

Mast Therapeutics, Inc.
Form DEF 14A
April 29, 2014
Table of Contents

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

Filed by a party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement

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

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material Pursuant to §240.14a-12

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):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

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

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

Table of Contents

MAST THERAPEUTICS, INC.

12390 El Camino Real, Suite 150

San Diego, CA 92130

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Be Held June 19, 2014

The 2014 Annual Meeting of Stockholders of Mast Therapeutics, Inc. will be held on June 19, 2014 at 9:00 a.m. Pacific Time at the offices of Sheppard, Mullin, Richter & Hampton, LLP, 12275 El Camino Real, Suite 200, 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 four 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, 2014;
3. To approve the Mast Therapeutics, Inc. 2014 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 22, 2014 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 12390 El Camino Real, Suite 150, 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, 2014

Important Notice Regarding the Availability of Proxy Materials for the Stockholders Meeting To Be Held on June 19, 2014. This notice of meeting, the proxy statement for the meeting and our annual report for the fiscal year ended December 31, 2013 are available at <https://materials.proxyvote.com/576314>

Table of Contents

TABLE OF CONTENTS

	Page
<u>GENERAL INFORMATION ABOUT THE MEETING</u>	1
<u>BOARD OF DIRECTORS</u>	6
<u>NOMINEES FOR ELECTION TO THE BOARD</u>	6
<u>CORPORATE GOVERNANCE</u>	8
<u>DIRECTOR NOMINATIONS</u>	12
<u>COMMUNICATIONS WITH DIRECTORS</u>	14
<u>EXECUTIVE OFFICERS</u>	15
<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	17
<u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS</u>	19
<u>SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE</u>	19
<u>EQUITY COMPENSATION PLAN INFORMATION</u>	20
<u>EXECUTIVE OFFICER COMPENSATION</u>	22
<u>DIRECTOR COMPENSATION</u>	32
<u>AUDIT COMMITTEE REPORT</u>	35
<u>PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	36
<u>PROPOSAL 1 ELECTION OF DIRECTORS</u>	37
<u>PROPOSAL 2 RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM</u>	37
<u>PROPOSAL 3 APPROVAL OF THE MAST THERAPEUTICS, INC. 2014 OMNIBUS INCENTIVE PLAN</u>	38
<u>OTHER MATTERS</u>	52
<u>STOCKHOLDER PROPOSALS FOR 2015 ANNUAL MEETING</u>	52

Table of Contents

Mast Therapeutics, Inc.

12390 El Camino Real, Suite 150

San Diego, CA 92130

(858) 552-0866

PROXY STATEMENT

2014 ANNUAL MEETING OF STOCKHOLDERS

To Be Held On June 19, 2014

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 2014 Annual Meeting of Stockholders to be held on June 19, 2014, at 9:00 a.m. Pacific Time at the offices of Sheppard, Mullin, Richter & Hampton, LLP, 12275 El Camino Real, Suite 200, 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, 2013 are collectively referred to as the proxy materials. The proxy materials are first being made available to our stockholders on or about April 29, 2014.

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:

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1. To elect four 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, 2014;
3. To approve the Mast Therapeutics, Inc. 2014 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 22, 2014 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

Table of Contents

thereof. At the close of business on the record date, we had 114,136,502 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 18, 2014 (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 18, 2014 to:

Mast Therapeutics, Inc.

12390 El Camino Real, Suite 150

San Diego, CA 92130

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Attention: Corporate Secretary

2

Table of Contents

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, 2014; and

For approval of the Mast Therapeutics, Inc. 2014 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 2014 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.

Table of Contents

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 incumbent director who is not 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 and 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. 2014 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. Notwithstanding the foregoing, until the earlier of: (i) U.S. Food and Drug Administration (FDA) approval of a new drug application covering the use of purified poloxamer 188 for the treatment of sickle cell crisis in children, which is the third milestone under our merger agreement with SynthRx, and (ii) April 8, 2015, which is the four-year anniversary of the closing of our acquisition of SynthRx, each stockholder party is permitted to vote the SynthRx Subject Shares in such stockholder's sole discretion solely with respect to a change of control that involves the transfer of SynthRx's assets to a third party and in which at least 80% of the consideration received by our company (or our stockholders) is non-contingent and paid in cash. 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

Table of Contents

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, 2,370,349 outstanding shares of our common stock, which represent approximately 2.1% of the shares entitled to vote at the Annual Meeting, are Subject Shares. While the Voting Agreements are in effect, they provide us with effective 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., 12390 El Camino Real, Suite 150, 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.

Table of Contents**BOARD OF DIRECTORS**

The current members of our board of directors, their ages as of April 22, 2014, 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	42	Chief Executive Officer and Director	None	December 2011
Jack Lief	68	Chair of the Board	Audit Committee Compensation Committee (chair) Nominating & Governance Committee	September 2006
David A. Ramsay	49	Director	Audit Committee (chair) Compensation Committee Nominating & Governance Committee	June 2011
Lewis J. Shuster	58	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 four and has nominated four 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. 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 iTherx, Inc. (formerly, Immusol, Inc.) in San Diego, where his most recent title was director of business

Table of Contents

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.

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 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 for weight management, cardiovascular disease, inflammation and other disorders. He also has served as chairman of Arena's board of directors since October 2007. 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 BIOCUM, a life science industry association representing more than 550 member companies in Southern California, and he was the chairman of the board of directors of BIOCUM 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. 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

Table of Contents

and executive vice president corporate development of Pharmacoepia, Inc., a drug discovery product and service company, and also as president and chief operating officer of Pharmacoepia Labs, a division of Pharmacoepia, 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 a member of the board of directors of Response Biomedical Corporation, a medical device company engaged in the research, development, commercialization, and distribution of diagnostic technologies for the medical point of care and on-site environmental testing markets. 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 provide our board of directors with 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. 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 2013. 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 responsibilities of the audit committee include appointing and providing for the compensation of an independent registered public accounting firm to conduct an annual audit of our financial statements, overseeing the work and evaluating the performance of the independent auditor, reviewing and evaluating our accounting principles and practices, approving all professional services to be provided to us by our independent registered public accounting firm, reviewing and overseeing any related party transactions, overseeing 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 2013, except that Ted W. Love, a former member of our board of directors, served on the compensation committee between June 19, 2013 and August 7, 2013, the date on which he resigned from our board of directors. 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

Table of Contents

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 2013. 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, assessing and making recommendations to our board of directors regarding our corporate governance guidelines and providing oversight with respect to corporate governance and succession planning 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 2013, our board of directors met seven times, the audit committee met four times, the compensation committee met twice and the nominating and governance committee met four times. Each member of our board of directors nominated for election at the Annual Meeting who served on our board during all or part of 2013 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,

Table of Contents

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)'s discretion, grant awards that are fully vested on the date of grant of the award or grant awards with more restrictive vesting requirements.

With respect to executive officer compensation, the compensation committee met once during the fourth quarter of 2012 and once during the first quarter of 2013 to review and evaluate 2012 performance and set 2013 compensation for our executive officers, including our chief executive officer, Brian Culley, our president and chief operating officer, Patrick Keran, and our chief medical officer, Santosh Vetticaden. At those meetings, the compensation committee determined the components of 2013 compensation of our executive officers, set base salaries, granted stock option awards, approved cash awards under the short-term incentive plan adopted by the compensation committee in February 2012, and adopted a short-term incentive plan for 2013 and corporate objectives under that plan. At meetings held in the fourth quarter of 2013 and the first quarter of 2014, the compensation committee reviewed and evaluated 2013 performance, approved cash awards under the short-term incentive plan for 2013 and set 2014 compensation for our executive officers. For details regarding the compensation of Messrs. Culley and Keran and Dr. Vetticaden, see [Executive Officer Compensation](#) below.

In setting the compensation of our executive officers, the compensation committee takes into consideration the recommendations of Messrs. Culley and Keran, who present the compensation committee with assessments of the performance of our company and individual officers, including against pre-established corporate goals, and

Table of Contents

proposals for executive officer compensation packages. Messrs. Culley and 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 Messrs. Culley and 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 2013 Omnibus Incentive Plan, which was approved by our stockholders in June 2013, and our 2014 Omnibus Incentive Plan, which was adopted by our board of directors in March 2014 and is the subject of Proposal 3 below. Neither FW Cook nor any of its affiliates provided any services to us in 2013 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.

Table of Contents

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

Table of Contents

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

Other than pursuant to the terms of agreements entered into in connection with equity financing and merger transactions, we have never received a proposal from a stockholder to nominate a director. 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.

Table of Contents

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 directors to report complaints or concerns related to accounting, internal accounting controls or auditing may do so using the audit committee's procedures for the receipt of such communications. These procedures allow submitting the complaint or concern telephonically as set forth in our Code of Business Conduct and Ethics, which is available on our corporate website at www.masttherapeutics.com.

