Mast Therapeutics, Inc.
Form DEF 14A
April 29, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

(Rule 14a-101)

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the

Securities Exchange Act of 1934

(Amendment No.)

Filed by the Registrant x Filed by a party other than the Registrant ¨

Check the appropriate box:

¨ Preliminary Proxy Statement

¨ Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

x Definitive Proxy Statement

¨ Definitive Additional Materials

¨ Soliciting Material Pursuant to §240.14a-12
MAST THERAPEUTICS, 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):

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(1) Amount Previously Paid:

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(3) Filing Party:

(4) Date Filed:

MAST THERAPEUTICS, INC.

3611 Valley Centre Drive, Suite 500

San Diego, CA 92130

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Be Held June 11, 2015

The 2015 Annual Meeting of Stockholders of Mast Therapeutics, Inc. will be held on June 11, 2015 at 9:00 a.m. Pacific Time at the Company's offices located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130. The meeting is being held for the following purposes, as more fully described in the proxy statement accompanying this notice:

1. To elect five directors to hold office until the next annual meeting of stockholders and until their respective successors are elected and qualified or until their earlier resignation or removal;

2. To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2015;

3. To approve the Mast Therapeutics, Inc. 2015 Omnibus Incentive Plan; and

4. To transact such other business as may properly come before the meeting and any adjournment or postponement thereof.

Only stockholders of record at the close of business on April 17, 2015 will be entitled to notice of, and to vote at, the meeting and any adjournment or postponement thereof. A list of stockholders entitled to vote at the meeting will be available for inspection by any stockholder for any purpose relating to the meeting during ordinary business hours at our corporate offices located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130 for ten days prior to the meeting, and will also be available for inspection at the meeting. To obtain directions to the location of the meeting, please contact us at (858) 552-0866.

Your vote is important. Whether or not you plan to attend the meeting, and no matter how many shares you own, please vote as promptly as possible. This will help to ensure the presence of a quorum at the meeting and save us additional proxy solicitation costs.

All stockholders are cordially invited to attend the meeting.

By Order of the Board of Directors,
Brian M. Culley
Chief Executive Officer
San Diego, California

April 29, 2015

Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting To Be Held on June 11, 2015. This notice of meeting, the proxy statement for the meeting and our annual report for the fiscal year ended December 31, 2014 are available at https://materials.proxyvote.com/576314.

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3611 Valley Centre Drive, Suite 500

San Diego, CA 92130

(858) 552-0866

PROXY STATEMENT

2015 ANNUAL MEETING OF STOCKHOLDERS

To Be Held On June 11, 2015

GENERAL INFORMATION ABOUT THE MEETING

Mast Therapeutics, Inc., a Delaware corporation ("Mast Therapeutics," "we," or "our company"), is making proxy materials, including this proxy statement, available to our stockholders via the Internet in connection with the solicitation of proxies by our board of directors for use at our 2015 Annual Meeting of Stockholders to be held on June 11, 2015, at 9:00 a.m. Pacific Time at our offices located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130 (the "Annual Meeting"), and at any adjournment or postponement thereof.

This proxy statement, the attached notice of the Annual Meeting, a proxy card and our annual report on Form 10-K for the fiscal year ended December 31, 2014 are collectively referred to as the "proxy materials." The proxy materials are first being made available to our stockholders on or about April 29, 2015.

Notice of Internet Availability of Proxy Materials

All stockholders have the ability to access the proxy materials on the website referred to in the attached notice of the Annual Meeting. Pursuant to rules adopted by the U.S. Securities and Exchange Commission (the "SEC"), we have elected to send a Notice of Internet Availability of Proxy Materials (the "Notice") to our stockholders instead of mailing printed copies of the proxy materials, unless you have previously elected to receive printed materials. The Notice provides instructions on how to access the proxy materials via the Internet and how to request a printed set of the proxy materials at no charge. In addition, stockholders can elect to receive future proxy materials electronically by email or in printed form by mail, and any such election will remain in effect until terminated by the stockholder. We encourage all stockholders to take advantage of the availability of the proxy materials on the Internet to help reduce the cost and environmental impact of our annual meetings.

Purposes of the Annual Meeting

The Annual Meeting is being held for the following purposes:

1. To elect five directors to hold office until the next annual meeting of stockholders and until their respective successors are elected and qualified or until their earlier resignation or removal;

2. To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2015;

3. To approve the Mast Therapeutics, Inc. 2015 Omnibus Incentive Plan; and

4. To transact such other business as may properly come before the meeting and any adjournment or postponement thereof.

Record Date; Shares Outstanding and Entitled to Vote

Our board of directors has fixed April 17, 2015 as the record date for the determination of holders of our common stock entitled to notice of, and to vote at, the Annual Meeting and any adjournment or postponement thereof. At the close of business on the record date, we had 159,628,062 shares of common stock issued and outstanding. Each stockholder of record as of the record date is entitled to one vote at the Annual Meeting for each share of common stock held by such stockholder on the record date. Stockholders do not have cumulative voting rights. We had no other class of capital stock outstanding as of the record date. No other shares are entitled to notice of, or to vote at, the Annual Meeting.

How to Vote Your Shares

If you hold your shares in your own name as the stockholder of record: You may vote your shares by proxy over the Internet or by telephone by following the instructions provided in the Notice, or, if you requested to receive printed proxy materials, you may vote by marking, dating and signing the enclosed proxy card and returning it in the postage-paid envelope provided or you may vote over the Internet or by telephone pursuant to the instructions provided in the proxy card. Additionally, you may vote your shares in person at the Annual Meeting. Stockholders voting by Internet or telephone should understand that, while we and the party providing the service through which you may vote by Internet or by telephone do not charge any fees to our stockholders for voting by Internet or telephone, there may still be costs, such as usage charges from Internet access providers and telephone companies, for which you are responsible.

If your shares are held in the name of a broker or other nominee (that is, in "street name"): You will receive instructions from the holder of record that you must follow for your shares to be voted. The availability of telephonic or Internet voting will depend on your broker's (or other nominee's) voting process. Please check with your broker or other nominee and follow the voting procedure your broker or other nominee provides to vote your shares. If you wish to vote in person at the Annual Meeting, you must request a legal proxy from your broker or other nominee that holds your shares and present that proxy and proof of identification at the Annual Meeting.

By casting your vote by proxy, you are authorizing the holders of the proxies solicited by this proxy statement to vote your shares in accordance with your instructions.

YOUR VOTE IS VERY IMPORTANT. We encourage you to submit your vote by proxy even if you plan to attend the Annual Meeting and vote in person.

How to Change Your Vote

If you hold your shares in your own name: You may revoke your proxy and change your vote at any time before your proxy is exercised by:

- Delivering to our corporate secretary a written notice of revocation, dated later than the proxy you wish to revoke, before voting begins at the Annual Meeting;
- Delivering to our corporate secretary a duly executed proxy bearing a date later than the proxy you wish to revoke, before voting begins at the Annual Meeting;
- Voting again on a later date via the Internet or by telephone before 11:59 p.m. Eastern Time on June 10, 2015 (in which case only your latest Internet or telephone proxy submitted will be counted); or
- Attending the Annual Meeting and voting in person (your attendance at the Annual Meeting, in and of itself, will not revoke your proxy).

Any written notice of revocation or later dated proxy should be delivered before the close of business on June 10, 2015 to:

Mast Therapeutics, Inc.
3611 Valley Centre Drive, Suite 500
San Diego, CA 92130
Attention: Corporate Secretary

Alternatively, you may hand deliver a written revocation notice or a later dated proxy to our corporate secretary at the Annual Meeting before voting begins.

If your shares are held in street name: You must follow the instructions provided by the broker or other nominee if you wish to change your vote.

Proxies

If you provide specific voting instructions on your proxy card or when voting via the Internet or by telephone, your shares will be voted at the Annual Meeting in accordance with your instructions. If you hold shares in your name and execute a proxy (either by submitting it via the Internet or telephone or signing and returning a proxy card) without making individual selections, your shares will be voted in accordance with the recommendations of our board of directors, which are:

·"For" election of each of the nominees to our board of directors listed in the proxy materials;

- "For" ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2015; and
- "For" approval of the Mast Therapeutics, Inc. 2015 Omnibus Incentive Plan.

At this time, we are unaware of any matters, other than those set forth above, that may properly come before the Annual Meeting. If any other matters properly come before the Annual Meeting or any adjournment or postponement thereof, the holders of proxies solicited by this proxy statement, or their duly constituted substitutes acting at the Annual Meeting and any adjournment or postponement thereof, will be deemed authorized to vote or otherwise act on such matters in accordance with their judgment.

The holders of proxies solicited by this proxy statement, or their duly constituted substitutes acting at the Annual Meeting and any adjournment or postponement thereof, may propose and vote for one or more adjournments or postponements of the Annual Meeting, including adjournments or postponements, to permit further solicitations of proxies. Proxies solicited may be voted only at the Annual Meeting and any adjournment or postponement thereof and will not be used for any other meeting of our stockholders.

Broker Non-Votes

A "broker non-vote" occurs when a nominee (typically a broker or bank) holding shares for a beneficial owner (typically referred to as shares being held in "street name") submits a proxy for those shares, but indicates on the proxy that it does not have authority to vote those shares on particular proposals because it has not received specific voting instructions from the beneficial owner for those proposals. Under the rules of the New York Stock Exchange, or NYSE, brokers and other nominees have discretion to vote shares held in street name on "routine" matters but lack such discretion with regard to "non-routine" matters. The ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for fiscal year 2015 is considered a routine matter and, as such, brokers and other nominees may vote on that proposal in the absence of specific instructions from the beneficial owner. Each of the other proposals described in this proxy statement is considered a non-routine matter and brokers and other nominees do not have discretionary authority to vote on those proposals.

Quorum and Required Votes

A majority of the aggregate number of shares of our common stock issued and outstanding and entitled to vote at the Annual Meeting must be present in person or by proxy in order for there to be a quorum at the Annual Meeting and for any action to be taken at the Annual Meeting. If you submit a properly executed proxy via the Internet or by telephone or mail, regardless of whether you abstain from voting on one or more matters, your shares will be counted as present at the Annual Meeting for the purpose of determining a quorum. Broker non-votes will also be counted as present for the purpose of determining the presence of a quorum at the Annual Meeting.

Proposal 1: If a quorum exists at the Annual Meeting, the affirmative vote of the holders of a majority of the shares of common stock having voting power present in person or represented by proxy at the Annual Meeting is required for the election of each director nominee. This majority voting standard means that a director nominee will be elected if the number of shares voted "For" that director nominee exceeds the aggregate number of shares voted "Against" and that "Abstain" from voting with respect to that director nominee. As a result, an abstention will have the same effect as a negative vote. Broker non-votes will not be counted toward the vote total and therefore will have no effect on the outcome of this proposal. In accordance with our corporate governance guidelines, each of our incumbent directors tendered his resignation in advance of being nominated for election at the Annual Meeting, with the effectiveness of such resignation subject to and contingent upon (a) the director's failure to receive a sufficient number of votes for re-election at the Annual Meeting and (b) our board of directors' acceptance of the resignation. Accordingly, the continued service on our board of directors by any director who is not re-elected because he does not receive the requisite affirmative votes at the Annual Meeting will be subject to our board of directors' determination as to whether

to accept or reject his resignation. Our board of directors will take into account and consider the voting results at the Annual Meeting, but has sole discretion to determine whether or not to accept the resignation of any director who does not receive the requisite number of votes for re-election.

Proposal 2: If a quorum exists at the Annual Meeting, the affirmative vote of the holders of a majority of the shares of common stock having voting power present in person or represented by proxy at the Annual Meeting is required to ratify the appointment of PricewaterhouseCoopers LLP. An abstention will have the same effect as a negative vote. Brokers and other nominees generally will have discretionary authority to vote on this proposal because it is considered a routine matter under NYSE rules; therefore, we do not expect broker non-votes with respect to this proposal.

Proposal 3: If a quorum exists at the Annual Meeting, the affirmative vote of the holders of a majority of the shares of common stock having voting power present in person or represented by proxy at the Annual Meeting is required to approve

the Mast Therapeutics, Inc. 2015 Omnibus Incentive Plan. An abstention will have the same effect as a negative vote. Broker non-votes will not be counted toward the vote total and therefore will have no effect on the outcome of this proposal.

Voting Agreements

In connection with our acquisition of SynthRx, Inc. in 2011, we and each of the former principal stockholders of SynthRx entered into a stockholders' voting and transfer restriction agreement (the "SynthRx Voting Agreement"), pursuant to which each stockholder party agreed, with respect to every action or approval by written consent of our stockholders, to vote all shares of our common stock beneficially owned by that stockholder that were issued pursuant to our merger agreement with SynthRx (the "SynthRx Subject Shares") in such manner as we direct. In addition, each stockholder party granted an irrevocable proxy to us for the term of the SynthRx Voting Agreement, which authorizes our executive officers to vote, or instruct nominees or record holders to vote, as applicable, all SynthRx Subject Shares in such manner as we direct. The SynthRx Voting Agreement terminates upon the transfer, in accordance with that agreement, of all the SynthRx Subject Shares by the stockholder parties and their affiliates to non-affiliates.

