

Parking: The Prudential Tower is best accessed via the South Garage, which has two entrances on Huntington Avenue, one on Dalton Street and one on Belvedere Street. The Red and Yellow levels are both part of the South Garage. Attendant parking is available on both levels at no additional charge.

By Order of the Board of Directors

John L. Knopf, Ph.D. Chief Executive Officer, President and Director May 9, 2014 QuickLinks

GENERAL INFORMATION PROPOSAL NO. 1 ELECTION OF DIRECTORS DIRECTORS AND CORPORATE GOVERNANCE EXECUTIVE OFFICERS DIRECTOR COMPENSATION EXECUTIVE COMPENSATION OPTION AWARDS DIRECTOR NOMINATIONS AND COMMUNICATION WITH DIRECTORS AUDIT COMMITTEE REPORT PROPOSAL NO. 2 RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM BENEFICIAL OWNERSHIP OF COMMON STOCK CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE GENERAL MATTERS