If any stockholder wishes to address questions regarding our business affairs directly to our board of directors, or any individual director, the stockholder must submit the inquiry in writing to: Mast Therapeutics, Inc., Attn: Investor Relations, 12390 El Camino Real, Suite 150, 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 directed towards 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.

We encourage all of our directors to attend our annual meetings of stockholders. All of our incumbent directors who were directors at the time of our 2013 meeting of stockholders (Messrs. Lief, Culley, Ramsay and Shuster) attended that meeting.

Table of Contents**EXECUTIVE OFFICERS**

Our executive officers, their ages and positions held as of April 22, 2014, are as follows:

Name	Age	Position
Brian M. Culley	42	Chief Executive Officer and Director
Patrick L. Keran	42	President and Chief Operating Officer
Santosh J. Vetticaden	55	Chief Medical Officer and Senior Vice President
Brandi L. Roberts	40	Chief Financial Officer and Senior Vice President
R. Martin Emanuele	59	Senior Vice President, Development
Gregory D. Gorgas	51	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.

Patrick L. Keran, J.D. Mr. Keran has served as our president and chief operating officer since February 2010. From August 2006 to February 2010, he served as our general counsel. He also has served as our secretary since September 2006 and served as our principal financial officer from July 2009 to January 2013. Previously, from April 2004 to August 2006, Mr. Keran was associate general counsel at Isis Pharmaceuticals, Inc., a publicly held drug discovery and development company. From February 2003 to April 2004, Mr. Keran practiced corporate law at the law firm of Heller Ehrman LLP, specializing in public and private financings, licensing arrangements, mergers and acquisitions and corporate governance matters. From September 1999 to February 2003, Mr. Keran practiced law at the law firm of Brobeck Phleger & Harrison LLP where he had a similar corporate practice. Mr. Keran is licensed to practice law in the State of California. Mr. Keran received a B.A. from the University of California at San Diego and a J.D. from the University of California at Berkeley, Boalt Hall School of Law.

Santosh J. Vetticaden, M.D., Ph.D. Dr. Vetticaden has served as our as our chief medical officer and senior vice president since September 2012. Dr. Vetticaden has held several senior level positions leading drug development across phase 1 through phase 4 clinical studies at biotech and large pharmaceuticals companies. Prior to joining our company, Dr. Vetticaden was at Cubist Pharmaceuticals, Inc., a publicly held biopharmaceutical company that develops and commercializes pharmaceutical products for use in acute care settings, where he served as senior vice president, chief medical and development officer from September 2010 to January 2012 and as senior vice president, clinical development and chief medical officer from December 2008 to September 2010. Dr. Vetticaden served as an independent consultant from January 2012 until joining our company and from August 2008 until joining Cubist. From February 2007 to August 2008, he was senior vice president and chief medical officer at Maxygen, Inc., a publicly held biopharmaceutical company. From April 2003 to February 2007, Dr. Vetticaden held senior management positions at Scios, Inc., a subsidiary of Johnson & Johnson, including vice president, clinical research. Previously, he held senior roles related to drug development at Aventis Pharmaceuticals, Inc. (now Sanofi) and the Whitehall-Robins Healthcare division of American Home Products Corporation (now Pfizer). Dr. Vetticaden earned his M.D. from the University of Maryland and a Ph.D. in pharmacokinetics and pharmacodynamics from Virginia Commonwealth University. He completed his residency in internal medicine at the Baylor College of Medicine.

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

Table of Contents

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. 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.

Table of Contents**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth information regarding beneficial ownership of our common stock as of April 22, 2014 (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 114,136,502 shares of our common stock outstanding as of the Evaluation Date. The information in this table reflects the proportionate adjustments made to securities 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) One Franklin Parkway San Mateo, CA 94403	12,046,100	10.6%
Directors and Named Executive Officers:		
Brian M. Culley(4)	1,045,424	*
Jack Lief(5)	122,900	*
David A. Ramsay(6)	210,721	*
Lewis J. Shuster(7)	112,467	*
Patrick L. Keran(8)	1,003,724	*
Santosh J. Vetticaden(9)	320,907	*
All directors and executive officers as a group (9 persons)(10)	3,652,676	3.1%

* Less than 1%

- (1) Unless otherwise indicated, the address of each of the listed persons is c/o Mast Therapeutics, Inc., 12390 El Camino Real, Suite 150, 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 the Schedule 13G jointly filed with the SEC on February 11, 2014 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

Table of Contents

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. Franklin Biotechnology Discovery Fund, a series of Franklin Strategic Series, an investment company registered under the Investment Company Act of 1940, has an interest in 5,453,500 of the shares listed for FRI in this table and Franklin Biotechnology Discovery Fund, a sub-fund of Franklin Templeton Investment Funds, a Luxemburg registered SICAV, has an interest in 6,592,600 of the shares listed for FRI in this table.

- (4) Consists of (a) 1,010,924 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 122,900 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.
- (6) Consists of (a) 110,721 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.
- (7) Consists of 112,467 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.
- (8) Consists of 1,003,724 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.
- (9) Consists of 320,907 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date.
- (10) Consists of (a) 429,098 shares of common stock, which includes 294,598 shares beneficially owned by Dr. Emanuele that were issued to him in his capacity as a former stockholder of SynthRx, Inc. pursuant to our merger agreement with SynthRx, which we acquired in April 2011, and (b) 3,223,578 shares of common stock subject to options currently exercisable or exercisable within 60 days of the Evaluation Date. The 294,598 shares of common stock beneficially owned by Dr. Emanuele 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.

Table of Contents

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

We have incorporated into our written review and approval policies certain procedures designed to ensure that any proposed transaction in which we would be a participant 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, would have a direct or indirect material interest is reviewed by individuals within our company familiar with the requirements of Item 404 of Regulation S-K promulgated by the SEC. If any such proposed transaction would require disclosure pursuant to Item 404(a) of Regulation S-K, it will be presented to the audit committee for review and, if appropriate, approval.

Other than the following transactions and the transactions described under **Executive Officer Compensation** and **Director Compensation** below, since January 1, 2012, 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, 2012 and 2013, which is approximately \$511,000, 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.

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, 2013.

Table of Contents**EQUITY COMPENSATION PLAN INFORMATION**

The following table provides information as of December 31, 2013 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) and (c)) (c)
Equity Compensation Plans Approved by Security Holders:			
2013 Omnibus Incentive Plan(1)	3,357,507	\$ 0.50	3,251,222
Amended and Restated 2008 Omnibus Incentive Plan(1)	3,356,319	\$ 1.21	0
2008 Omnibus Incentive Plan(1)	550,644	\$ 4.27	0
2005 Equity Incentive Plan(1)	40,358	\$ 50.05	0
2005 Employee Stock Purchase Plan(2)	0	\$	276,945
Equity Compensation Plans Not Approved by Security Holders:			
Total	7,304,828	\$ 1.38	3,528,167

- (1) On June 19, 2013, the 2013 Omnibus Incentive Plan (the "2013 Plan") was approved by our stockholders and became effective. Upon effectiveness, the 2013 Plan amended, renamed and restated in its entirety the Amended and Restated 2008 Omnibus Incentive Plan (the "Amended and Restated 2008 Plan"), and no awards have been or will be granted under the Amended and Restated 2008 Plan after such date. The Amended and Restated 2008 Plan was approved by our stockholders and became effective in June 2011, and, upon effectiveness, amended and restated in its entirety the 2008 Omnibus Incentive Plan (the "2008 Plan"), and no awards have been or will be granted under the 2008 Plan after such date. Likewise, since the 2008 Plan was approved by our stockholders and became effective in May 2008, no awards have been or will be granted under the 2005 Equity Incentive Plan (the "2005 Plan"). If any awards granted under the 2013 Plan, the Amended and Restated 2008 Plan, the 2008 Plan or the 2005 Plan 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 2013 Plan to the extent of the forfeiture, expiration or settlement, other than under specified circumstances. The shares will be added to the 2013 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 1.5 shares for every share of common stock if the shares were subject to an award other than a stock option or stock appreciation right. If our 2014 Omnibus Incentive Plan (the "2014 Plan"), which is the subject of Proposal 3 of this proxy statement, is approved by our stockholders, then shares subject to awards granted under the 2013 Plan, the Amended and Restated 2008 Plan, the 2008 Plan and the 2005 Plan that are forfeited, expire or are settled for cash, may become available for awards under the 2014 Plan to the extent of the forfeiture, expiration or settlement, other than under specified circumstances. The shares would 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.

Table of Contents

- (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.

Table of Contents

EXECUTIVE OFFICER COMPENSATION

The following provides compensation information pursuant to the scaled disclosure rules applicable to smaller reporting companies under U.S. Securities and Exchange Commission rules.