In connection with our acquisition of Aires Pharmaceuticals, Inc. in February 2014, we and each of the former principal stockholders of Aires entered into a stockholder agreement (the "Aires Voting Agreements" and, collectively with the SynthRx Voting Agreement, the "Voting Agreements"), pursuant to which each stockholder party executed and delivered an irrevocable proxy appointing our officers, or other designees, as the sole and exclusive attorneys and proxies to vote and exercise all voting and related rights with respect to each meeting or action by written consent of our stockholders from the effective time of our acquisition of Aires through the 30-month anniversary of the acquisition, or August 2016, covering all of the shares of our common stock issued to the former Aires stockholders in consideration for our acquisition of Aires (the "Aires Subject Shares" and, collectively with the SynthRx Subject Shares, the "Subject Shares").

As of the record date for the Annual Meeting, 6,284,034 outstanding shares of our common stock are Subject Shares, which represent approximately 3.9% of the shares entitled to vote at the Annual Meeting. While the Voting Agreements are in effect, they provide us with voting control over the Subject Shares. All of the Subject Shares will be voted in accordance with the recommendation of our board of directors with respect to each of the proposals described in this proxy statement. See "— Proxies" above, for a discussion regarding the recommendation of our board of directors with respect to each such proposal.

Solicitation of Proxies

We are soliciting proxies from our stockholders on behalf of our board of directors and will pay for all costs incurred in connection with the solicitation. In addition to solicitation by mail, our directors, officers and employees may solicit proxies from our stockholders in person or by telephone, facsimile, email or other electronic methods without additional compensation other than reimbursement for their actual expenses.

We may retain a proxy solicitation firm to assist us in the solicitation of proxies for the Annual Meeting. We would pay such firm, if any, customary fees, which we do not expect would exceed $20,000, and would reimburse the firm for its reasonable out-of-pocket expenses.

Arrangements also will be made with brokerage firms and other custodians, nominees and fiduciaries for the forwarding of solicitation material to the beneficial owners of stock held of record by such persons, and we will reimburse such custodians, nominees and fiduciaries for their reasonable out-of-pocket expenses in connection therewith.

If You Receive More Than One Proxy Card

If you receive more than one proxy card, it means you hold shares that are registered in more than one account. To ensure that all of your shares are voted, please mark your votes and date, sign and return each proxy card, or vote your proxy via Internet or by telephone as instructed on each proxy card.

Householding Information

The SEC has adopted rules that permit brokers, banks and other nominees to satisfy the delivery requirements for proxy statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single copy of such document addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

A number of brokers and other nominees with account holders who are our stockholders may be "householding" the proxy materials. This means that only one copy of this proxy statement and our annual report may have been sent to multiple stockholders in a household. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report from the other stockholder(s) sharing your address, please (i) notify your broker or other nominee, (ii) direct your written request to Mast Therapeutics, Inc., 3611 Valley Centre Drive, Suite 500, San Diego, California 92130, Attn: Corporate Secretary or (iii) contact us by phone at (858) 552-0866. We undertake to deliver promptly, upon any such oral or written request, a separate copy of the proxy materials to a stockholder at a shared address to which a single copy of these documents was delivered. Stockholders who currently receive multiple copies of the proxy materials at their address and would like to request householding of their communications should notify their broker or other nominee, or contact our corporate secretary at the above address or phone number.

If you have any questions about voting your shares, please contact us at (858) 552-0866.

BOARD OF DIRECTORS

The current members of our board of directors, their ages as of April 17, 2015, the positions they hold, and the month and year in which they commenced service on our board, are as follows:

Name	Age	Title	Committee Membership	Director Since
Brian M. Culley	43	Chief Executive Officer and Director	None	December 2011
Howard C. Dittrich	62	Director	None	June 2014
Jack Lief	69	Chair of the Board	• Audit Committee • Compensation Committee (chair) • Nominating & Governance Committee	September 2006
David A. Ramsay	50	Director	• Audit Committee (chair) • Compensation Committee • Nominating & Governance Committee	June 2011
Lewis J. Shuster	59	Director	• Audit Committee • Compensation Committee • Nominating & Governance Committee (chair)	April 2011

Our certificate of incorporation and bylaws, provide that each director elected or appointed to our board of directors shall hold office until the next annual meeting of stockholders following such election or appointment and until the

director's successor is elected and qualified, or until the director's earlier resignation or removal. Our bylaws provide that vacancies on our board of directors, including those resulting from an increase in the authorized number of directors, may be filled by a majority of the remaining directors, even if less than a quorum, or by a sole remaining director. Any director appointed as a result of a vacancy holds office until the next annual meeting of stockholders and until a successor is elected and qualified. Pursuant to our bylaws, the authorized number of directors may be not less than three nor more than nine, with the exact number to be fixed by resolutions adopted from time to time by our board of directors. Our board of directors has set the current number of authorized directors at five and has nominated five directors for election at the Annual Meeting.

NOMINEES FOR ELECTION TO THE BOARD

Each of our current directors has been nominated for election to our board of directors. The paragraphs below provide information about each director that includes each director's principal occupation and business experience during at least the past five years, the names of other publicly held companies at which he currently serves as a director or has served as a director during the past five years, information regarding involvement in certain legal or administrative proceedings during the past ten years, if applicable, and the experience, qualifications, attributes or skills that led the nominating and governance committee and our board of directors to determine that the person should serve on our board of directors. Dr. Dittrich, who was appointed to our board of directors in June 2014, was recommended to our nominating and governance committee by one of our non-employee directors and our nominating and governance committee recommended his appointment to our board of directors. There are no family relationships among any of our directors and executive officers.

Brian M. Culley, M.A., M.B.A. Mr. Culley has served as our chief executive officer since February 2010 and as a member of our board of directors since December 2011. He has served as our principal executive officer since February 2009. Previously, from January 2007 to February 2010, he served as our chief business officer and senior vice president, from February 2006 to January 2007, he served as our senior vice president, business development, and, from December 2004 to February 2006, he served as our vice president, business development. From 2002 until 2004, Mr. Culley managed all strategic collaborations and licensing agreements for Immusol, Inc. in San Diego, where his most recent title was director of business development and marketing. From 1999 until 2000, he was a licensing and marketing associate at the University of California, San Diego, department of technology transfer & intellectual property services and from 1996 to 1999, he was a research associate for Neurocrine Biosciences, Inc. Mr. Culley has more than 20 years of experience in the life science industry. He received a B.S. in biology from Boston College, a masters in biochemistry from the University of California, Santa Barbara and an M.B.A. from The Johnson School of Business at Cornell University. Mr. Culley's extensive experience with our company and our board of directors' belief that our chief executive officer should serve on the board of directors, as well as Mr. Culley's substantial business development experience, leadership skills and scientific background, led our board of directors to conclude that Mr. Culley should serve as a director.

Howard C. Dittrich. Dr. Dittrich has served as a director since June 2014. A cardiologist with more than 20 years of experience in cardiac therapeutic research and clinical development, Dr. Dittrich currently serves as chief medical officer of Laguna Pharmaceuticals, a privately-held biopharmaceutical company developing a drug to treat atrial fibrillation. He has served as chief medical officer of Laguna Pharmaceuticals (formerly known as ChanRx Corp.) since November 2011, first as a consultant and, since February 2015, as a full-time employee. In addition, Dr. Dittrich is an adjunct professor of medicine at the University of Iowa Carver College of Medicine and serves as chair of the board of directors of the François M. Abboud Cardiovascular Research Center at the University of Iowa Carver College of Medicine. He also co-founded and serves as chairman of the board of directors of IOWA Approach Inc., a privately-held company developing atrial fibrillation ablation technology. From April 2012 to July 2014, he served as chief medical officer of Sorbent Therapeutics, a privately-held biopharmaceutical company that commenced liquidation proceedings through an assignment for the benefit of creditors under California law in July 2014. Previously, from June 2003 until it was acquired by Merck & Co., Inc. in September 2007, Dr. Dittrich served as chief medical officer and senior vice president of clinical and regulatory affairs of NovaCardia, Inc., a clinical-stage pharmaceutical company focused on cardiovascular diseases, and, from September 2007 to June 2011, he co-founded and served as chief medical officer of Sequel Pharmaceuticals, Inc., a privately-held pharmaceutical company spun out from NovaCardia following its acquisition by Merck. Prior to NovaCardia, from 1996 to 2002, Dr. Dittrich held executive positions overseeing clinical development and regulatory affairs at Molecular Biosystems, Inc. and Alliance Pharmaceutical Corp. From 1984 to 1996, he was a full-time faculty member of the Department of Medicine at the University of California, San Diego (UCSD) and, from 1996 to 2011, he served part-time as clinical professor of medicine at UCSD. Dr. Dittrich holds a B.S. degree from the University of Iowa and an M.D. from the University of Iowa Carver College of Medicine. He completed his residency in internal medicine and clinical fellowship in cardiology at UCSD. We believe that Dr. Dittrich's extensive medical and pharmaceutical development expertise, including his background in the clinical practice of medicine, clinical research and development, and regulatory affairs and his experience with the successful development of medicinal products provide our board of directors with valuable medical and pharmaceutical development expertise.

Jack Lief. Mr. Lief has served as a director since September 2006 and as chair of our board of directors since May 2007. Mr. Lief is a co-founder of and, since April 1997, has served as president, chief executive officer and a director of Arena Pharmaceuticals, Inc., a publicly held biopharmaceutical company focused on discovering, developing and commercializing novel drugs that target G protein-coupled receptors. He also served as chairman of Arena's board of directors for more than eight years. From 1995 to April 1997, Mr. Lief served as an advisor and consultant to numerous biopharmaceutical organizations. From 1989 to 1994, Mr. Lief served as senior vice president, corporate development and secretary of Cephalon, Inc., a biopharmaceutical company. From 1983 to 1989, Mr. Lief served as

director of business development and strategic planning for Alpha Therapeutic Corporation, a manufacturer of biological products. Mr. Lief joined Abbott Laboratories, a pharmaceutical company, in 1972, where he served until 1983, most recently as the head of international marketing research. Mr. Lief is an executive board member of BIOCOM, a life science industry association representing more than 650 member companies, service providers and research institutions in Southern California, and he was the chairman of the board of directors of BIOCOM from March 2005 to March 2006. Mr. Lief holds a B.A. from Rutgers University and an M.S. in psychology (experimental and neurobiology) from Lehigh University. Mr. Lief's extensive and current executive leadership and management experience in biopharmaceutical companies brings to our board of directors the perspective of a leader managing similar drug development, regulatory, commercialization and financing issues as our company. In addition, his over 40 years of experience in the life science industry provides unique insight to our board.

David A. Ramsay. Mr. Ramsay has served as a director since June 2011. Mr. Ramsay is currently chief financial officer of Halozyme Therapeutics, Inc., a publicly held biopharmaceutical company developing and commercializing products targeting the extracellular matrix, a position he has held since May 2013. He previously served as Halozyme's vice president, corporate development from May 2009 to May 2013. From 2003 to May 2009, he served as Halozyme's vice president, chief financial officer. From 2000 to 2003, Mr. Ramsay was vice president, chief financial officer of Lathian Systems, Inc., a provider of technology-based sales solutions for the life science industry. From 1998 to 2000, he was with Valeant Pharmaceuticals International, Inc. (formerly ICN Pharmaceuticals, Inc.), a multinational specialty pharmaceutical company, where he served as vice president, treasurer and

director, corporate finance. Mr. Ramsay began his career at Deloitte & Touche, where he obtained his CPA license. Mr. Ramsay holds a B.S. in business administration from the University of California, Berkeley and a M.B.A. with a dual major in finance and strategic management from The Wharton School at the University of Pennsylvania. Mr. Ramsay's significant experience as chief financial officer of life science companies, particularly his experiences at Halozyme during its successful development and its commercialization of its first products, and at a large audit and financial advisory firm, provide our board of directors with valuable financial and accounting perspectives and skills.

Lewis J. Shuster. Mr. Shuster joined our board of directors in April 2011 immediately following our acquisition of SynthRx, Inc. In 2002, Mr. Shuster founded Shuster Capital, a strategic and operating advisor to and angel investor in life science companies, and has served as its chief executive officer since that time. Since February 2014, Mr. Shuster has served as executive chairman of TissueNetix, Inc., a privately held company he co-founded that is developing novel tools for medical and drug discovery research applications. From June 2003 to November 2007, Mr. Shuster served as chief executive officer of Kemia, Inc., a drug discovery and development company. From February 2000 to December 2001, Mr. Shuster held various operating executive positions at Invitrogen Corporation, a biotechnology company that merged with Applied Biosystems Inc. and became Life Technologies Corporation. Between 1994 and 1999, Mr. Shuster served as chief financial officer and executive vice president corporate development of Pharmacopeia, Inc., a drug discovery product and service company, and also as president and chief operating officer of Pharmacopeia Labs, a division of Pharmacopeia, Inc. Mr. Shuster joined Human Genome Sciences, Inc. as its first employee in September 1992 and served as its executive vice president, operations and finance until 1994. Mr. Shuster currently serves as chairman of the board of directors of Response Biomedical Corporation, a company that develops, manufactures and markets diagnostic tools for clinical, biodefense and environmental applications, and as a member of the board of directors of HTG Molecular Diagnostics, Inc., a company that develops and markets technologies to facilitate molecular profiling. From April 2010 to March 2013, he served as a director of Complete Genomics, Inc., a life science company, and, from September 2009 to February 2010, as a director of Sorrento Therapeutics, Inc., a biopharmaceutical company. Mr. Shuster received a B.A. in economics from Swarthmore College and an M.B.A. from Stanford University. Mr. Shuster's extensive executive background in strategic planning and managing rapid operations growth for multiple public and private life science companies and his service on boards of other companies in our industry provides our board of directors with perspective and expertise in evaluating and managing the operational and financial challenges and opportunities we may face as we grow our company.