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 development-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 2013, our primary focus was advancing our MST-188 program in sickle cell disease and, in particular, initiation of and progress with EPIC, our pivotal phase 3 study of MST-188 in sickle cell disease. Accordingly, the performance objectives under our annual executive incentive plan were predominantly related to that goal.

Our compensation committee evaluates executive compensation on an annual basis, including whether it encourages excessive risk-taking and the attributes of our executive compensation policies and practices that mitigate such risks. 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 the 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 the 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;

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

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multi-year, 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.

Table of Contents

Below is an overview of the 2013 compensation of our chief executive officer, Brian Culley, our president and chief operating officer, Patrick Keran, and our chief medical officer and senior vice president, Santosh Vetticaden, whom we refer to as our named executive officers or NEOs.

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. The 2013 base salaries for Messrs. Culley and Keran were increased by approximately 5% relative to their 2012 base salaries to \$393,750 and \$388,750, respectively. Prior to that, the base salaries for Messrs. Culley and Keran had not been increased since July 2011. Dr. Vetticaden's 2013 base salary remained at \$350,000, which was set in his offer letter following an arms length negotiation prior to commencement of his employment in September 2012.

In January 2014, our compensation committee determined to increase the 2014 base salaries of our named executive officers by approximately 3.0% relative to their 2013 base salaries. Therefore, effective January 1, 2014, the base salaries for Messrs. Culley and Keran and Dr. Vetticaden are \$405,000, \$399,500 and \$360,500, respectively.

Annual Performance-Based Cash Incentives

In early 2013, our compensation committee approved the 2013 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 2013 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 the compensation committee adopted the 2013 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. The compensation committee determined that awards for Messrs. Culley and Keran would be based entirely (100%) on achievement of corporate objectives. Mr. Lief, as chair of the compensation committee, subsequently approved individual objectives for Dr. Vetticaden, taking into consideration recommendations by Messrs. Culley and Keran. The following table lists the NEOs and their incentive targets under the 2013 Executive Incentive Plan:

Named Executive Officer	Incentive Target
Brian Culley	\$196,875
Patrick Keran	\$196,875
Santosh Vetticaden	35%

Under the 2013 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, the difficulty in achieving the objective, conditions that affected the ability to achieve objectives and such other factors as it determined appropriate.

Table of Contents

As discussed above, because we are a development-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 2013 Executive Plan involved achieving research and development-related objectives for MST-188 on specified timelines and achieving a specified level of capital at year-end. Dr. Veticaden's individual performance objectives were related to progress with the EPIC study. The corporate objectives under the 2013 Executive Incentive Plan and the compensation committee's assessment of achievement of such objectives are summarized below:

Corporate Objective	Weight	Achievement
Product Development – MST-188 in sickle cell disease	80%	
Progress with the EPIC study in the U.S.		Partially met objectives
Progress with the EPIC study outside the U.S.		Exceeded objective
Submission of TQT clinical study results to FDA		Partially met objective
Submission of protocol for EPIC sub-study		Met objective
Initiation of nonclinical study to investigate long-term clinical benefits		Met objective
Submission of scientific article for publication		Met objective
Orphan drug status in European Union		Exceeded objective
Product Development – MST-188 2nd indication	10%	
Develop and announce 2 nd indication		Exceeded objective
Finance	10%	
Year-end cash, cash equivalents and investment securities consistent with forecast		Exceeded objective

In determining the amounts of awards under the 2013 Executive Incentive Plan, the compensation committee took into consideration the weighting associated with each objective and whether the objective had been met within the targeted timeframe. The compensation committee considered that, while one of the objectives related to advancing the EPIC study in the U.S. was not achieved within the targeted timeframe, other objectives related to progress with the EPIC study were achieved and achievement of one such objective exceeded the target. The compensation committee determined to award approximately 97.5% of their incentive target, or \$191,953, to each of Messrs. Culley and Keran. In determining Dr. Veticaden's incentive award, the compensation committee considered that, although his specific individual objectives were not met, his performance contributed to important progress with the EPIC study during the year. The compensation committee approved an incentive award to Dr. Veticaden of approximately 85.6% of his target, or \$104,891.

Stock Option Awards

We typically grant stock option awards to our employees, including our executive officers, with multi-year, time-based vesting. In 2013 and 2012, 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 generally vest monthly over four years after the date of grant and 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.

Prior to 2013, employee option awards typically were granted on an annual basis. In December 2012, the compensation committee determined that option awards would better serve their intended retention and motivational purposes by changing the practice of granting them once a year at the beginning of the year to a

Table of Contents

twice-yearly schedule, with one grant generally occurring around the beginning of the year and the other generally occurring around the time of our annual meeting of stockholders, and with the size of each semi-annual award generally equal to one-half of the amount that would have been granted on the once-per-year schedule. The compensation committee determined to implement this new practice for 2013, and semi-annual employee option awards were granted in January 2013 and June 2013.

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 2013, 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 (e.g., four years), with the size of an employee's initial award typically about three times the size of the subsequent awards. For example, if the target share number was 100, an employee's initial option award would be for 50 shares and in each of years 2, 3 and 4 that employee's option award would be for 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. 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 option awards granted in June 2013 after the closing an underwritten public offering in which we sold and issued shares of our common stock and warrants that more than doubled our outstanding shares and warrants.

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 currently is approximately 6.3% and, as of the record date for the Annual Meeting, their aggregate deemed ownership stake, for purposes of applying the carried interest framework, is approximately 4.9% 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 it 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 option shares 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.

Table of Contents

In 2013, our NEOs were granted option awards in January and in June, except that the compensation committee determined not to grant Dr. Vetticaden an award in January due to the size and timing of the initial option award granted to him in September 2012 upon commencement of his employment with our company. In January 2013, Messrs. Culley and Keran each received an option to purchase 138,650 shares of our common stock. The options have a 10-year term, an exercise price of \$0.59 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 2013, Messrs. Culley and Keran each received an option to purchase 907,300 shares of our common stock and Dr. Vetticaden received an option to purchase 125,000 shares of our common stock. The options have a 10-year term and an exercise price of \$0.50 per share, which was greater than the closing price of our common stock on the NYSE MKT on the grant date (\$0.45 per share) because the compensation committee determined to grant the option awards with an exercise price per share equal to the public offering price per unit (consisting of one share of our common stock and one warrant to purchase 0.5 of a share of our common stock) of units sold in our June 2013 underwritten public offering. The options granted to Messrs. Culley and Keran vest and become exercisable, subject to the officer's continued service to us, in 48 substantially equal monthly installments. The option granted to Dr. Vetticaden vested and became exercisable as to 5,208 shares on September 5, 2013, the first anniversary of his employment with our company, and vests and becomes exercisable as to the remaining shares, subject to the officer's continued service to us, in 48 substantially equal monthly installments thereafter.

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 \$45,900 and \$37,665 in matching contributions in 2013 and 2012, 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. Messrs. Culley and Keran and Dr. Vetticaden accrue 29, 27 and 21 vacation days per year, respectively, subject to adjustment based on the number of years of the officer's employment with us. Under our policy, the maximum amount of vacation days that an employee, including our NEOs, can accrue is two times the employee's annual accrual limit. If the NEOs' employment with us had terminated as of December 31, 2013, our aggregate payment obligation for this benefit would have been approximately \$88,000, \$81,000 and \$12,000 for Messrs. Culley and Keran and Dr. Vetticaden, respectively.

Perquisites. We did not provide any of our NEOs with perquisites in 2013 that exceeded \$10,000 in the aggregate for any person.

Table of Contents

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 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 employment with our company, which commenced in September 2012, we agreed to provide Dr. Vetticaden with similar severance arrangements. The terms of Dr. Vetticaden s arrangements are set forth in his offer letter agreement with us.

Under the Retention Plan, in the cases of Messrs. Culley and Keran, and pursuant to the terms of Dr. Vetticaden s offer letter, if the employment of Mr. Culley, Mr. Keran or Dr. Vetticaden, as applicable, terminates at any time as a result of an involuntary termination, and Mr. Culley, Mr. Keran or Dr. Vetticaden, as the case may be, 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 Dr. Vetticaden) 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 Dr. Vetticaden). These severance benefits will be paid in a lump-sum on the date the general release of claims becomes effective. If the NEOs employment with us had been involuntarily terminated as of December 31, 2013, our aggregate payment obligations to them under the Retention Plan and under Dr. Vetticaden s offer letter, as applicable, would have been approximately \$425,000 for Mr. Culley, \$420,000 for Mr. Keran and \$283,000 for Dr. Vetticaden.

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 Mr. Culley 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 Mr. Keran 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 offer letter contains the same definitions of involuntary termination and cause, except that, with respect to involuntary termination, in lieu of clause (v) above, the offer letter includes: (v) our failure to

Table of Contents

obtain the assumption of the offer letter by any successors as contemplated in the offer letter. With regard to cause, the offer letter 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.

Summary Compensation Table

The following table sets forth information concerning compensation earned for services rendered to us during the years ended December 31, 2013 and December 31, 2012 by our principal executive officer and our two most highly compensated executive officers other than our principal executive officer as of December 31, 2013. We refer to the executive officers named in the following table as the named executive officers or NEOs.

Name and Principal Position	Year	Salary	Bonus	Stock Awards	Summary Compensation Table				Total
					Option Awards (1)	Non-Equity Incentive Plan Compensation (2)	Nonqualified Deferred Compensation (3)	All Other Compensation (3)	
Brian M. Culley(4) Chief Executive Officer	2013	\$ 393,750			\$437,655	\$ 191,953		\$ 16,140	\$ 1,039,498
	2012	\$ 375,000				\$ 156,188		\$ 16,680	\$ 547,868
Patrick L. Keran President and Chief Operating Officer	2013	\$ 388,750			\$437,655	\$ 191,953		\$ 16,140	\$ 1,034,498
	2012	\$ 370,000				\$ 156,188		\$ 15,828	\$ 542,016
Santosh J. Vetticaden(5) Chief Medical Officer and Senior Vice President	2013	\$ 350,000			\$50,313	\$ 104,891		\$ 17,094	\$ 522,298
	2012	\$ 113,750	\$ 100,000(6)		\$370,860	\$ 39,603		\$ 7,274	\$ 631,487

- (1) The amounts in this column represent the aggregate grant date fair value of option awards granted to the named executive officers in 2013 and 2012, 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 9 to our audited consolidated financial statements included in our annual report on Form 10-K for the year ended December 31, 2013 filed with the SEC on March 26, 2014. These option awards were granted under our Amended and Restated 2008 Omnibus Incentive Plan or 2013 Omnibus Incentive Plan. Pursuant to the terms of those plans, 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 2013 Executive Incentive Plan and 2012 Executive Incentive Plan, as applicable. See Overview Annual Performance-Based Cash Incentives above for information regarding the 2013 Executive Incentive Plan.
- (3) 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 our executives.
- (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) Dr. Veticaden joined our company in September 2012.

Table of Contents

- (6) In accordance with his offer letter, this amount was paid as a signing bonus that was also intended to help defray Dr. Vetticaden's relocation expenses from Massachusetts to San Diego, California. If Dr. Vetticaden voluntarily resigns before September 1, 2014, other than in connection with an involuntary termination for which he is entitled to severance benefits under the terms of his offer letter, he must reimburse us the full amount of the signing bonus within 30 days of such resignation.

Outstanding Equity Awards at Fiscal Year-End 2013

The following table sets forth information regarding outstanding equity awards held by our named executive officers at the end of fiscal 2013. All 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.

Name	Number of Securities Underlying Unexercised Options		Option Awards Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options	Option Exercise Price	Option Expiration Date
	Exercisable(1)	Unexercisable(1)	(#)	(\$)	
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
	48,001(2)	15,998(2)		\$ 8.00	02/02/2020
	50,000(3)	50,000(3)		\$ 2.29	02/01/2021
	151,041(4)	98,959(4)		\$ 3.26	07/05/2021
	203,645(5)	221,355(5)		\$ 0.60	12/07/2021
31,773(6)	106,877(6)		\$ 0.59	01/02/2023	
	113,412(7)	793,888(7)	\$ 0.50	06/19/2023	
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
	48,001(2)	15,998(2)		\$ 8.00	02/02/2020
	50,000(3)	50,000(3)		\$ 2.29	02/01/2021
	151,041(4)	98,959(4)		\$ 3.26	07/05/2021
	203,645(5)	221,355(5)		\$ 0.60	12/07/2021
	31,773(6)	106,877(6)		\$ 0.59	01/02/2023
	113,412(7)	793,888(7)	\$ 0.50	06/19/2023	
Santosh J. Vetticaden	187,500(8)	412,500(8)		\$ 0.69	09/05/2022
	12,695(9)	112,305(9)		\$ 0.50	06/19/2023

- (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 or involuntary termination, as described below. Otherwise, vesting is subject to the NEO's continued service to our company.

Table of Contents

- (2) This option was granted under the 2008 Omnibus Incentive Plan (the 2008 Plan) in February 2010. It vests and becomes exercisable in four substantially equal annual installments. Approximately 1/4 of the total underlying shares vested and became exercisable on January 1 of each of 2011, 2012 and 2013 and will vest and become exercisable on January 1, 2014.
- (3) This option was granted under our 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 and 2013 and will vest and become exercisable on January 1 of each of 2014 and 2015.
- (4) 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.
- (5) 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.
- (6) 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 first day of each month thereafter.
- (7) 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.
- (8) This option was granted under the Amended and Restated 2008 Plan in September 2012. It vests and becomes exercisable in substantially equal monthly installments over three years after a one-year cliff vesting. Approximately 1/4 of the total underlying shares vested and became exercisable on September 5, 2013 and approximately 1/48th of the total underlying shares will vest and become exercisable on the fifth day of each of the 36 months thereafter.
- (9) This option was granted under the 2013 Plan in June 2013. It vests and becomes exercisable in substantially equal monthly installments over four years after a cliff vesting on the first anniversary of Dr. Vetticaden's employment start date. 5,208 of the underlying shares vested and became exercisable on September 5, 2013 and approximately 1/48th of the balance of the underlying shares vest and become exercisable on the fifth day of each month thereafter.

Acceleration of Vesting of Option Awards

Stock option awards granted to Messrs. Culley and Keran and Dr. Vetticaden 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 or the 2013 Plan, depending upon the plan under which the option

Table of Contents

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. For purposes of the option awards granted to Messrs. Culley and Keran beginning in 2011, 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.

In the event Dr. Vetticaden 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. In addition, in the event of a change in control (as defined in the Amended and Restated 2008 Plan or the 2013 Plan, depending upon the plan under which the option was granted), (i) 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 Dr. Vetticaden 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 18 months following the date of such involuntary termination, and (ii) 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 Dr. Vetticaden within 24 months following the date of the change in control, acceleration in full of vesting and exercisability for a period of 18 months following the date of such involuntary termination. For purposes of this option award, the definitions of involuntary termination and cause are the same as described above in Dr. Vetticaden's offer letter.

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 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.

Although the terms of the option awards granted to Messrs. Culley and Keran and Dr. Vetticaden provide for acceleration of vesting in the circumstances as described above, none of the accelerated option awards would have had intrinsic value on December 31, 2013 because none of the NEOs' outstanding option awards have an exercise price that is less than the closing sale price of our common stock on December 31, 2013, which was \$0.46 per share. In other words, none of the option awards were in-the-money on December 31, 2013.

Table of Contents**DIRECTOR COMPENSATION**

The following table shows compensation information for the individuals who served as our non-employee directors during the year ended December 31, 2013. 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 2013

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	\$ 64,500		\$ 22,876				\$ 87,376
David A. Ramsay	\$ 46,500		\$ 22,876				\$ 69,376
Lewis J. Shuster	\$ 44,500		\$ 22,876				\$ 67,376
Ted W. Love(3)	\$ 16,065		\$ 22,876				\$ 38,941

- (1) The amounts in this column represent the aggregate grant date fair value of option awards granted to the directors in 2013, calculated in accordance with the provisions of FASB 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 9 to our audited consolidated financial statements included in our annual report on Form 10-K for the year ended December 31, 2013. The actual value of any option award to a director, if any, will depend on the excess of our stock price over the exercise price on the date the option award is exercised. The actual value realized by the director upon exercise of the option awards may be higher or lower than the value shown in this column.
- (2) As of December 31, 2013, our non-employee directors had option awards outstanding to purchase the following number of shares of our common stock:

Name	Shares Underlying Outstanding Options
Jack Lief	122,900
David A. Ramsay	110,721
Lewis J. Shuster	112,467
Ted W. Love	25,148

- (3) Dr. Love resigned from our board of directors effective August 7, 2013.

Overview of Non-Employee Director Compensation

Compensation of the non-employee members of our board of directors for their service on the board and its committees is set forth in a written policy adopted by our board of directors. With the assistance of its compensation committee, our board of directors periodically reviews and evaluates the director compensation policy and adopts changes to enable our director compensation to allow us to recruit and retain individuals with the requisite experience, skills and characteristics for membership on our board of directors. During 2013, our non-employee director compensation was governed by the non-employee director compensation policy adopted by our board of directors in March 2011, as modified in March 2013 to increase the cash retainers payable to the chairs of the compensation committee and the nominating and governance committee. Our director compensation policy provides for a combination of cash compensation in the form of a fixed retainer and meeting attendance fees and equity compensation in the form of stock option awards. We also reimburse our directors for travel and other reasonable out-of-pocket expenses related to attendance at meetings of our board of directors and its committees.