CORPORATE GOVERNANCE

Director Independence

Our board of directors has determined that each of Messrs. Dittrich, Lief, Ramsay and Shuster, is an "independent director" as such term is defined in Section 803(A)(2) of the NYSE MKT LLC Company Guide.

Board Committees

Our board of directors currently has a standing audit committee, compensation committee and nominating and governance committee.

Audit Committee. The audit committee currently consists of Mr. Ramsay (chair), Mr. Lief and Mr. Shuster. The composition of the audit committee was the same during 2014. Our board of directors has determined that each member of the audit committee is an independent director under Section 803(A)(2) of the NYSE MKT LLC Company Guide and meets the applicable additional eligibility standards for audit committee service under Section 803(B)(2) of the NYSE MKT LLC Company Guide. In addition, our board of directors has determined that Mr. Ramsay qualifies as an "audit committee financial expert" as defined in Item 407(d)(5) of Regulation S-K under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The primary purpose of the audit committee is to oversee our

accounting and financial reporting processes, including our internal controls system, and audits of our financial statements. The audit committee's responsibilities include: appointing and providing for the compensation of the independent registered public accounting firm to be engaged to prepare and issue an audit report and perform other audit, review or attest services for our company; approving any other permissible non-audit services to be provided to us by the independent auditor; overseeing the work and evaluating the performance of the independent auditor, and, if so determined by the audit committee, terminating and replacing the independent auditor; reviewing and discussing, including with management and the independent auditor, our annual and quarterly financial statements; reviewing any proposed significant changes to our accounting principles and practices; reviewing any material changes to our system of internal control over financial reporting; reviewing management's report on effectiveness of our internal control over financial reporting and, if applicable, our independent auditor's audit of the effectiveness of our internal control over financial reporting; establishing a procedure for receipt, retention and treatment of any complaints or concerns received by us about our accounting, internal accounting controls or auditing matters; reviewing, approving and overseeing any related party transaction that would require disclosure pursuant to Item 404 of Regulation S-K; overseeing the implementation and enforcement of our insider trading policy; and reviewing and evaluating any significant financial risk exposures facing our company

and the steps our management has taken to control and monitor such exposures. The audit committee is governed by a written charter approved by our board of directors.

Compensation Committee. The compensation committee currently consists of Mr. Lief (chair), Mr. Ramsay and Mr. Shuster. The composition of the compensation committee was the same during 2014. Our board of directors has determined that each member of the compensation committee is an independent director under Section 803(A)(2) of the NYSE MKT LLC Company Guide. The compensation committee reviews, approves and administers compensation arrangements for our executive officers, administers our equity-based compensation plans, establishes and reviews general policies relating to the compensation and benefits of our executive officers and other personnel, evaluates the relationship between executive officer compensation policies and practices and corporate risk management to confirm those policies and practices do not incentivize excessive risk-taking, and evaluates and makes recommendations to our board of directors regarding the compensation of our non-employee directors. The compensation committee may, in its sole discretion, select, retain, obtain the advice of, engage, compensate and terminate compensation consultants, legal counsel and such other advisors as it deems necessary and advisable to assist it in carrying out its responsibilities and functions. The compensation committee is directly responsible for the appointment, compensation and oversight of the work of any of its compensation consultants, legal counsel and other advisors. We are required to provide for appropriate funding, as determined by the compensation committee, for payment of reasonable compensation to any compensation consultant, legal counsel and other advisor retained by the compensation committee. To the extent required by the listing standards of the national securities exchange on which our common stock is then principally listed, before selecting or receiving advice from any compensation consultant, legal counsel or other advisor, the compensation committee must conduct an independence assessment in accordance with the rules of such national securities exchange. In addition, with regard to any compensation consultant identified in response to Item 407(e)(3)(iii) of Regulation S-K, the compensation committee must assess whether the work of such compensation consultant has raised any conflict of interest, taking into consideration all relevant factors, including the factors listed in Rule 10C-1(b)(4)(i) through (vi) under the Exchange Act. The compensation committee is governed by a written charter approved by our board of directors.

Nominating and Governance Committee. The nominating and governance committee currently consists of Mr. Shuster (chair), Mr. Lief and Mr. Ramsay. The composition of the nominating and governance committee was the same during 2014. Our board of directors has determined that each member of the nominating and governance committee is an independent director under Section 803(A)(2) of the NYSE MKT LLC Company Guide. The nominating and governance committee's responsibilities include identifying, evaluating and recommending to our board of directors nominees for possible election to our board of directors, evaluating and making recommendations to our board of directors regarding its size, composition and leadership structure, reviewing and assessing our corporate governance guidelines and recommending any proposed changes thereto to our board of directors, reviewing and making recommendations to our board of directors regarding issues of executive officer succession planning and providing oversight with respect to corporate governance matters. The nominating and governance committee is governed by a written charter approved by our board of directors.

Charters for the audit committee, the compensation committee and the nominating and governance committee, as well as our corporate governance guidelines, are posted on our corporate website at: www.masttherapeutics.com.

Meetings of the Board and its Committees

As required under NYSE MKT listing standards and our corporate governance guidelines, our board of directors meets on a regular basis as often as necessary to fulfill its responsibilities, including at least once each quarter, and our independent directors meet at least annually in executive session outside the presence of non-independent directors and management. During 2014, our board of directors met nine times, the audit committee met four times, the compensation committee met three times and the nominating and governance committee met three times. In addition,

the board of directors established a special pricing committee in the fourth quarter of 2014 and that committee met twice during 2014. Each member of our board of directors nominated for election at the Annual Meeting who served on our board during all or part of 2014 attended 75% or more of the aggregate of (i) the total number of board meetings held during the period of such member's service and (ii) the total number of meetings of committees on which such member served during the period of such member's service.

Procedures for Determining Executive and Director Compensation

The compensation committee was formed to, among other things, assist our board of directors in the discharge of its responsibilities with respect to compensation of our executive officers and non-employee directors. In accordance with its charter, the compensation committee has authority to determine the amount, form and terms of compensation of our chief executive officer and other officers (as such term is defined in the NYSE MKT LLC Company Guide), and to take such action, and to direct us to take such action, as it deems necessary or advisable to compensate our chief executive officer and other officers in a manner consistent with its determinations, and shall deliberate and vote on all such actions outside the presence of our chief executive officer and other officers. The compensation committee is responsible for reviewing, at least annually, the performance of our chief executive officer

and other officers, including in light of any goals and objectives established for such performance, and, in light of such review, determining each officer's compensation.

In accordance with its charter, the compensation committee also has authority to establish our general compensation policies and practices and to administer plans and arrangements established pursuant to such policies and practices. In addition, the compensation committee has authority to administer our equity compensation plans, including, without limitation, to recommend the adoption of such plans, recommend the reservation of shares of our common stock for issuance thereunder, amend and interpret such plans and the awards and agreements issued pursuant thereto, and make awards to eligible persons under the plans and determine the terms of such awards, including any such awards to our chief executive officer and other officers.

With respect to non-employee director compensation, the compensation committee reviews such compensation practices and policies at least annually and makes a recommendation to our board of directors as to the amount, form and terms of non-employee director compensation. Our board of directors, taking the compensation committee's recommendation into consideration, sets the amount, form and terms of non-employee director compensation.

Except with respect to its responsibilities regarding setting compensation for our chief executive officer and our other officers, the compensation committee may delegate its authority to individual members of the compensation committee or other members of our board of directors. In addition, to the extent permitted by applicable law and regulations, the compensation committee may delegate to one or more of our officers (or other appropriate supervisory personnel) the authority to grant stock options, stock appreciation rights, restricted stock units and performance units to our employees (who are not officers or members of our board of directors), including employees of any of our subsidiaries; provided, however that (a) the number of shares of our common stock underlying such options, stock appreciation rights, restricted stock units and performance units are consistent with guidelines previously approved by the compensation committee; (b) the per-share exercise or purchase price of such awards equals the fair market value of our common stock on the date of grant; and (c) the vesting and other terms that apply to such awards are the same terms as apply under our standard form of agreement under the applicable equity compensation plan, provided that such officer(s) may, in such officer(s)' discretion, grant awards that are fully vested on the date of grant of the award or grant awards with more restrictive vesting requirements. However, our board of directors has determined that it's in the best interests of our company that the board of directors administer our 2015 Omnibus Incentive Plan, should it be approved by our stockholders, except to the extent our board of directors delegates its authority to the compensation committee or another committee formed or approved by the board of directors. Consequently, if the 2015 Omnibus Incentive Plan is approved by our stockholders at the Annual Meeting, the compensation committee will not have authority to grant awards under that plan, except to the extent so authorized by the board of directors. For more information regarding the terms of the 2015 Omnibus Incentive Plan, see Proposal 3 below.

With respect to executive officer compensation, the compensation committee met once during the fourth quarter of 2013 and once during the first quarter of 2014 to review and evaluate 2013 performance and set 2014 compensation for our executive officers, including our chief executive officer and our other officers who are our "named executive officers." At those meetings, the compensation committee determined the components of 2014 compensation of our executive officers, set base salaries, granted stock option awards, and approved cash awards under the short-term incentive plan adopted by the compensation committee in February 2013. Additionally, the compensation committee met and adopted a short-term incentive plan for 2014 and corporate objectives under that plan in June 2014. At meetings held in the fourth quarter of 2014 and the first quarter of 2015, the compensation committee reviewed and evaluated 2014 performance, approved cash awards under the short-term incentive plan for 2014 and set 2015 compensation for our executive officers. For details regarding the compensation of Mr. Culley and our other named executive officers, see "Executive Officer Compensation" below.

In setting the compensation of our executive officers, the compensation committee takes into consideration the recommendations of Mr. Culley and, until his departure in February 2015, Patrick Keran, our former president and chief operating officer, who present the compensation committee with assessments of the performance of our company and individual officers, including against pre-established corporate goals, and proposals for executive officer compensation packages. Mr. Culley and, previously, together with Mr. Keran, also make proposals regarding the terms of long-term equity incentive plans, in which all of our employees and directors are eligible to participate, and goals under our short-term executive incentive plans. From time to time, other executive officers are invited to make presentations or provide financial or other information to the compensation committee to assist it in setting and assessing the achievement of corporate goals and reviewing other aspects of executive compensation. The compensation committee typically meets in executive session following presentations by management. While Mr. Culley and, previously, Mr. Keran may be present during the compensation committee's deliberation and determination of other executive officers' compensation, they are not present during the compensation committee's deliberation and determination of their compensation. The compensation committee's decisions are made by the compensation committee in its sole discretion.

For several years, management has utilized the compensation consulting firm, Frederic W. Cook & Co., Inc. ("FW Cook"), to provide advice regarding executive officer and director compensation practices and programs. FW Cook has not been engaged to conduct a review and evaluation of our executive officer or director compensation program as a whole in any of the prior three fiscal

years. Rather, in light of FW Cook's familiarity with our company and industry, from time to time, our management contacts FW Cook with specific questions in order to assist management in providing information and making recommendations to the compensation committee regarding executive officer and non-employee director compensation. In addition, FW Cook provides advice to management regarding the terms our broad-based equity incentive plans, including our 2014 Omnibus Incentive Plan, which was approved by our stockholders in June 2014. Neither FW Cook nor any of its affiliates provided any services to us in 2014 apart from those described above. The compensation committee has conducted a conflict of interest assessment, which included taking into consideration the factors set forth in Rule 10C-1(b)(4) under the Exchange Act, and concluded that FW Cook's work has not raised any conflict of interest.

Board Leadership Structure and Role in Risk Oversight

Our leadership is structured such that the chair of our board of directors and chief executive officer positions are separated. Mr. Lief, an independent director, has served as chair of our board of directors since May 2007. We believe having an independent chair of our board of directors with extensive executive experience in the life science industry has provided our board of directors with experienced and independent leadership that enhances the effectiveness of our board of directors as a whole. Our corporate governance guidelines do not require our board of directors to choose an independent chair or to separate the roles of chair and chief executive officer, but our board of directors believes this leadership structure is the appropriate structure for our company at this time. Pursuant to our corporate governance guidelines, our board of directors may choose its chair in any manner that it deems to be in the best interests of our company. If, in the future, the chair of our board of directors is not an independent director, our board of directors may designate an independent director to serve as a lead independent director, with the responsibilities specified in our corporate governance guidelines.