Table of Contents***Retainer***

As reflected in the table below, the amount of the cash retainer payable to a non-employee director under our director compensation policy is based on the director's role on our board and its committees. The amounts set forth in the following table are annualized amounts, which we pay in four equal installments on a quarterly basis. A non-employee director whose service begins or ends during a quarter receives a pro-rated portion of the applicable payment.

2013 Cash Retainer

	Chairperson	Member
Board of Directors	\$ 40,000	\$ 20,000
Audit Committee	\$ 7,500	\$
Compensation Committee	\$ 7,500	\$
Nominating and Governance Committee	\$ 7,500	\$

Meeting Fees

Pursuant to our director compensation policy, we pay our non-employee directors \$1,000 for attendance at each meeting of our board of directors and each meeting of a board committee of which such director is a member (whether such attendance is in person or by telephone, videoconference or other comparable communication device).

Equity Compensation

Pursuant to our director compensation policy, non-employee directors are eligible, in connection with each annual meeting of our stockholders, to receive an annual option to purchase up to such number of shares of our common stock that is equal to the sum of (a) an amount, which we refer to as the allocated amount, equal to the product of 0.0396% multiplied by the number of shares of our common stock outstanding as of the date of the applicable annual meeting of stockholders and (b) an amount, which we refer to as the adjustment amount, equal to the difference between (i) the allocated amount for the current year's annual meeting of stockholders, minus (ii) the allocated amount that was applicable to the prior year's annual meeting of stockholders (unless a director was not a non-employee director at the time of the prior year's annual meeting of stockholders, in which case the adjustment amount for that director will be based on the number of shares of our common stock outstanding as of the date of that director's appointment or election to our board of directors). However, the adjustment amount will be included in the annual option for a director only if (x) the adjustment amount for that director exceeds 20% of the allocated amount for the current year's annual meeting of stockholders, (y) our company's market capitalization (shares outstanding multiplied by stock price) has not exceeded \$100 million for a sustained period, as determined unanimously by our board of directors, and (z) our board of directors unanimously determines to include the adjustment amount in such annual option. Each annual option will vest and become exercisable in 12 substantially equal monthly installments of 1/12th of the shares subject to the option at the end of each successive month following the date of the applicable annual meeting of stockholders, subject to the director's continuing services (as defined in the 2013 Plan).

In addition, any newly appointed or elected non-employee director is eligible to receive an inducement option and a pro-rated annual option. An inducement option entitles the director to purchase up to such number of shares of our common stock that is equal to the amount, which we refer to as the new director allocated amount, that is the product of 0.0396% multiplied by the number of shares of our common stock outstanding as of the date of the director's initial appointment or election to our board of directors. A pro-rated annual option entitles the director to purchase up to such number of shares of our common stock that is equal to the product of (A) the quotient of the new director allocated amount, divided by 12, and (B) the number of full 30-day periods between the new director's date of appointment or election and the date of our next annual meeting of stockholders (or, if, on the new director's date of appointment or election, the date of our next annual

Table of Contents

meeting of stockholders has not been set, the one-year anniversary of the new director's date of appointment or election). Each inducement option will vest and become exercisable in 36 substantially equal monthly installments of 1/36th of the shares subject to the option at the end of each successive month following the date of the director's initial appointment or election to our board of directors, subject to the director's continuing services (as defined in the 2013 Plan). Each pro-rated annual option will vest and become exercisable in such number of substantially equal monthly installments as is equal to the number of full 30-day periods between the director's initial appointment or election to our board of directors and the date of the next annual meeting of our stockholders.

Each stock option award granted pursuant to our director compensation policy will be granted under the 2013 Plan, or any amendment or restatement thereof, will have an exercise price per share equal to the fair market value (as defined in the 2013 Plan) of a share of our common stock on the date the option award is granted, and will have a term equal to the shorter of (i) ten years from the date the option award is granted and (ii) three years from the date such non-employee director ceases to provide services (as defined in the 2013 Plan) to us for any reason other than such director's death or disability. In addition, in the event of a change of control of our company, each option award will vest and become exercisable on the day prior to the date of the change in control if the director is then providing services (as defined in the 2013 Plan), and each option award will terminate on the date of the change in control to the extent not exercised.

Table of Contents

AUDIT COMMITTEE REPORT

Our management has the primary responsibility for our financial reporting process, accounting principles and internal controls as well as the preparation of our financial statements. Under the guidance of a written charter, the audit committee oversees our accounting and financial reporting process and audits of our financial statements on behalf of our board of directors. Each of the members of the audit committee meets the independence standards and other qualification requirements of the NYSE MKT LLC.

The audit committee appointed PricewaterhouseCoopers LLP, an independent registered public accounting firm, as our independent auditor for fiscal year 2013. As such, PricewaterhouseCoopers LLP was responsible for expressing an opinion on our annual financial statements based on an audit conducted in accordance with the standards established by the Public Company Accounting Oversight Board.

In this context and in connection with the audited financial statements contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, the audit committee:

reviewed and discussed the audited financial statements as of and for the fiscal year ended December 31, 2013 with our management;

discussed with PricewaterhouseCoopers LLP the matters required to be discussed by Auditing Standard No. 16, Communications with Audit Committees, as adopted by the Public Company Accounting Oversight Board;

reviewed the written disclosures and the letter from PricewaterhouseCoopers LLP required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the audit committee concerning independence, and has discussed with PricewaterhouseCoopers LLP its independence; and

based on the foregoing reviews and discussions, recommended to our board of directors that the audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 filed with the SEC on March 26, 2014.

AUDIT COMMITTEE

David A. Ramsay, Chair

Jack Lief

Lewis J. Shuster

The preceding Audit Committee Report shall not be deemed soliciting material or filed with the SEC, nor shall any information in this report be incorporated by reference into any past or future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent the Company specifically incorporates it by reference into such filing.

Table of Contents**PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The audit committee has appointed PricewaterhouseCoopers LLP (PwC), an independent registered public accounting firm, as our independent auditor for the fiscal year ending December 31, 2014. We are asking our stockholders to ratify this appointment.

The following table presents the fees we paid to PwC for the years ended December 31, 2013 and December 31, 2012 for professional services rendered to us by PwC:

	2013	2012
Audit Fees(1)	\$ 226,000	\$ 170,750
Audit-Related Fees		
Tax Fees		
All Other Fees		
Total	\$ 226,000	\$ 170,750

- (1) Audit Fees represent fees for professional services provided in connection with the audit of our annual financial statements and, as applicable, our internal control over financial reporting, as well as those provided in connection with the review of financial statements included in our quarterly reports, review of our registration statements on Forms S-1 and S-8, and related services normally provided in connection with statutory and regulatory filings and engagements.

Policy Regarding Pre-Approval of Audit and Non-Audit Services by Our Independent Registered Public Accounting Firm

We have established a policy that all audit and permissible non-audit services provided by our independent registered public accounting firm will be approved by the audit committee in advance of their performance. These services may include audit services, audit-related services, tax services and other services. The audit committee may pre-approve services as part of its approval of the scope of the engagement of the independent registered public accounting firm or on an individual case-by-case basis. The audit committee considers whether the provision of any non-audit service is compatible with maintaining the independence of our auditors.

Table of Contents

PROPOSAL 1 ELECTION OF DIRECTORS

At the Annual Meeting, our stockholders will vote on the election of four directors to serve for one-year terms until the 2015 annual meeting of stockholders and until their successors are elected and qualified, or until their earlier death, retirement, resignation or removal. Our board of directors has unanimously nominated Brian M. Culley, Jack Lief, David A. Ramsay and Lewis J. Shuster for election to our board of directors at the Annual Meeting. The director nominees have indicated that they are willing and able to serve as directors. If any of the nominees becomes unable or unwilling to serve, the proxies being solicited by this proxy statement will be voted for the election of any substitute nominee who shall be designated by our board of directors to fill the vacancy. The proxies being solicited by this proxy statement will be voted for no more than four nominees at the Annual Meeting.

Assuming a quorum is present at the Annual Meeting, each director nominee who receives an 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 will be elected. Abstentions will have the same effect as negative votes. Broker non-votes will not be counted toward the vote total and therefore will have no effect on the outcome of this proposal. Stockholders do not have cumulative voting rights in the election of directors.

Our board of directors unanimously recommends a vote FOR the election of Brian M. Culley, Jack Lief, David A. Ramsay and Lewis J. Shuster as directors.