Our board of directors is responsible for oversight of risks facing our company, while our management is responsible for day-to-day management of risk. Our board of directors, as a whole, directly administers its risk oversight function. In addition, the risk oversight function is also administered through the standing committees of our board of directors, which oversee risks inherent in their respective areas of responsibility, reporting to our board of directors regularly and involving our board of directors as necessary. For example, the audit committee oversees our financial exposure and financial reporting related risks, and the compensation committee oversees risks related to our compensation programs and practices. Our board of directors as a whole directly oversees our strategic and business risk, including product development risk, through regular interactions with our management and, from time-to-time, input from independent advisors. We believe our board's leadership structure supports its role in risk oversight, with our executive officers responsible for assessing and managing risks facing our company on a day-to-day basis and the chair and other members of our board of directors providing oversight of such risk management.

Director Resignation Policy

Under Delaware law, an incumbent director may remain in office notwithstanding the failure to receive the required vote for re-election until the director's successor is duly elected. To address this "holdover rule," our corporate governance guidelines include a director resignation policy whereby our board of directors will nominate for re-election only those directors who tender an irrevocable, contingent resignation in writing to the chair of our board. The resignation becomes effective only if (a) the director fails to receive a sufficient number of votes for re-election at a meeting of stockholders at which director elections are held and (b) our board of directors accepts the resignation. If a director fails to receive the required vote for re-election, the nominating and governance committee, or such other committee designated by our board of directors, which we refer to as the "reviewing committee," will act promptly to consider the director's resignation and recommend to the full board of directors whether to accept or reject the resignation, or whether other action should be taken. Our board of directors expects the director whose resignation is under consideration to abstain from participating in any decision regarding that resignation. In considering whether to

accept or reject a director's resignation, each of the reviewing committee and our board of directors may consider any factors it deems relevant. Within 90 days after the date of the certification of the election results for the applicable stockholders' meeting, our board of directors will act on the resignation, taking into account the reviewing committee's recommendation, and publicly disclose its decision.

Prohibition on Hedging and Speculative Transactions Involving our Securities

As part of our insider trading policy, our directors and employees (including our executive officers) and designated consultants, advisors and contractors to our company are prohibited from engaging in speculative transactions involving our securities, including short sales, "sales against the box" or any equivalent transaction involving our securities (or the securities of any of our customers, vendors, suppliers or other business partners). In addition, as part of our insider trading policy, our directors, officers and other specified employees of and consultants, advisors and contractors to our company are prohibited from engaging in hedging or derivative transactions involving our securities, such as "cashless" collars, forward sales, equity swaps and other similar or related transactions, and all other employees and persons subject to the policy are discouraged from engaging in such transactions and required to pre-clear any such proposed transaction with the compliance officer for our insider trading policy. Further, our insider trading policy states that we recommend that our directors and employees (including our executive officers) and other persons

subject to the policy not hypothecate or pledge our securities to secure a loan and that they not purchase our securities "on margin" (that is, borrow funds to purchase securities, including in connection with exercising any stock options), and requires that our directors, officers and other specified employees of and consultants, advisors and contractors to our company pre-clear any proposed margin transaction involving our securities with the compliance officer for our insider trading policy.

DIRECTOR NOMINATIONS

Criteria for Board Membership

In recommending candidates for appointment or election to our board of directors, the nominating and governance committee considers the appropriate balance of experience, skills and characteristics required of our board of directors, and seeks to insure that at least a majority of the directors are independent under NYSE MKT listing standards, that members of the audit committee meet the financial literacy and sophistication requirements under NYSE MKT listing standards and that at least one of member of the audit committee qualifies as an "audit committee financial expert" under SEC rules. Nominees for director are selected on the basis of their depth and breadth of experience, wisdom, integrity, ability to make independent analytical inquiries, understanding of our business environment, willingness to devote adequate time to board duties, the interplay of the nominee's experience and skills with those of other directors and the extent to which the nominee would be a desirable addition to our board of directors and any of its committees. Directors generally will not be nominated for re-election at any annual or special meeting held after their 75th birthday. In addition, our corporate governance guidelines require that our directors limit their service on boards of directors of public companies to a total of four (including service on our board of directors). Other than the foregoing, there are no stated minimum criteria for director nominees, although the nominating and governance committee may also consider such other factors as it may deem are in the best interests of our company and our stockholders. The nominating and governance committee does not have a policy regarding board diversity, but it takes diversity of professional experience and perspective within the pharmaceutical and biotechnology industries into account in identifying and selecting director nominees.

Stockholder Recommendations

The nominating and governance committee will consider qualified candidates for director suggested by stockholders by applying the criteria for board membership described above. Stockholders wishing to suggest a qualified director candidate for review and consideration by the nominating and governance committee must provide a written statement to our corporate secretary that includes the following information: a statement that the proposing stockholder is recommending a candidate for consideration by the nominating and governance committee; the name, age, business address and residence address of the proposed nominee; a statement of the proposed nominee's business experience and educational background; the proposed nominee's principal occupation or employment; the class and number of shares of our capital stock beneficially owned by the proposed nominee; a detailed description of all relationships, arrangements or understandings between the proposing stockholder and the proposed nominee and any other person or persons (naming such person or persons) pursuant to which such proposed nomination is being made by the stockholder; a detailed description of all relationships, arrangements or understandings between the proposed nominee and any service-provider or supplier to, or competitor of, our company; information regarding each of the criteria for board membership described above in sufficient detail to allow the nominating and governance committee to evaluate the proposed nominee; and a statement from the proposed nominee that he or she is willing to be considered and willing to serve as a director if nominated and elected. The proposing stockholder must also include the following information with respect to such stockholder: documentation supporting that the proposing stockholder is a stockholder of our company; the proposing stockholder's name and address, as they appear on our books; and the class and number of shares of our capital stock beneficially owned by the proposing stockholder. If a stockholder submits a director recommendation in compliance with the procedure described above, the nominating and governance

committee will conduct an initial evaluation of the proposed nominee and, if it determines the proposed nominee may be a qualified candidate, the nominating and governance committee and one or more members of our management team will interview the proposed nominee to determine whether he or she might be suitable to be a director. If the nominating and governance committee determines the proposed nominee would be a valuable addition to our board of directors, based on the criteria for board membership described above and our board of directors' specific needs at the time, it will recommend to our board of directors such person's nomination. In connection with its evaluation, the nominating and governance committee may request additional information from the proposed nominee and/or the proposing stockholder.

Separately, our bylaws contain provisions that address the process by which a stockholder may nominate an individual to stand for election to our board of directors at our annual meeting of stockholders. Such nominations may be made only if the stockholder has given timely written notice to our corporate secretary containing the information required by our bylaws. To be timely, such notice must be received at our principal executive offices not earlier than the 120th day, nor later than the close of business on the 90th day, prior to the first anniversary of the date of the preceding year's annual meeting as first specified in our notice of meeting (without regard to any postponements or adjournments of such meeting after such notice was first sent), except that if no annual meeting was held in the previous year or the date of the annual meeting is more than 30 days earlier or later than such anniversary

date, such notice must be received not earlier than the 120th day prior to the date of such annual meeting and not later than the close of business on the later of the 90th day prior to the date of such annual meeting or the 10th day following the date on which we first publicly announce the date of such meeting.

Process for Identifying and Evaluating Nominees

Each year before recommending to our board of directors a slate of nominees for director, the nominating and governance committee considers each incumbent director's performance on our board of directors and whether the incumbent director's nomination would be consistent with the criteria for board membership described above and other guidelines included in our corporate governance guidelines, including ensuring that the composition of our board of directors is such that it maintains an openness to new ideas and a willingness to critically re-examine the status quo. In the ordinary course, absent special circumstances or a material change in the criteria for board membership, the nominating and governance committee will recommend for nomination incumbent directors with skills and experience that are relevant to our business and who are willing to continue in service. If an incumbent director is not willing to stand for re-election, or if a vacancy on our board of directors occurs between annual stockholder meetings and our board of directors determines to fill such vacancy, the nominating and governance committee will identify the desired skills and experience of a new nominee based on the criteria for board membership described above and any specific needs of our board of directors at the time. The nominating and governance committee will then seek suggestions from other members of our board of directors and our management team as to individuals meeting such criteria. Potential nominees will be selected based on input from members of our board of directors, our management team and, if the nominating and governance committee deems appropriate, a third-party search firm. The nominating and governance committee will evaluate each potential nominee's qualifications and check relevant references. In addition, such individuals will be interviewed by at least one member of the nominating and governance committee. Following this process, the nominating and governance committee will determine whether to recommend to our board of directors that a potential nominee be presented as a nominee for election by the stockholders or appointed to fill a vacancy on our board of directors, as the case may be. Historically, our board of directors nominates for election at our annual stockholder meetings the individuals recommended by the nominating and governance committee.

COMMUNICATIONS WITH DIRECTORS

Stockholders who wish to communicate with our board of directors or an individual director may do so by sending a written communication addressed to the board or an individual director to: Mast Therapeutics, Inc., Attn: Investor Relations, 3611 Valley Centre Drive, Suite 500, San Diego, California 92130. Submitting stockholders should indicate they are a stockholder of our company. Depending on the subject matter, investor relations will: forward the inquiry to the chair of our board of directors, who may forward the inquiry to a particular director if the inquiry is addressed to a particular director; forward the inquiry to the appropriate personnel within our company (for instance, if it is primarily commercial in nature); attempt to handle the inquiry directly (for instance, if it is a request for information about our company or a stock-related matter); or not forward the inquiry, if it relates to an improper or inappropriate topic or is otherwise irrelevant.

Any stockholder who wishes to communicate with our board of directors to report complaints or concerns related to accounting, internal accounting controls or auditing may submit a report telephonically or through a web-based system via the toll-free telephone number or the internet address provided in our Code of Business Conduct and Ethics, which is available on our corporate website at www.masttherapeutics.com.

We encourage all of our directors to attend our annual meetings of stockholders. Mr. Lief, Mr. Culley and Mr. Ramsay attended our 2014 annual meeting of stockholders.

EXECUTIVE OFFICERS

Our executive officers, their ages and positions held as of April 17, 2015, are as follows:

Name	Age	Title
Brian M. Culley	43	Chief Executive Officer and Director
Edwin L. Parsley	54	Chief Medical Officer and Senior Vice President
Brandi L. Roberts	41	Chief Financial Officer and Senior Vice President
R. Martin Emanuele	60	Senior Vice President, Development
Gregory D. Gorgas	52	Senior Vice President, Commercial

Biographical Information of Executive Officers

Set forth below is biographical information regarding each of our executive officers, other than Mr. Culley. For biographical information regarding Mr. Culley, see “Nominees for Election to the Board” above.

Edwin L. Parsley, D.O. Dr. Parsley has served as our chief medical officer and senior vice president since October 2014. He served as our interim chief medical officer in September 2014 and has served as chief medical officer of our wholly-owned subsidiary, Aires Pharmaceuticals, Inc., since we acquired Aires in February 2014. Prior to the acquisition, he had served as chief medical officer of Aires since April 2011. Dr. Parsley joined Aires from Pfizer where he oversaw clinical trials for Revatio® (sildenafil) and consulted across molecules in Pfizer’s pulmonary vascular disease portfolio on clinical trial design, conduct and data interpretation from January 2010 to April 2011. Prior to Pfizer, from January 2009 to September 2009, Dr. Parsley worked at CSL Biotherapies as its pulmonary hypertension medical science specialist and, from 2006 to December 2008, at Encysive Pharmaceuticals, Inc. where he most recently served as its executive director for global medical affairs and drug safety, developing endothelin receptor antagonists for pulmonary hypertension, heart failure, renal failure and resistant hypertension. Dr. Parsley is a practicing physician and certified by the American Board of Internal Medicine in internal medicine, pulmonary disease, critical care medicine and sleep medicine. He earned his D.O. from Oklahoma State University College of Osteopathic Medicine and a B.S. Pharmacy from Southwestern Oklahoma State University. Prior to joining industry, Dr. Parsley was an assistant professor of medicine at the University of Texas Medical School at Houston and a medical director of Medical Intensive Care and Respiratory Therapy Services at Memorial Hermann Hospital in Houston, where he had an active inpatient care and office practice with focus on pulmonary hypertension and fibrosis research. He also worked in the emergency department at Lyndon B. Johnson Hospital, a Harris County Hospital District facility in Houston. In the course of his practice, Dr. Parsley treated patients with a range of acute care needs, including patients with sickle cell disease, heart failure and stroke.

Brandi L. Roberts, C.P.A., M.B.A. Ms. Roberts joined our company in March 2011 and currently serves as our chief financial officer and senior vice president. She previously served as our vice president, finance from March 2011 to January 2013 and from June 2008 to January 2009. From January 2009 to March 2011, Ms. Roberts served as vice president, accounting and corporate controller of Alphatec Spine, Inc., the wholly-owned operating subsidiary of Alphatec Holdings, Inc., a medical technology company listed on the NASDAQ Global Select Market where she was responsible for managing all accounting activities, including SEC reporting and compliance with Sarbanes-Oxley Act requirements. From June 2007 to June 2008, Ms. Roberts served as executive director, corporate controller of Artes Medical, Inc., a publicly traded medical technology company, and from September 2005 to June 2007, she served as director, finance of Stratagene Corporation, a publicly traded life science company acquired by Agilent Technologies, Inc. in June 2007. Ms. Roberts’ experience also includes seven years at Pfizer’s laboratories in La Jolla, California (formerly Agouron), most recently as director, finance, and three years with the public accounting firm of PricewaterhouseCoopers LLP. She is a certified public accountant with the State of California. Ms. Roberts received a

B.S. in Business Administration from the University of Arizona and an M.B.A. from the University of San Diego.

R. Martin Emanuele, Ph.D., M.B.A. Dr. Emanuele has served as our senior vice president, development since he joined our company in April 2011 following our acquisition of SynthRx, Inc., which he co-founded. Previously, from April 2010 to April 2011, Dr. Emanuele was vice president, pharmaceutical strategy at DaVita, Inc., a FORTUNE 500® company and leading provider of kidney care in the United States. Dr. Emanuele's responsibilities while at DaVita focused on evaluating business opportunities related to emerging renal therapeutics, biomarkers and diagnostics. Prior to DaVita, from June 2008 to April 2010, Dr. Emanuele provided consulting services to a range of life science companies regarding corporate partnering and business development. From November 2006 to May 2008, Dr. Emanuele was senior vice president, business development at Kemia, Inc., a venture-backed privately-held company focused on discovering and developing small molecule therapeutics. From 2002 to 2006, Dr. Emanuele held various senior-level positions with Avanir Pharmaceuticals, Inc., most recently as vice president, business development and portfolio management, and from 1988 to 2002, Dr. Emanuele held positions of increasing responsibility at CytRx Corporation, most recently as vice president, research and business development. He earned a Ph.D. in pharmacology and experimental therapeutics from Loyola University of Chicago, Stritch School of Medicine and a B.S. in biology from Colorado State University. He also holds an M.B.A. with an emphasis in healthcare and pharmaceutical management from the University of Colorado.

Gregory D. Gorgas, M.B.A. Mr. Gorgas joined our company in July 2011 as our senior vice president, commercial. He has more than 28 years of commercial experience in the life science industry, including more than 10 years at IDEC Pharmaceuticals and its successor, Biogen Idec, Inc. Prior to joining our company, from November 2009 to July 2011, Mr. Gorgas was managing director at Theragence, Inc., a privately-held company he co-founded, that applies proprietary computational intelligence to analyze clinical data. From November 2008 to July 2011, Mr. Gorgas also served as an independent consultant, providing commercial and business development consulting services to pharmaceutical, biotechnology and medical device companies. From 1997 to October 2008, Mr. Gorgas held positions of increasing responsibility with Biogen Idec Inc., a publicly held biotechnology company that develops therapies for the treatment of neurodegenerative diseases, hemophilia and autoimmune disorders. Most recently, from March 2006 to October 2008, Mr. Gorgas served as senior director, global and U.S. marketing at Biogen Idec, where he was responsible for the strategic vision and operational commercialization of the company's worldwide cancer business, and, prior to such time, he had responsibilities in sales, commercial operations and project team and alliance management. Prior to Biogen Idec, he held sales and manager positions with Chiron Corporation, Cetus Corporation and The Upjohn Company. Mr. Gorgas holds an M.B.A. from the University of Phoenix and a B.A. in economics from California State University, Northridge.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding beneficial ownership of our common stock as of April 17, 2015 (the "Evaluation Date"), or an earlier date for information based on filings with the SEC, by (a) each person known to us to beneficially own more than 5% of the outstanding shares of our common stock, (b) each director and nominee for director, (c) each of the named executive officers listed in the compensation tables included in this proxy statement, and (d) all of our current directors and executive officers as a group. The information in this table is based solely on statements in filings with the SEC or other reliable information. Percent of beneficial ownership is based on 159,628,062 shares of our common stock outstanding as of the Evaluation Date. The information in this table reflects the proportionate adjustments made to stock options exercisable for our common stock that we issued prior to the 1-for-25 reverse split of our common stock effected on April 23, 2010.

Name and Address of Beneficial Owner (1)	Shares Beneficially Owned (2)	Percent of Outstanding	
Principal Stockholders:			
Franklin Resources, Inc. (3)	11,946,100	7.5	%
One Franklin Parkway San Mateo, CA 94403			
Directors and Named Executive Officers:			
Brian M. Culley (4)	2,118,490	1.3	%
Howard C. Dittrich (5)	56,965	*	
Jack Lief (6)	165,624	*	
David A. Ramsay (7)	253,445	*	
Lewis J. Shuster (8)	155,191	*	
Patrick L. Keran (9)	2,991,878	1.8	%
Santosh J. Vetticaden (10)	696,903	*	
R. Martin Emanuele (11)	453,157	*	
All directors and executive officers as a group (9 persons) (12)	4,366,672	2.7	%

*Less than 1%

(1) Unless otherwise indicated, the address of each of the listed persons is c/o Mast Therapeutics, Inc., 3611 Valley Centre Drive, Suite 500, San Diego, California 92130.

(2) Beneficial ownership of shares is determined in accordance with SEC rules and generally includes any shares over which a person exercises sole or shared voting or investment power, or of which a person has the right to acquire ownership within 60 days of the Evaluation Date. Except as otherwise noted, (a) each person or entity has sole voting and investment power with respect to the shares shown and (b) none of the shares shown as beneficially owned on this table are subject to pledge. In calculating the percentage ownership of each person identified in the table, shares underlying options, warrants or other rights to acquire shares of our common stock held by that person

that are either currently exercisable or exercisable within 60 days of the Evaluation Date are deemed outstanding. These shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other individual or entity. Percentage ownership for each person is based on the number of shares of our common stock outstanding as of the Evaluation Date, together with the applicable number of shares of common stock subject to options, warrants or other rights to acquire shares of our common stock currently exercisable or exercisable within 60 days of the Evaluation Date for that person or group of persons.

(3) The number of shares listed for Franklin Resources, Inc. ("FRI"), and the following information in this footnote, was obtained from Amendment No. 2 to Schedule 13G jointly filed with the SEC on February 4, 2015 by FRI, Charles B. Johnson, Rupert H. Johnson, Jr. and Franklin Advisers, Inc. Franklin Advisers, Inc. has the sole power to vote or to direct the vote, and the sole power to dispose or to direct the disposition of, these shares. These shares are beneficially owned by one or more investment companies or other managed accounts that are advised by investment managers that are direct and indirect subsidiaries of FRI. Messrs. C. Johnson and R. Johnson each own in excess of 10% of the outstanding common stock of FRI and are the principal stockholders of FRI. FRI and Messrs. C. Johnson and R. Johnson may be deemed to be, for purposes of Rule 13d-3 under the Exchange Act, the beneficial owners of securities held by persons and entities for whom or for which FRI subsidiaries provide investment management services.

(4) Consists of (a) 2,083,990 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date and (b) 34,500 shares of common stock held directly by Mr. Culley.

(5) Consists of 56,965 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.

(6) Consists of 165,624 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.

(7) Consists of (a) 153,445 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date and (b) 100,000 shares of common stock held directly by Mr. Ramsay.

(8) Consists of 155,191 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.

(9) Consists of 2,991,878 shares of common stock subject to options currently exercisable.

(10) Consists of 696,903 shares of common stock subject to options currently exercisable.

(11) Consists of (a) 158,559 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date and (b) 294,598 shares of common stock held directly by Dr. Emanuele. The 294,598 shares owned by Dr. Emanuele were issued to him in his capacity as a former stockholder of SynthRx, Inc. pursuant to our merger agreement with SynthRx, Inc., which we acquired in April 2011, and are subject to the SynthRx Voting Agreement and will be voted consistent with the recommendation of our board of directors with respect to each proposal described in this proxy statement. See “General Information about the Meeting — Voting Agreements” above.

(12) Consists of (a) 3,899,574 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date and (b) 467,098 shares of common stock.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Our audit committee's charter requires that it reviews and approves any proposed related-party transaction that would require disclosure pursuant to Item 404(a) of Regulation S-K. If the audit committee approves a related-party transaction, it will regularly review the status of the transaction and any proposed material change to the previously approved terms or conditions.

Other than the following transactions and the transactions described under "Executive Officer Compensation" and "Director Compensation" below, since January 1, 2013, there has not been, nor currently are there proposed, any transactions or series of similar transactions in which we were or are to be a participant and the amount involved exceeds or will exceed the lesser of $120,000 or 1% of the average of our total assets as of December 31, 2013 and 2014, which is approximately $628,750, and in which any of our directors, executive officers, holders of more than 5% of our common stock or any member of the immediate family of any of the foregoing persons, had or will have a direct or indirect material interest.

Consulting and Employment Arrangements between Aires Pharmaceuticals and Edwin Parsley

Immediately prior to completion of our acquisition of Aires Pharmaceuticals, Inc. in February 2014, Dr. Parsley's employment with Aires was terminated. After completion of the acquisition, Aires, then our wholly-owned subsidiary, entered into a consulting agreement with Dr. Parsley whereby he agreed to provide certain services to Aires, including serving as its chief medical officer, through June 2014. Subsequently, on July 1, 2014, Dr. Parsley became a temporary employee of Aires, serving as its chief medical officer. In September 2014, Dr. Parsley was appointed by our board of directors as Mast's interim chief medical officer and, as of October 1, 2014, pursuant to terms approved by our board of directors, Dr. Parsley commenced full-time employment with Mast as our chief medical officer and senior vice president.

Pursuant to Aires' post-acquisition consulting agreement with Dr. Parsley, for services rendered from February through June 2014, Dr. Parsley earned an aggregate of $108,290 in consulting fees and reimbursement for travel and lodging-related expenses. Pursuant to the terms of his temporary employment with Aires, Dr. Parsley earned an aggregate of $30,058 from July through September 2014, consisting of his salary and reimbursement for certain travel and lodging-related costs incurred in commuting between his home in Houston, Texas and our offices in San Diego, California. In addition, pursuant to his pre-acquisition employment agreement with Aires, from February through September 2014, Dr. Parsley received an aggregate of $5,456 in reimbursement of costs from Aires to continue his healthcare insurance coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended (COBRA).

SynthRx Acquisition — Issuance of Milestone Shares

We acquired SynthRx, Inc. in April 2011. The merger agreement pursuant to which we acquired SynthRx provided that the former stockholders of SynthRx would receive, for no additional consideration, additional shares of our common stock upon achievement of specified development and regulatory milestones related to SynthRx's lead product candidate, which we refer to as MST-188. The first of the three milestones in the merger agreement was achieved in May 2013 and, as a result, we issued an aggregate of 250,000 shares of our common stock to the former stockholders of SynthRx. Dr. Emanuele, our senior vice president, development, was a former stockholder of SynthRx and we issued 52,543 of such shares to him.

Indemnification of Officers and Directors

Our certificate of incorporation and our bylaws, each as amended, provide that we will indemnify each of our directors and officers to the fullest extent permitted by the Delaware General Corporation Law. Further, we have entered into indemnification agreements with each of our directors and officers, and we have purchased directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our officers and directors, and persons who own more than 10% of our common stock, to file reports of securities ownership and changes in such ownership with the SEC. Our officers and directors and persons who own more than 10% of our common stock also are required by rules promulgated by the SEC to furnish us with copies of all Section 16(a) reports they file. Based solely upon a review of the copies of such reports furnished to us and written representations from our directors and executive officers, we believe that all Section 16(a) filing requirements were timely met during the fiscal year ended December 31, 2014.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of December 31, 2014 regarding equity compensation plans previously approved by our stockholders. We do not have any equity compensation plans that have not been approved by our stockholders. All share and per share information included in this table reflects retrospective application of the 1-for-25 reverse split of our outstanding common stock effected on April 23, 2010.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a)) (c)
Equity Compensation Plans Approved by Security Holders:			
2014 Omnibus Incentive Plan (1)	4,773,432	$ 0.64	10,388,691
2013 Omnibus Incentive Plan (1)	5,170,414	$ 0.49	0
Amended and Restated 2008 Omnibus Incentive Plan (1)	3,115,618	$ 1.25	0
2008 Omnibus Incentive Plan (1)	516,315	$ 4.15	0
2005 Equity Incentive Plan (1)	40,358	$ 50.05	0
2005 Employee Stock Purchase Plan (2)	0	$ —	306,945
Equity Compensation Plans Not Approved by Security Holders:	—	—	—
Total	13,616,137	$ 1.00	10,695,636

(1)

On June 19, 2014, the 2014 Omnibus Incentive Plan (the "2014 Plan") was approved by our stockholders and became effective. Upon effectiveness, the 2014 Plan amended, renamed and restated in its entirety the 2013 Omnibus Incentive Plan (the "2013 Plan"), and no awards have been or will be granted under the 2013 Plan after the 2014 Plan became effective. Similarly, when each of the 2013 Plan, the Amended and Restated 2008 Omnibus Incentive Plan and the 2008 Omnibus Incentive Plan was approved by our stockholders and became effective, upon effectiveness, such plan amended, renamed and restated in its entirety the plan that was then in effect, and no awards have since been or will be granted under any plan that was so amended, renamed and restated. In addition, when our stockholders approved the 2008 Omnibus Incentive Plan, the 2005 Equity Incentive Plan was terminated and no awards have since been or will be granted under that plan. Collectively, these prior stockholder-approved plans are referred to as the "Prior Plans." If any awards granted under the 2014 Plan or under any of the Prior Plans are forfeited, expire or are settled for cash pursuant to the terms of an award, we may use the shares that were subject to the award for new awards under the 2014 Plan to the extent of the forfeiture, expiration or settlement, other than under specified circumstances. The shares will be added to the 2014 Plan as one share for every share of common stock if the shares were subject to a stock option or stock appreciation right, and as 1.2 shares for every share of common stock if the shares were subject to an award other than a stock option or stock appreciation right. However, see Proposal 3 in this proxy statement for a description of the 2015 Omnibus Incentive Plan and its effect on the 2014 Plan, if approved by our stockholders.