PROPOSAL 2 RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

At the Annual Meeting, our stockholders will be asked to ratify the appointment of PricewaterhouseCoopers LLP (PwC) as our independent registered public accounting firm for the fiscal year ending December 31, 2014. Stockholder ratification of the appointment of PwC as our independent registered public accounting firm is not required by our bylaws or otherwise. Our board of directors is submitting the appointment of PwC to our stockholders for ratification as a matter of good corporate practice. If our stockholders do not ratify the appointment of PwC, the audit committee will reconsider this appointment. Even if the appointment is ratified, the audit committee, in its discretion, may appoint a different independent registered public accounting firm at any time during the year if the audit committee determines that such a change would be in the best interests of our company and our stockholders.

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

We expect a representative of PwC to be present at the Annual Meeting and that representative will have the opportunity to make a statement at the Annual Meeting if so desired. We also expect such representative to be available to respond to appropriate questions.

Our board of directors unanimously recommends a vote FOR the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2014.

Table of Contents

PROPOSAL 3 APPROVAL OF THE MAST THERAPEUTICS, INC. 2014 OMNIBUS INCENTIVE PLAN

At the Annual Meeting, we are asking our stockholders to approve the Mast Therapeutics, Inc. 2014 Omnibus Incentive Plan (the 2014 Plan). Our board of directors approved the 2014 Plan at its March 19, 2014 meeting, subject to approval from our stockholders at the Annual Meeting. The 2014 Plan amends, restates and renames our 2013 Omnibus Incentive Plan (the Existing Plan). We are requesting approval of the 2014 Plan primarily because the number of shares that remain available for awards under the Existing Plan is inadequate for that plan to continue to serve its purposes of enabling us to attract and retain the services of employees and non-employee directors and to motivate participants to achieve long-term objectives that we believe will benefit our stockholders. Our board of directors believes that the effective use of stock-based long-term incentive compensation is essential for our company to maintain a balanced and competitive compensation program and important to our ability to achieve long-term business objectives.

As a development-stage biopharmaceutical company with limited cash focused on funding our development programs, we believe that equity, in particular stock option awards, is an important and significant component of our employees' compensation. If our stockholders do not approve this proposal, we may be unable to use equity compensation to the extent needed to make our compensation packages competitive and to motivate our employees and we could be required to increase cash compensation to attract, retain and motivate our employees, which may compromise funding of our development programs. As discussed above under Executive Officer Compensation Overview Stock Option Awards, we generally apply what we refer to as a carried interest framework to determine the size of stock option awards for our employees. Consequently, an increase in the number of shares of our common stock outstanding or those issuable upon exercise or conversion of options, warrants or other derivative securities or other rights, can result in an increase in the size of employee option awards. In June 2013, we raised additional capital through an underwritten public offering in which we sold and issued shares of our common stock and warrants that more than doubled our outstanding shares and warrants. Primarily as a result of that transaction, the size of option awards and the rate at which shares available under the Existing Plan have been used have been significantly greater than contemplated when our board of directors approved the plan in March 2013.

If the 2014 Plan is approved at the Annual Meeting it will become effective as of that date and no new awards will be granted under the Existing Plan, which currently is our sole active plan for providing equity incentive compensation to eligible employees, consultants and non-employee directors. On the other hand, if the 2014 Plan does not receive the required stockholder approval at the Annual Meeting, the Existing Plan will remain in effect, and future grants may occur under the Existing Plan in accordance with its terms. Regardless of whether or not the 2014 Plan is approved at the Annual Meeting, all outstanding awards under the Existing Plan will continue to be governed under the terms of that plan.

The maximum number of shares of our common stock that may be issued under the 2014 Plan, subject to adjustment for certain corporate events, including mergers and stock splits, is 16,700,000 shares, reduced for grants made after December 31, 2013 under the Existing Plan and increased to the extent that, after December 31, 2013, awards granted under the Existing Plan, our Amended and Restated 2008 Omnibus Incentive Plan (the Amended and Restated 2008 Plan), our 2008 Omnibus Incentive Plan (the 2008 Plan), and our 2005 Equity Incentive Plan (collectively, the Prior Plans) are forfeited, expire or are settled for cash, except as otherwise provided in the 2014 Plan. The table below outlines our estimate of shares available for grants under the 2014 Plan as of the Annual Meeting date, if the 2014 Plan is approved at the Annual Meeting. The estimates below are based on information available as of April 22, 2014. To the extent that our compensation committee or board of directors grants additional awards or additional awards are forfeited or expire or are otherwise added back to the

Table of Contents

Existing Plan pursuant to its terms after April 22, 2014 and before the Annual Meeting, the total shares available for grant under the 2014 Plan as of the Annual Meeting date will be different than as shown in the table below.

Shares available for grant under Existing Plan as of June 19, 2013 (effective date)	6,539,207
Shares awarded under Existing Plan through December 31, 2013	(3,461,904)
Cancellations/forfeitures added back to share reserve through December 31, 2013	173,919
Total shares available under the Existing Plan as of December 31, 2013	3,251,222
Estimated total shares awarded under the Existing Plan after December 31, 2013	(2,186,900)
Estimated total cancellations/forfeitures added back to share reserve after December 31, 2013	0
Estimated total shares available under the Existing Plan as of Annual Meeting date	1,064,322
Additional shares requested for 2014 Plan	13,448,778
Estimated total shares to be available for grant under 2014 Plan as of Annual Meeting date	14,513,100

In determining the number of additional shares to request for the 2014 Plan, our board of directors reviewed our burn rates for the prior three fiscal years, the total number of shares of our common stock outstanding, the total number of shares subject to outstanding options and shares that remain available under the Existing Plan, the total number of shares reserved for issuance upon exercise of outstanding warrants, the total number of shares issuable to former stockholders of SynthRx, Inc. and Aires Pharmaceuticals, Inc. pursuant to the terms of our merger agreements relating to the acquisition of those companies and the potential timing of those issuances, an estimated amount of shares issuable in connection with the at the market equity offering program we commenced in February 2014 (the ATM Program), potential dilution scenarios related to increased shares available for plan awards and the resulting costs to our stockholders, and management's projections regarding future equity compensation needs.

Key Metrics

Potential dilutive effect of additional shares requested for 2014 Plan(1)	9.8%
Total potential dilution related to equity compensation plans(2)	14.0%
Average annual burn rate, prior three fiscal years(3)	5.4%

- (1) Based on shares outstanding as of December 31, 2013 and the 16,700,000 shares requested for the 2014 Plan. Based on shares outstanding as of April 22, 2014 (the record date for the Annual Meeting), the dilutive effect of the 2014 Plan is 10.5%.
- (2) Based on shares outstanding as of December 31, 2013, shares underlying awards granted under Prior Plans and outstanding as of December 31, 2013 (7,304,828 shares), and the 16,700,000 shares requested for the 2014 Plan. Based on shares outstanding as of April 22, 2014, shares underlying awards granted under Prior Plans and outstanding as of April 22, 2014 (9,491,728 shares), and the estimated number of shares to be available under the 2014 Plan as of the Annual Meeting date if the 2014 Plan is approved (14,513,100 shares), total dilution related to equity compensation plans is 17.4%.
- (3) For 2011, 2012 and 2013 on an annual basis, the burn rate was approximately 8.9%, 2.0% and 5.2%, respectively.

Table of Contents

The following table sets forth the number of stock option awards we granted in the prior three fiscal years as well as the weighted-average number of shares of our common stock outstanding as of December 31 of each such year. No awards other than stock option awards were granted in the prior three fiscal years.

Year	Options Granted (Number of Shares)	Weighted-Average Number of Shares of Common Stock Outstanding at Year-End
2013	3,946,204	76,585,752
2012	933,996	47,641,043
2011	2,519,399	28,175,221

Management's projections regarding future equity compensation needs were based on our current carried interest framework for determining employee equity awards, which is discussed above under Executive Officer Compensation Overview Stock Option Awards. We apply a similar framework to determine the size of stock option awards for our non-employee directors, as discussed above under Director Compensation Equity Compensation. Estimating our future equity compensation needs is subject to significant assumptions, particularly for a development-stage company such as ours, including our future operations and progress with development and regulatory approval of MST-188, the rate of growth and nature of our workforce and the types and sizes of awards our compensation committee or board of directors may determine to grant, as well as the number of shares of our common stock outstanding and those issuable upon exercise or conversion of outstanding options, warrants and other derivative securities or other rights at the time awards are granted in the future, all of which are difficult to predict and actual outcomes may be materially different than the assumptions used by management. Assuming our capitalization remains consistent, except for the issuance of shares under the ATM Program and the issuance of an aggregate of 4,198,830 shares to former stockholders of Aires Pharmaceuticals pursuant to the merger agreement relating to our acquisition of Aires, the share pool under the 2014 Plan is intended to manage our equity compensation needs through 2016. However, there can be no assurance that the number of shares available for issuance under the 2014 Plan, if approved, will be sufficient and we may need to request an increase in shares available for incentive awards prior to the end of that time period.

The table below provides information as of December 31, 2013 regarding our equity incentive plans. The only awards outstanding under the Prior Plans were stock options. As of December 31, 2013, the fair market value of a share of our common stock (as determined by the closing sale price on the NYSE MKT on that date) was \$0.46 per share.

Plan(1)	Number of Shares to be Issued upon Exercise of Outstanding Option Awards	Weighted Average Exercise Price	Weighted Average Remaining Term (Years)	Number of Shares Remaining Available for Future Issuance(2)
2013 Omnibus Incentive Plan	3,357,507	\$ 0.50	9.48	3,251,222
Amended and Restated 2008 Plan	3,356,319	\$ 1.21	8.13	0
2008 Plan	550,644	\$ 4.27	6.02	0
2005 Equity Incentive Plan	40,358	\$ 50.05	3.23	0
Total	7,304,828	\$ 1.38	8.57	3,251,222

- (1) Our 2005 Employee Stock Purchase Plan, which was approved by our stockholders in 2005, is not included in this table because it has not been implemented. See the section of this proxy statement entitled Equity Compensation Plan Information above for additional information regarding the 2005 Employee Stock Purchase Plan.
- (2) If the 2014 Plan is approved at the Annual Meeting, no further awards will be granted under the Existing Plan as of that date. No shares have been available for grant and no awards have been granted under the Amended and Restated 2008 Plan, the 2008 Plan or the 2005 Equity Incentive Plan since June 2013, June 2011 and May 2008, respectively.

Table of Contents

During the period after December 31, 2013 through April 22, 2014 (the record date for the Annual Meeting), we granted option awards under the Existing Plan to purchase up to a total of 2,186,900 shares and no shares were added back to the Existing Plan. Accordingly, assuming no awards were granted after April 22, 2014, the number of shares that remain available for future issuance under the Existing Plan as of the date of the Annual Meeting is 1,064,322 shares. However, as stated above, if the 2014 Plan is approved by our stockholders at the Annual Meeting, no new awards will be granted under the Existing Plan.

Approval of the 2014 Plan is also intended to serve as re-approval of the material terms of the performance goals under the Existing Plan with such changes as contained in the 2014 Plan for purposes of Section 162(m) of the Internal Revenue Code (the Code). The material terms of the performance goals include the eligible class of employees, the business criteria (including new criteria) on which performance objectives may be based and the maximum amounts payable for the various types of awards under the 2014 Plan, as described below. If the 2014 Plan is approved by our stockholders, the effectiveness of the approval of the performance goals is intended to last until our annual meeting of stockholders in 2019 for purposes of Section 162(m) of the Code.

The complete text of the 2014 Plan is attached as Appendix A to this Proxy Statement. Stockholders are urged to review the 2014 Plan together with the information in this Proxy Statement in evaluating this Proposal 3. The description of terms of the 2014 Plan contained in this Proposal 3 is qualified in its entirety by reference to Appendix A. If there is any inconsistency between this Proposal 3 and the 2014 Plan or any inaccuracy in this Proposal 3, the actual terms of the 2014 Plan, as set forth in Appendix A, shall govern.

Principal Differences between the 2014 Plan and the Existing Plan

The principal differences between the 2014 Plan and the Existing Plan are as follows:

Available shares. The number of shares authorized for grant under the 2014 Plan effectively increases the number of shares available for plan awards by 13,448,778 shares.

Plan Expiration. The 2014 Plan will expire on June 19, 2024, assuming it is approved by the stockholders on June 19, 2014. The Existing Plan expires on June 19, 2023.

Fungible Ratio. The 2014 Plan decreases to 1.2-to-1 the ratio at which awards other than options and stock appreciation rights (SARs) will count against the number of shares available under the plan, as well as the ratio at which awards other than options and SARs that are forfeited, expire or are settled for cash will contribute shares back to the 2014 Plan, except as otherwise provided by the 2014 Plan. Under the Existing Plan, the fungible ratio is 1.5-to-1. As of April 22, 2014, there were not any awards outstanding under the Prior Plans other than option awards.

Automatic Exercise of Expiring Options and SARs. The 2014 Plan permits award agreements to provide for automatic exercise of in the money options and SARs on the last day of the term of an option or SAR by withholding of shares otherwise issuable in connection with the exercise of the option in payment of the purchase price and/or required withholding taxes. The Existing Plan does not include these provisions.

Definition of Change in Control. The 2014 Plan includes language to clarify that the occurrence of the consummation of a Business Transaction (as defined in the 2014 Plan) is the Change in Control.

Section 162(m) Grant Limits. The 2014 Plan has the following per person limits on awards granted or earned, as applicable, during any 12-month period: (i) 4,000,000 shares under stock options or SARs, (ii) 4,000,000 shares under any awards other than stock options and SARs that are denominated in shares and intended to comply with the performance-based compensation exception under Section 162(m) of the Code, and (iii) a \$2,000,000 maximum value for awards denominated in cash that are intended to comply with the performance-based compensation exception under Section 162(m) of the Code; however, each of those limitations shall be multiplied by two with respect to awards granted

to a participant during the first

Table of Contents

calendar year in which that participant commences employment with us or any of our subsidiaries. The Existing Plan has a 3,000,000 share limit with respect to awards other than stock options and SARs that are denominated in shares. Under the Existing Plan, the limitations for options and SARs and for any other awards intended to comply with the performance-based exception under Code Section 162(m) that are denominated in shares are 5,000,000 and 4,000,000 shares, respectively. In addition, the Existing Plan does not authorize an increased limit for awards to new participants that are denominated in cash.

Summary of the 2014 Plan

Purpose of the Plan. The purpose of the 2014 Plan is to assist us in attracting and retaining selected individuals who, serving as our employees, directors, consultants and/or advisors, are expected to contribute to our success and to achieve long-term objectives which will benefit our stockholders through the additional incentives inherent in the awards under the 2014 Plan.

Shares Available. The maximum number of shares of our common stock authorized for issuance under the 2014 Plan, subject to adjustment for certain corporate events, including mergers and stock splits (see *Adjustments upon Changes in Capitalization* below), is 16,700,000 shares, reduced for grants made after December 31, 2013 under the Existing Plan and increased to the extent that, after December 31, 2013, awards issued under the Prior Plans are forfeited, expire, or are settled for cash, except as otherwise provided in the 2014 Plan. Stock options and SARs granted under the Existing Plan after December 31, 2013 and under the 2014 Plan reduce the number of shares available for grant under the 2014 Plan by one (1) share for each share subject to such award, and other types of awards granted under the 2014 Plan after December 31, 2013 and under the 2014 Plan reduce the number of shares available for grant under the 2014 Plan by 1.2 shares for each share subject to such award. As of the effective date of the 2014 Plan, no awards may be granted under any Prior Plan. The Existing Plan currently is the sole active plan.

Shares that are released from an award granted under any Prior Plan that was outstanding after December 31, 2013 or from an award granted under the 2014 Plan due to forfeiture, expiration or settlement for cash of the award will increase the number of shares available for grant under the 2014 Plan by one (1) share for each share released from a stock option or SAR and by 1.2 shares for each share released from any other type of award. However, the following shares will not become available for issuance: (i) shares tendered or withheld in payment of the purchase price of an option, (ii) shares tendered or withheld to satisfy any tax withholding obligation with respect to an option or SAR, (iii) shares subject to a SAR that are not issued in connection with the stock settlement of the SAR on exercise thereof, and (iv) shares reacquired by us in the open market or otherwise using cash proceeds from the exercise of options.

Shares of our common stock issued under awards granted under the 2014 Plan in assumption of or in substitution or exchange for awards previously granted by a company acquired by us or a subsidiary, or with which we or a subsidiary combine (*Substitute Awards*), will not reduce the shares available for grant under the 2014 Plan. In addition, if a company acquired by us or a subsidiary, or with which we or a subsidiary combine, has shares remaining available under a plan approved by its stockholders and not adopted in contemplation of such acquisition or combination, the available shares (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio of formula applied to determine the consideration payable to stockholders in the acquisition or combination) may be used for awards under the 2014 Plan and will not reduce the shares available for grant; provided that awards using such available shares shall not be made after the date awards or grants could have been made under the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not our employees or directors prior to the acquisition or combination.

Shares issued under the 2014 Plan may consist of authorized and unissued shares, treasury shares or shares purchased in the open market or otherwise.