(2) Our 2005 Employee Stock Purchase Plan contains a provision for an automatic increase in the number of shares available for grant on the first day of each fiscal year beginning in 2006 and on each anniversary of that date thereafter equal to the lesser of (i) one percent of the number of outstanding shares of our common stock on such day, (ii) 30,000 and (iii) such other amount as our board of directors may specify prior to the date such annual increase is to take effect. Although the 2005 Employee Stock Purchase Plan was approved by our stockholders in 2005, we have not implemented it or issued any shares under it, and this plan will expire in May 2015.

EXECUTIVE OFFICER COMPENSATION

We qualify as a “smaller reporting company” and have elected to comply with the scaled disclosure requirements available to smaller reporting companies under U.S. Securities and Exchange Commission rules. Accordingly, the information provided in this section does not include all of the information required of larger companies. For example, the overview below of our executive compensation program is not intended to meet the compensation discussion and analysis requirements applicable to non-smaller reporting companies.

Overview

Our executive compensation program is intended to enable us to attract and retain qualified executive officers and to align the interests of our executive officers with those of our stockholders by incentivizing and rewarding achievement of business objectives that we believe will enhance the value of our company and by promoting commitment to long-term success. The primary components of our executive compensation program are base salary, annual performance-based cash incentives, and stock option awards. Executive compensation is determined by our compensation committee, which consists entirely of independent directors.

As a clinical-stage biopharmaceutical company, we are focused on advancing our product candidates through clinical studies and other development activities and seeking approval from the U.S. Food and Drug Administration to commercialize them, and we expect to continue to incur substantial operating losses for the next several years. As such, the compensation committee evaluates corporate performance principally based on progress with product development and not on financial metrics. However, our annual performance objectives also typically include the maintenance of a specified level of capital. In 2014, our primary focus was advancing our vepoloxamer (MST-188) programs in sickle cell disease, arterial disease (in combination with thrombolytics) and heart failure, including enrollment in EPIC, our pivotal Phase 3 study of vepoloxamer in sickle cell disease, and in our Phase 2 study of vepoloxamer in acute limb ischemia. Accordingly, the performance objectives under our annual executive incentive plan were predominantly related to development of vepoloxamer. However, performance objectives related to advancing Phase 2 clinical development of AIR001, a program that was added to our pipeline through our acquisition of Aires Pharmaceuticals, Inc. in February 2014, also were included.

In setting the compensation of our executive officers, the compensation committee evaluates whether the compensation program encourages excessive risk-taking and the attributes of our executive compensation policies and practices that mitigate excessive risk-taking. The risk-mitigating factors considered by the compensation committee include:

- a compensation committee consisting entirely of independent directors;
- the regular (at least annual) review of the amount, form and terms of executive compensation by the compensation committee;
- a mix of different types of compensation, which provides balance between fixed and performance-based compensation and as to the timing of pay realization, incentivizing executive officers to act consistently with both near- and long-term value creation;
- a fixed component (base salary) that constitutes a significant percentage of the executive officers’ total cash compensation, which reduces incentive to take excessive risks in pursuit of annual bonuses;
- corporate performance objectives under an annual cash incentive plan that reflect a variety of elements of company performance, which diversifies the risk of focusing executive officers on any single performance metric;
- corporate performance objectives under an annual cash incentive plan that have year-to-year inter- relatedness, typically in relation to product development, which discourages achievement of short-term goals that would compromise longer-term success and, consequently, future compensation;
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the compensation committee's discretion under the annual cash incentive plan to modify, replace or eliminate performance objectives during the year in response to changing circumstances, which discourages risk-taking to achieve goals that the committee may determine are undesirable or irrelevant; and

- multi-year (generally, four years), time-based vesting on stock option awards, which requires long-term value creation in order for an executive officer to realize a substantial part of an award's value.

For 2014, our "named executive officers," or NEOs, were Brian Culley, our chief executive officer, Patrick Keran, our former president and chief operating officer, Santosh Vetticaden, our former chief medical officer and senior vice president, and R. Martin Emanuele, our senior vice president, development. Below is an overview of the components of their 2014 compensation. Mr. Keran's and Dr. Vetticaden's employment with us concluded in February 2015 and September 2014, respectively.

Base Salary

The purpose of the base salary component of our NEOs' compensation is to provide a level of income that allows us to attract and retain executive talent and mitigates pressure to focus on stock price performance to the detriment of other important aspects of our business. In 2014, the base salaries of Mr. Culley, Mr. Keran, Dr. Vetticaden and Dr. Emanuele were $405,000, $399,500, $360,500 and $300,000, respectively.

In January 2015, our compensation committee approved an approximately 3.5% increase to our NEOs' base salaries relative to their 2014 base salaries. Therefore, effective January 1, 2015, the base salaries of Mr. Culley, Mr. Keran and Dr. Emanuele were $419,175, $413,500 and $310,500, respectively.

Annual Performance-Based Cash Incentives

Our annual performance-based incentive plans are designed to motivate our executive officers to achieve near-term goals intended to enhance the long-term value of our company. In June 2014, our compensation committee approved the 2014 Executive Incentive Plan, pursuant to which executive officers were eligible for incentive awards, generally payable in cash, based on achievement of corporate and, potentially, individual performance objectives. Under the 2014 Executive Incentive Plan, each participant was assigned an incentive target that was expressed either as a specific dollar amount or as a percentage of annual base salary, and the participant's actual incentive award would be based on the level of achievement of the corporate objectives approved by the compensation committee and, if applicable, individual objectives approved by the chair of the compensation committee. The corporate objectives, which were set by the compensation committee at the time it adopted the 2014 Executive Incentive Plan, were applicable to all participants in order to align the interests of all our executive officers with one another and with our stockholders. To the extent individual objectives were adopted for a participant, that participant's award would be based 25% on the participant's achievement of individual objectives and 75% on the corporate objectives. For 2014, no individual objectives were adopted and awards for all executives were based entirely (100%) on achievement of corporate objectives. The following table lists the NEOs and their incentive targets under the 2014 Executive Incentive Plan:

Named Executive Officer	Incentive Target
Brian Culley	$202,500
Patrick Keran	$202,500
Santosh Vetticaden	35 %*
R. Martin Emanuele	30 %*

*Percentage of the officer's base salary.

Under the 2014 Executive Incentive Plan, the compensation committee had discretion to grant an incentive award that was less than the incentive target if it determined performance partially met objectives or was less than acceptable, and to grant an incentive award that exceeded the incentive target if it determined performance exceeded objectives or was excellent in view of prevailing conditions. Pursuant to the plan, in evaluating performance, the compensation committee was to consider the achievement of objectives, the degree to which performance exceeded the objective or an objective was partially achieved, the quality of achievement of partially achieved objectives, the degree of difficulty in achieving an objective, conditions that affected the ability to achieve objectives and such other factors as

it determined appropriate.

As discussed above, because we are a clinical-stage biopharmaceutical company, our compensation committee typically focuses on progress with product development in setting corporate objectives and determining actual award amounts under our annual incentive plans. The corporate objectives for the 2014 Executive Incentive Plan involved achieving research and development-related objectives for vepoloxamer and AIR001 during 2014 and achieving a specified level of capital at year-end. The corporate objectives under the 2014 Executive Incentive Plan and the compensation committee's assessment of achievement of such objectives are summarized below:

Corporate Objective	Weight	Achievement
Product Development – Vepoloxamer	80%	
Enrollment in the EPIC study		Exceeded objective
Enrollment in Phase 2 ALI study		Partially met objective
Progress with Phase 2 development in heart failure		Partially met objectives
Progress with CMC-related(1) initiatives		Partially met objectives
Conduct of nonclinical stroke study		Met objective
Conduct of nonclinical trauma study		Did not meet objective
Progress with intellectual property-related initiatives		Exceeded objective
Product Development – AIR001	10%	
Data generation from Phase 2 PAH(2) study		Met objective
Progress with institution-sponsored Phase 2a studies in HFpEF(3)		Partially met objectives
Cash Management	10%	
Year-end cash(4) consistent with forecast		Exceeded objective

(1) "CMC" refers to chemistry, manufacturing and control.
(2) "PAH" refers to pulmonary arterial hypertension.
(3) "HFpEF" refers to heart failure with preserved ejection fraction.
(4) "Cash" refers to cash, cash equivalents and investment securities.

In determining the amounts of awards under the 2014 Executive Incentive Plan, the compensation committee considered the weighting associated with each objective, whether the objective had been met within the targeted timeframe, the degree and quality of performance for partially achieved objectives, and the rationales as to why particular objectives were partially achieved or not achieved during the year. The compensation committee determined to award approximately 93.6% of their incentive targets, or $189,591, to each of Messrs. Culley and Keran and $84,263 to Dr. Emanuele. Dr. Vetticaden's employment ended in September 2014 and he did not receive any performance-based incentive award for 2014.

Stock Option Awards

We typically grant stock option awards to our employees, including our executive officers, with multi-year, time-based vesting. In 2014 and 2013, all option awards were granted under our stockholder-approved plans that do not permit repricing or exercise prices below 100% of the fair market value of our common stock on the date of grant (i.e., the closing sale price of our common stock on the NYSE MKT on the date of grant). Stock options granted to employees who have been employed by us for more than one year as of the grant date generally vest monthly over four years after the date of grant. Stock options granted to new employees generally vest monthly over four years after a one-year anniversary "cliff" vesting of 25% of their option grant. All option awards typically have a 10-year term. Because stock options are valuable only if our stock price is greater when the option is exercised than it was at the time the option was granted, we believe these equity awards promote a long-term perspective on corporate success and directly incentivize our NEOs to build long-term value. The multi-year vesting feature and 10-year term also foster

employee retention.

Employee stock option awards typically are granted twice a year. Our compensation committee believes that granting option awards twice a year, rather than once a year, better serves their intended retention and motivational purposes, and transitioned to a twice-yearly schedule in 2013. Employee option awards generally are granted around the beginning of the year (January) and around the time of our annual meeting of stockholders (June), with the size of each semi-annual award generally equal to one-half of the amount that would have been granted on a once-per-year schedule.

Since 2010, we generally have used what we refer to as a "carried interest" framework to determine the size of stock option awards for all of our employees, including our NEOs. The target carried interest for each employee, expressed as a percentage that we refer to as the carried interest percentage ("CIP"), refers to the targeted ownership stake in our company that the employee is expected to achieve over time, typically over four years. The CIP is then translated into a share number by multiplying it by the number of outstanding shares of our common stock, on an adjusted fully-diluted basis (which, for 2014, added only shares underlying outstanding warrants with exercise prices of $2.75 or less per share). The resulting share number is then allocated over the designated period (generally, four years), with the aggregate size of year 1 awards typically about 50% (or 25% at each semi-annual grant date) of the total amount to be granted over the four-year period, and the aggregate size of awards granted in years 2 – 4 typically about 16.6% (or 8.3% at each semi-annual grant date) of the total amount for the four-year period. For example, if the share-equivalent of the

target CIP was 100 shares, an employee's option awards in year 1 would be for a total of 50 shares and in each of years, 2 – 4, that employee's option awards would be for a total of approximately 16 shares, assuming that the total number of our outstanding shares, on an adjusted fully-diluted basis, did not change between year 1 and year 4. If the number of our outstanding shares, on an adjusted fully-diluted basis, increases, the target share number increases, so the size of option awards may also increase. For grants to Mr. Culley, Mr. Keran, and other employees who received their first option award under the carried interest framework in 2010, the size of option awards after the first four-year period generally has been determined as approximately 5% of the share-equivalent of the employee's CIP. The compensation committee or the board of directors, as applicable, always has discretion to make the size of an award smaller than a strict application of the carried interest framework may call for, and has done so in the past, including with regard to the NEO and other employee option awards granted in January and June 2014.

We believe the carried interest framework is well-suited for our company because it provides for a coherent approach to achieving targeted ownership levels for our NEOs following changes to our capitalization, which helps ensure that these equity awards continue to achieve their intended retention and motivational purposes. To determine the CIP for each NEO, the compensation committee considers the NEO's role, responsibilities and past performance, executive compensation survey data published by the San Diego Biotechnology Employee Development Coalition regarding ownership stakes of executives in similar positions, and the CIPs for other of our executive officers. The aggregate target CIP for our NEOs was approximately 7.3%, but, in light of Mr. Keran's and Dr. Vetticaden's departures, as of the record date for the Annual Meeting, the aggregate target CIP for our currently-employed NEOs is approximately 3.4%, and, as of the record date for the Annual Meeting, the aggregate deemed ownership stake of our currently-employed NEOs, for purposes of applying the carried interest framework, is approximately 2.9% on an adjusted fully-diluted basis (which, in addition to outstanding shares, includes only shares underlying outstanding warrants with exercise prices of $2.75 or less per share). The ownership stake utilized for the carried interest framework does not reflect the NEOs' current "beneficial ownership" (calculated in accordance with SEC rules) because the carried interest framework (unlike the beneficial ownership calculation) takes into account all shares underlying outstanding stock options, including those that are not vested or exercisable and will not be vested or exercisable within 60 days, but does not include options with exercise prices per share of $57.50 or greater. Because the NEOs' options vest and become exercisable over a minimum of four years from the grant date, the NEOs deemed ownership stake for purposes of the carried interest framework is significantly larger than the NEOs' beneficial ownership calculated in accordance with SEC rules. Notwithstanding the compensation committee's general practice of applying the carried interest framework to determine stock option awards, as noted above, the compensation committee and the board of directors have complete discretion with regard to size and terms of stock option awards. For our NEOs, the compensation committee may determine to adjust the CIP or, for any particular award, may determine to make the size of the grant greater or less than what would be granted by following a strict application of the carried interest framework. The compensation committee may exercise this discretion for a variety of reasons, including the number of shares that remain available under our stockholder-approved equity plan, an officer's ownership in our company apart from company-granted stock options, anticipated changes to an officer's role or responsibilities, and anticipated changes to our company's capitalization. For example, in Dr. Emanuele's case, the compensation committee has taken into consideration his stock ownership resulting from our acquisition of SynthRx, Inc. in determining the size of his option awards and granted option awards that were smaller than a strict application of the carried interest framework would call for.

In 2014, our NEOs were granted option awards in January and in June. In January 2014, Mr. Culley, Mr. Keran, Dr. Vetticaden and Dr. Emanuele each received an option to purchase 650,300, 650,300, 295,100 and 115,900 shares of our common stock, respectively. The options have a 10-year term, an exercise price of $0.47 per share, which was the closing price of our common stock on the NYSE MKT on the grant date, and vest and become exercisable, subject to the officer's continued service to us, in 48 substantially equal monthly installments. In June 2014, Mr. Culley, Mr. Keran, Dr. Vetticaden and Dr. Emanuele each received an option to purchase 1,114,250, 1,114,250, 529,300 and 285,400 shares of our common stock, respectively. The options have a 10-year term, an exercise price of $0.65 per

share, which was the closing price of our common stock on the NYSE MKT on the grant date, and vest and become exercisable, subject to the officer's continued service to us, in 48 substantially equal monthly installments.

Other Benefits and Post-Termination Compensation

Our NEOs, as well as our other regular, full-time employees are eligible for a variety of health and welfare and paid time-off benefits. We believe that these benefits enable us to offer more competitive compensation packages and support employee focus and productivity. In addition, as described below, our NEOs may be entitled to receive additional benefits upon termination of their employment. These arrangements are intended to keep our NEOs focused on corporate interests while employed, including in the face of potential change in control transactions, and, at the time they were implemented, were deemed necessary to attract or retain the employment of the NEOs. Additional advantages to us include our receipt of a release of claims as a precondition to paying any cash severance.

401(k) Plan and Company Match. We have a defined contribution savings plan pursuant to Section 401(k) of the Internal Revenue Code of 1986. The plan is for the benefit of all employees and permits voluntary contributions by qualifying employees of up to 100% of eligible compensation, subject to Internal Revenue Service-imposed maximum limits. Under the terms of the plan, we are required to make matching contributions equal to 100% of employee contributions up to 6% of eligible compensation, limited by

the IRS-imposed maximum, for all employees. With respect to the NEOs, we incurred total expenses of approximately $62,200 and $45,900 in matching contributions in 2014 and 2013, respectively.

Life Insurance Policies. We provide all regular, full-time employees, including the NEOs, with a life insurance policy equal to two times the employee's annual base salary, up to a maximum coverage of $750,000.

Paid Time-off. Mr. Culley and Dr. Emanuele accrue 30 and 23 vacation days per year, respectively, subject to annual adjustment based on the number of years of the officer's employment with us. Prior to the conclusion of their employment, Mr. Keran and Dr. Vetticaden accrued 28 and 22 vacation days per year, respectively. Under our policy, the maximum number of vacation days that an employee, including our NEOs, can accrue is two times the employee's annual accrual limit. Upon conclusion of his employment with us in September 2014, we paid Dr. Vetticaden approximately $12,000 for accrued, but unused vacation time. If the other NEOs' employment with us had terminated as of December 31, 2014, our payment obligations to Mr. Culley, Mr. Keran and Dr. Emanuele for accrued, but unused vacation time would have been approximately $93,000, $86,000 and $51,000, respectively. Upon conclusion of his employment with us in February 2015, we paid Mr. Keran approximately $89,000 for accrued, but unused vacation time.

Perquisites. We did not provide any of our NEOs with perquisites in 2014 that exceeded $10,000 in the aggregate for any person.

Accelerated Vesting of Stock Options. As described in more detail below under "Acceleration of Vesting of Option Awards," the vesting and exercisability of stock options held by our NEOs may accelerate to various degrees under circumstances involving a change in control and/or involuntary termination, depending on the particular terms of the agreement governing the stock option.

Employment Retention and Severance Arrangements. The employment of each of our NEOs is at-will and they or we may terminate their employment with us at any time with or without prior notice. In July 2009, the compensation committee adopted a retention and severance plan (the "Retention Plan") applicable to each of Messrs. Culley and Keran, the terms of which are discussed below. The compensation committee determined that this plan was necessary to incentivize and retain Messrs. Culley and Keran, who at the time were our only employees, and reinforce their dedication to us during a period when they would have been likely to seek alternative employment otherwise. In connection with negotiating the terms of Dr. Vetticaden's and Dr. Emanuele's employment with our company, which commenced in September 2012 and April 2011, respectively, we agreed to provide them with similarly structured severance arrangements. The terms of Dr. Vetticaden's and Dr. Emanuele's arrangements are set forth in their respective offer letter agreements with us and are discussed below.

Under the Retention Plan, in the cases of Messrs. Culley and Keran, and pursuant to the terms of Dr. Vetticaden's and Dr. Emanuele's respective offer letters, if the employment of the NEO terminates at any time as a result of an involuntary termination, and the NEO delivers and does not revoke a general release of claims, which confirms any post-termination obligations and/or restrictions applicable to him, he will be entitled to (i) an amount equal to 12 months (for Messrs. Culley and Keran) or nine months (for Drs. Vetticaden and Emanuele) of his then-current base salary, less applicable withholdings, and (ii) an amount equal to the estimated cost of continuing his healthcare coverage and the coverage of his dependents who are covered at the time of the involuntary termination under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, for a period equal to 12 months (for Messrs. Culley and Keran) or nine months (for Drs. Vetticaden and Emanuele). These severance benefits will be paid in a lump-sum on the date the general release of claims becomes effective. If Mr. Culley's, Mr. Keran's and Dr. Emanuele's employment with us had been involuntarily terminated as of December 31, 2014, our aggregate severance obligations to them under the above-described arrangements would have been approximately $435,000, $429,000, and $248,000, respectively. Dr. Vetticaden's departure in September 2014 was deemed an involuntary termination for purposes of his

offer letter and, as a result, upon effectiveness of his general release of claims, we paid Dr. Vetticaden severance of approximately $298,000 in accordance with the terms of his offer letter. Mr. Keran's departure in February 2015 was deemed an involuntary termination for purposes of the Retention Plan and, as a result, upon effectiveness of his general release of claims, we paid Mr. Keran severance of approximately $443,000 in accordance with the terms of the Retention Plan.

For purposes of the Retention Plan, an "involuntary termination" means (i) without the officer's express written consent, an action by our board of directors or external events causing or immediately portending a material reduction or alteration of the officer's duties, position or responsibilities relative to the officer's duties, position or responsibilities in effect immediately prior to such reduction or alteration, or the removal of the officer from such position, duties or responsibilities; provided, however, that an involuntary termination will not be deemed to occur with respect to Mr. Culley, if he remains the head of and most senior individual within our company's (or our successor's) business development function, and with respect to Mr. Keran, if he remains the head of and most senior individual within our company's (or our successor's) legal function; (ii) without the officer's express written consent, a material reduction by us of the officer's base salary as in effect immediately prior to such reduction; (iii) without the officer's express written consent, the relocation of the officer's principal place of employment with us by more than 50 miles; (iv) any termination of the officer's employment by us without cause (as defined below), or (v) a material breach of the

plan, including, but not limited to our failure to obtain the assumption of the plan by any successors, as contemplated in the plan. For purposes of the Retention Plan, "cause" means (A) any act of personal dishonesty taken by the officer in connection with his responsibilities as an employee which is intended to result in substantial personal enrichment of the officer; (B) the officer's conviction of a felony that our board of directors reasonably believes has had or will have a material detrimental effect on our reputation or business; (C) a willful act by the officer that constitutes misconduct and is materially injurious to us, or (D) continued willful violations by the officer of the officer obligations to us after there has been delivered to the officer a written demand for performance from us that describes the basis for our belief that the officer has not substantially performed his duties.

Dr. Vetticaden's and Dr. Emanuele's offer letters contain substantially the same definitions of involuntary termination except that, in Dr. Vetticaden's case, in lieu of clause (v) above, the offer letter includes,"(v) our failure to obtain the assumption of the offer letter by any successors as contemplated in the offer letter," and, in Dr. Emanuele's case, there is no clause (v). With regard to the definition of "cause," in Dr. Vetticaden's case, it is substantially the same as under the Retention Plan except that it includes any act of personal dishonesty by Dr. Vetticaden in connection with his hiring process that our board of directors believes has had or will have a material detrimental effect on our reputation or business. Dr. Emanuele's offer letter defines "cause" as: (I) any significant act of personal dishonesty by him in connection with his responsibilities as an employee; (II) acts or omissions constituting recklessness or willful misconduct on his part with respect to his obligations or otherwise relating to our business; (III) any material breach or continued willful violations by him of his obligations to us, including under any offer letter, confidentiality and inventions assignment agreement or other agreement by and between him and us (other than in his capacity as stockholders' agent under our merger agreement with SynthRx), which is not cured during a period of 30 days after written notice from us; (IV) his conviction (including any plea of guilty or nolo contendere) of any felony or other criminal act involving dishonesty or moral turpitude; or (V) any material failure by him to comply with our written policies.

Summary Compensation Table

The following table sets forth compensation information for the years ended December 31, 2014 and December 31, 2013 for individuals who served as: (a) our principal executive officer, or PEO, (b) our two most highly compensated executive officers other than our PEO who were serving as executive officers as of December 31, 2014, and (c) one additional individual who would have been one of our two most highly compensated executive officers, other than our PEO, but for the fact that he was no longer an executive officer as of December 31, 2014. We refer to the executive officers listed in the following table as the "named executive officers" or "NEOs."

2014 Summary Compensation Table

Name and Principal Position	Year	Salary	Bonus	Stock Awards	Option Awards (1)	Non-Equity Incentive Plan Compensation (2)	All Other Compensation (3)	Total
Brian M. Culley(4)	2014	$405,000	—	—	$863,039	$ 189,591	$ 16,440	$1,474,070
Chief Executive Officer	2013	$393,750	—	—	$437,655	$ 191,953	$ 16,140	$1,039,498
Patrick L. Keran(5)	2014	$399,500	—	—	$863,039	$ 189,591	$ 16,440	$1,468,570
Former President and Chief Operating Officer	2013	$388,750	—	—	$437,655	$ 191,953	$ 16,140	$1,034,498
Santosh J. Vetticaden(6)	2014	$265,967	—	—	$404,510	—	$ 327,586 (7)	$998,063

Former Chief Medical Officer and Senior Vice President	2013	$350,000	—	—	$50,313	$ 104,891	$ 17,094	$522,298
R. Martin Emanuele(8) Senior Vice President, Development	2014	$300,000	—	—	$201,033	$ 84,263	$ 20,078	$605,374

(1) The amounts in this column represent the aggregate grant date fair value of option awards granted to the named executive officers in 2014 and 2013, respectively, calculated in accordance with the provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, Stock Compensation, except that any estimate of forfeitures was disregarded. For a description of the assumptions used to calculate these amounts, see Note 10 to our audited consolidated financial statements included in our annual report on Form 10-K for the year ended December 31, 2014 filed with the SEC on March 24, 2015. These option awards were granted under our 2013 Omnibus Incentive Plan or 2014 Omnibus Incentive Plan. Pursuant to the plan's terms, the exercise price per share of these option awards cannot be lowered without prior approval of our stockholders, except in the event of a merger, reorganization, consolidation, recapitalization, dividend or distribution (whether in cash, shares or other property, other than a regular cash dividend), stock split, reverse stock split, spin-off or similar transaction or other change in corporate structure affecting our common stock or the value thereof, in each case as our compensation committee may deem equitable or appropriate. The actual value of any option award to an officer, if

any, will depend on the excess of our stock price over the exercise price on the date the option is exercised. The actual value realized by the officer upon exercise of the option awards may be higher or lower than the value shown in this column.

(2) We paid the amounts set forth in this column pursuant to the terms of our 2014 Executive Incentive Plan and 2013 Executive Incentive Plan, as applicable. See “Overview – Annual Performance-Based Cash Incentives” above for information regarding the 2014 Executive Incentive Plan.

(3) Unless otherwise noted, the amounts in this column consist of (a) matching contributions made pursuant to our tax-qualified 401(k) plan and (b) premiums paid for life insurance policies for the benefit of the NEO.

(4) Mr. Culley also serves as a member of our board of directors, but he does not receive any additional compensation for such service.

(5) Mr. Keran’s employment with us concluded in February 2015.

(6) Dr. Vetticaden’s employment with us concluded in September 2014.

(7) Includes severance of $297,796 and a payment of $11,979 for accrued but unused vacation time.

(8) Dr. Emanuele was not an NEO for the year ended December 31, 2013. Accordingly, this table does not include 2013 compensation information for Dr. Emanuele.

Outstanding Equity Awards at Fiscal Year-End 2014

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of December 31, 2014. Share and per share information included in this table for option awards granted before April 23, 2010 reflects retrospective application of the 1-for-25 reverse split of our outstanding common stock effected on April 23, 2010.

Outstanding Equity Awards at Fiscal Year-End 2014

	Option Awards				
Name	Number of Securities Underlying Unexercised Options (#) Exercisable(1)	Number of Securities Underlying Unexercised Options (#) Unexercisable(1)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date
Brian M. Culley	4,000	—	—	$57.50	07/13/2015
	3,200	—	—	$118.75	01/30/2016
	5,999	—	—	$68.75	01/11/2017
	8,000	—	—	$13.50	03/30/2018
	67,999	—	—	$3.25	07/20/2019
	63,999	—	—	$8.00	02/02/2020
	75,000 (2)	25,000 (2)	—	$2.29	02/01/2021
	213,541 (3)	36,459 (3)	—	$3.26	07/05/2021
	309,895 (4)	115,105 (4)	—	$0.60	12/07/2021
	66,436 (5)	72,214 (5)	—	$0.59	01/02/2023
	340,237 (6)	567,063 (6)	—	$0.50	06/19/2023
	149,027 (7)	501,273 (7)	—	$0.47	01/02/2024
	139,281 (8)	974,969 (8)	—	$0.65	06/19/2024
Patrick L. Keran	4,000	—	—	$74.75	08/17/2016
	1,999	—	—	$68.75	01/11/2017
	8,000	—	—	$13.50	03/30/2018
	67,999	—	—	$3.25	07/20/2019
	63,999	—	—	$8.00	02/02/2020
	75,000 (2)	25,000 (2)	—	$2.29	02/01/2021

	213,541 (3)	36,459	(3)	—	$3.26	07/05/2021
	309,895 (4)	115,105	(4)	—	$0.60	12/07/2021
	66,436 (5)	72,214	(5)	—	$0.59	01/02/2023
	340,237 (6)	567,063	(6)	—	$0.50	06/19/2023
	149,027 (7)	501,273	(7)	—	$0.47	01/02/2024
	139,281 (8)	974,969	(8)	—	$0.65	06/19/2024
Santosh J. Vetticaden	412,499	—		—	$0.69	06/30/2015 (9)
	58,593	—		—	$0.50	06/30/2015 (9)
	104,514	—		—	$0.47	06/30/2015 (9)
	121,297	—		—	$0.65	06/30/2015 (9)
R. Martin Emanuele	26,560 (7)	89,340	(7)	—	$0.47	01/02/2024
	35,675 (8)	249,725	(8)	—	$0.65	06/19/2024

(1) The agreements covering these option awards contain vesting acceleration provisions triggered by certain change in control and/or involuntary termination circumstances as described below under "Acceleration of Vesting of Option Awards." Consequently, the vesting schedules described for each option in this table are subject to acceleration in connection with a change in control and/or involuntary termination, as described below. Otherwise, vesting is subject to the NEO's continued service to our company.

(2) This option was granted under our 2008 Omnibus Incentive Plan (the "2008 Plan") in February 2011. It vests and becomes exercisable in four equal annual installments. One-fourth of the total underlying shares vested and became exercisable on January 1 of each of 2012, 2013 and 2014 and will vest and become exercisable on January 1 of 2015.

(3) This option was granted under our Amended and Restated 2008 Omnibus Incentive Plan (the "Amended and Restated 2008 Plan") in July 2011. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on August 1, 2011 and will vest and become exercisable on the first day of each month thereafter.

(4) This option was granted under the Amended and Restated 2008 Plan in December 2011. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on February 1, 2012 and will vest and become exercisable on the first day of each month thereafter.

(5) This option was granted under the Amended and Restated 2008 Plan in January 2013. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on February 2, 2013 and will vest and become exercisable on the second day of each month thereafter.

(6) This option was granted under the 2013 Omnibus Incentive Plan (the "2013 Plan") in June 2013. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on July 19, 2013 and will vest and become exercisable on the nineteenth day of each month thereafter.

(7) This option was granted under the 2013 Plan in January 2014. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on February 2, 2014 and will vest and become exercisable on the second day of each month thereafter.

(8) This option was granted under the 2014 Omnibus Incentive Plan (the "2014 Plan") in June 2014. It vests and becomes exercisable in substantially equal monthly installments over four years. Approximately 1/48th of the total underlying shares vested and became exercisable on July 19, 2014 and will vest and become exercisable on the nineteenth day of each month thereafter.

(9) This option will terminate on June 30, 2015 in accordance with its terms as a result of the conclusion of Dr. Vetticaden's employment in September 2014, which was deemed an involuntary termination as such term is defined in the option grant agreement.

Acceleration of Vesting of Option Awards

Stock option awards granted to Mr. Culley, Mr. Keran, Dr. Vetticaden and Dr. Emanuele contain vesting acceleration provisions triggered by certain change in control and/or involuntary termination circumstances. With regard to option awards granted to Messrs. Culley and Keran, in the event Mr. Culley or Mr. Keran ceases to provide services to us as an employee by reason of an involuntary termination, his option award will, immediately prior to such involuntary termination, vest and become exercisable with respect to 25% of the total number of shares subject to the option award, and the exercisability of the then-vested portion of the option award (after taking into account the foregoing acceleration) will be extended such that the option award will be exercisable for a period of 12 months following the date of such involuntary termination but not later than the 10-year term expiration, subject to limited exceptions. In addition, the vesting and/or exercisability of each option award will accelerate or be extended under certain circumstances, including, (a) in the event of a change in control (as defined in the 2008 Plan, the Amended and Restated 2008 Plan, the 2013 Plan or the 2014 Plan, depending upon the plan under which the option was granted), acceleration of vesting with respect to 50% of the then unvested shares on the day prior to the date of the change in control and, subject to the respective officer's continuous service, with respect to the remaining 50% of the then unvested shares on the one year anniversary of the date of the change in control, (b) subject to the preceding clause (a), in the event of a change of control, to the extent the successor company (or a subsidiary or parent thereof) does not assume or substitute for the option award, acceleration in full on the day prior to the date of the change in control if the officer is then providing services or was the subject of an involuntary termination in connection with, related to or in contemplation of the change in control and exercisability for a period of 24 months following the date of such involuntary termination but not later than the 10-year term expiration, subject to limited exceptions, and (c) subject to the preceding clause (a), in the event of a change in control, to the extent the successor company (or a subsidiary or parent thereof) assumes or substitutes for the option award, and in the event of an involuntary termination of the officer within 12 months following the date of the change in control, acceleration in full of vesting and exercisability for a period of 24 months following the date of such involuntary termination but not later than the 10-year term expiration, subject to limited exceptions. Under the terms of Mr. Culley's and Mr. Keran's option awards, the definitions of "involuntary termination" and "cause" are the same as described above with respect to the Retention Plan,

except that the definition of involuntary termination does not include exceptions in the event that Mr. Culley remains the head of and most senior individual within our company's (or our successor's) business development function or in the event that Mr. Keran remains the head of and most senior individual within our company's (or our successor's) legal function.

Mr. Keran concluded his employment with us in February 2015. For purposes of his option awards, his departure was deemed an involuntary termination, resulting in the acceleration of vesting described above, such that 1,338,476 additional shares subject to his option awards vested the date his employment ended (valued at approximately $12,665, based on the difference between the closing sale price of our common stock on the trading day immediately preceding the date his employment ended (because his employment ended on a weekend), and the applicable exercise prices that are less than that closing sale price). Of the shares subject to accelerated vesting, 949,075 shares, or approximately 71%, were "out-of-the-money" on the date Mr. Keran's employment ended because the option exercise prices exceeded the closing sale price. In March 2015, we entered into an amendment of stock option agreements with Mr. Keran whereby we agreed to extend the period during which the vested portions of his outstanding options with exercise prices of $13.50 per share or less would be exercisable to November 15, 2016.

Dr. Vetticaden's stock option agreements provide that in the event he ceases to provide services to us as an employee by reason of an involuntary termination, his option award will, immediately prior to such involuntary termination, vest and become exercisable with respect to 18.75% of the total number of shares subject to the option award, and the exercisability of the then-vested portion of the option award (after taking into account the foregoing acceleration) will be extended such that the option award will be exercisable for a period of nine months following the date of such involuntary termination but not later than the 10-year term expiration, subject to limited exceptions. Dr. Vetticaden's employment with us concluded in September 2014. For purposes of his option awards, his departure was deemed an involuntary termination, resulting in the acceleration of vesting described above, such that 290,511 additional shares subject to his option awards vested the date his employment ended (valued at approximately $9,537, based on the difference between the closing sale price of our common stock on the date his employment ended and the applicable exercise prices that are less than that closing sale price). Of the shares subject to accelerated vesting, 211,743 shares, or approximately 73%, were "out-of-the-money" on the date Dr. Vetticaden's employment ended because the option exercise prices exceeded the closing sale price. In accordance with the terms of his option agreements, Dr. Vetticaden may exercise the vested portions of his options through the close of business on June 30, 2015, after which time the options will terminate.

Dr. Emanuele's option awards may vest and become exercisable in full (100%) in the event of a change in control (as defined in the 2013 Plan and 2014 Plan) if the successor company (or a subsidiary or parent thereof) does not assume or substitute for the option awards or the successor company assumes or substitutes for the option awards but Dr. Emanuele's employment is subsequently terminated by us or the successor company without cause or by Dr. Emanuele for good reason within 24 months after the change in control. For purposes of Dr. Emanuele's option awards, "cause" means the commission of any act of fraud, embezzlement or dishonesty by him, any unauthorized use or disclosure by him of our confidential information or trade secrets, or any other intentional misconduct by him adversely affecting our business affairs in a material manner. For purposes of Dr. Emanuele's option awards, "good reason" means, in each case without his explicit written consent, which he may withhold or provide in his sole and absolute discretion, (i) a reduction by us or a successor company (or a subsidiary or parent thereof) of more than 10% in his annual base salary as in effect immediately prior to the change in control; (ii) a reduction by us or a successor company (or a subsidiary or parent thereof) of more than 10% of his individual annual target or bonus opportunity, except under circumstances where we or the successor company (or a subsidiary or parent thereof) implement changes to the bonus structure of similarly situated employees, including but not limited to changes to the bonus structure designed to integrate our personnel with other personnel of the successor company (or a subsidiary or parent thereof); (iii) a change in position that materially reduces his level of responsibility, including the level of person to whom he reports; or (iv) a relocation following the change in control of his primary office location by more than 50 miles or that would reasonably be expected to increase his commute such that his round-trip commute would reasonably be expected to increase by more than one hour per day.

Generally, under the 2008 Plan and the Amended and Restated 2008 Plan, a change in control occurs upon (a) a merger or consolidation of our company with or into another entity, (b) the sale, transfer or other disposition of all or substantially all of our assets, (c) certain changes in the majority of our board of directors within a period of 36 consecutive months, (d) the acquisition, pursuant to a tender or exchange offer made directly to our stockholders that our board of directors does not recommend, of more than 50% of the total combined voting power in our outstanding securities, (e) approval by our stockholders of a plan of complete liquidation or dissolution, or (f) a determination by the majority of our board of directors that a change in control has occurred. The definition of change in control under the 2013 Plan and the 2014 Plan is substantially the same except that it does not include a determination by the majority of our board of directors that a change in control has occurred.

DIRECTOR COMPENSATION

The following table shows compensation information for the individuals who served as our non-employee directors during the year ended December 31, 2014. Mr. Culley, our only director who is also one of our employees, does not receive any additional compensation for his service as a director.

Director Compensation for Fiscal Year 2014

Name	Fees Earned or Paid in Cash	Stock Awards	Option Awards (1)(2)	Non-Equity Incentive Plan Compensation	Nonqualified Deferred Compensation Earnings	All Other Compensation	Total
Jack Lief	$68,500	—	$23,822	—	—	—	$92,322
David A. Ramsay	$47,500	—	$23,822	—	—	—	$71,322
Lewis J. Shuster	$46,500	—	$23,822	—	—	—	$70,322
Howard C. Dittrich(3)	$15,611	—	$47,644	—	—	—	