Table of Contents

The aggregate maximum number of shares of our common stock that may be issued under the 2014 Plan pursuant to the exercise of incentive stock options, subject to adjustment for certain corporate events, including mergers and stock splits (see *Adjustments upon Changes in Capitalization* below), is 16,700,000 shares, less one (1) share for every one (1) share that was subject to an option or stock appreciation right granted after December 31, 2013 under the Existing Plan and 1.2 shares for each share subject to an award other than an option or stock appreciation right granted after December 31, 2013 under the Existing Plan.

Eligibility; Awards to Certain Individuals and Groups. Options, SARs, restricted stock awards, restricted stock unit awards, other share-based awards and performance awards may be granted under the 2014 Plan. Options may be either incentive stock options (as defined in Section 422 of the Code) or nonstatutory stock options. Awards may be granted under the 2014 Plan to any employee, non-employee member of our board of directors, consultant or advisor who is a natural person and provides services to us or a subsidiary or parent of ours, except for incentive stock options, which may be granted only to employees.

As of April 22, 2014, 25 employees of Mast Therapeutics or its subsidiaries, which includes our six executive officers, and four non-employee directors, were eligible to participate in the 2014 Plan. Our compensation committee, in its discretion, will select the individuals to whom awards under the 2014 Plan may be granted and will determine the type or types of awards to be granted, the time or times at which such awards will be granted, the number of shares subject to each such award (or the dollar value of certain performance awards) and other terms and conditions relating to the awards, subject to the reservation of authority by our board of directors to administer the 2014 Plan and act as the compensation committee thereunder. For this reason, it is not possible to determine the benefits or amounts that will be received by or allocated to any particular individual or group of individuals in the future under the 2014 Plan.

Limits on Awards to Participants. With respect to awards intended to qualify as performance-based compensation under Section 162(m) of the Code, the 2014 Plan provides that, subject to adjustment as provided in the plan, no participant may, in any 12-month period (i) be granted options or SARs with respect to more than 4,000,000 shares of our common stock, (ii) earn more than 4,000,000 shares of our common stock under restricted stock awards, restricted stock unit awards, performance awards and/or other share-based awards, or (iii) earn more than \$2,000,000 under an award; provided, however, that each of these limitations shall be multiplied by two (2) with respect to awards granted to a participant during the first calendar year in which the participant commences employment with us or any of our subsidiaries. If an award is cancelled, the cancelled award will continue to count against the applicable limitations.

The 2014 Plan also imposes a limit on awards to non-employee directors. The aggregate grant date fair value (calculated as of the date of grant in accordance with applicable financial accounting rules) of all awards granted to any non-employee member of our board of directors during any 12-month period shall not exceed \$3,000,000.

Administration. Subject to the reservation of authority by our board of directors to administer the 2014 Plan and act as the compensation committee thereunder, the 2014 Plan will be administered by our compensation committee, which shall consist of at least two members of our board of directors, each of whom must qualify as a non-employee director under Rule 16b-3 under the Securities Exchange Act of 1934, as amended, an outside director under Section 162(m) of the Code (to the extent our board of directors has members meeting such qualifications) and an independent director under the rules of the principal U.S. national securities exchange on which our common stock is traded (the Principal Exchange), to the extent required by such rules. The compensation committee has the authority to select the participants who will receive awards under the 2014 Plan, determine the types and terms and conditions of awards, and to interpret and administer the 2014 Plan. The compensation committee may (i) delegate to a committee of one or more directors the right to grant, cancel, suspend or amend awards and otherwise take action on its behalf under the 2014 Plan (to the extent not inconsistent with applicable law, including Section 162(m) of the Code, and the rules of the Principal Exchange), and (ii) to the extent permitted by law, delegate to an one or more officers (as that term is defined in Rule 16(a)-1(f) of the Exchange Act) or a committee of such officers the right to grant awards to employees who

Table of Contents

are not directors or such officers and the authority to take action on behalf of the compensation committee pursuant to the 2014 Plan to cancel or suspend awards under the 2014 Plan to employees who are not directors or such officers of our company.

Stock Options. The compensation committee may grant either nonstatutory stock options or incentive stock options. A stock option entitles the recipient to purchase a specified number of shares of our common stock at a fixed price subject to terms and conditions set by the compensation committee. The purchase price of shares of common stock covered by a stock option cannot be less than 100% of the fair market value of the common stock on the date the option is granted. Fair market value of the common stock is generally equal to the closing price for the common stock on the Principal Exchange on the date the option is granted (or if there was no closing price on that date, on the last preceding date on which a closing price was reported), except for Substitute Awards.

The 2014 Plan permits payment of the purchase price of stock options to be made by cash or cash equivalents, shares of our common stock previously acquired by the participant, through same-day sales through a broker, any other form of consideration approved by our compensation committee and permitted by applicable law (including withholding of shares of common stock that would otherwise be issued on exercise, including the specified net exercise procedure), or any combination thereof. Options granted under the 2014 Plan expire no later than 10 years from the date of grant, except in the event of the participant's death or disability or if the exercise of an option, other than an incentive stock option, is prohibited by applicable law or the holder cannot purchase or sell shares of our common stock due to a black-out period under our insider trading policy, in which case the term of the option shall be automatically extended for a 30-day period from the end of the prohibition or black-out period.

The written agreement governing an option award may provide for the automatic exercise on the last day of the term of an in the money option through payment of the purchase price and required withholding taxes by withholding of shares otherwise issuable in connection with the exercise of the option.

Stock Appreciation Rights. The compensation committee is authorized to grant SARs in conjunction with a stock option or other award granted under the 2014 Plan, and to grant SARs separately. The grant price of a SAR may not be less than 100% of the fair market value of a share of our common stock on the date the SAR is granted, except for Substitute Awards. The term of an SAR may be no more than 10 years from the date of grant, except in the event of the participant's death or disability or if the exercise of the SAR is prohibited by applicable law or the holder cannot purchase or sell shares of our common stock due to a black-out period under our insider trading policy, in which case the term of the option shall be automatically extended for a 30-day period from the end of the prohibition or black-out period. SARs are subject to terms and conditions set by the compensation committee.

Upon exercise of an SAR, the participant will have the right to receive the excess of the fair market value of the shares covered by the SAR on the date of exercise over the grant price. Payment may be made in cash, shares of our common stock or other property, or any combination thereof, as the compensation committee may determine. Shares issued upon the exercise of SARs are valued at their fair market value as of the date of exercise.

The written agreement governing a SAR may provide for the automatic exercise on the last day of the term of an in the money SAR through payment of the required withholding taxes by withholding of shares otherwise issuable in connection with the exercise of the SAR.

Restricted Stock Awards. Restricted stock awards may be issued either alone or in addition to other awards granted under the 2014 Plan, and are also available as a form of payment of performance awards and other earned cash-based incentive compensation. The compensation committee determines the terms and conditions of restricted stock awards, including the number of shares of common stock granted, and conditions for vesting that

Table of Contents

must be satisfied, which may be based principally or solely on continued provision of services, and also may include a performance-based component. Unless otherwise provided in the award agreement, the holder of a restricted stock award will have the rights of a stockholder from the date of grant of the award, including the right to vote the shares of common stock and the right to receive distributions on the shares (subject to the requirements for dividends on restricted stock awards that vest based on the achievement of performance goals as described under Dividends; Dividend Equivalents below). Except as otherwise provided in the award agreement, any shares or other property (other than cash) distributed with respect to the award will be subject to the same restrictions as the award (subject to the requirements for dividends on restricted stock awards that vest based on the achievement of performance goals as described under Dividends; Dividend Equivalents below).

Restricted Stock Unit Awards. Awards of restricted stock units having a value equal to an identical number of shares of common stock may be granted either alone or in addition to other awards granted under the 2014 Plan, and are also available as a form of payment of performance awards granted under the 2014 Plan and other earned cash-based incentive compensation. The compensation committee determines the terms and conditions of restricted stock units, including conditions for vesting that must be satisfied, which may be based principally or solely on continued provision of services, and also may include a performance-based component. The holder of a restricted stock unit award will not have voting rights with respect to the award. Except as otherwise provided in the award agreement, any shares or other property (other than cash) distributed with respect to the award will be subject to the same restrictions as the award (subject to the requirements for dividend equivalents on restricted stock unit awards that vest based on the achievement of performance goals as described under Dividends; Dividend Equivalents below).

Other Share-Based Awards. The 2014 Plan also provides for the award of shares of our common stock and other awards that are valued by reference to our common stock or other property (Other Share-Based Awards). Such awards may be granted above or in addition to other awards under the 2014 Plan. Other Share-Based Awards may be paid in cash, shares of our common stock or other property, or a combination thereof, as determined by the compensation committee. The compensation committee determines the terms and conditions of Other Share-Based Awards, including any conditions for vesting that must be satisfied.

Performance Awards. Performance awards provide participants with the opportunity to receive shares of our common stock, cash or other property based on performance and other vesting conditions. Performance awards may be granted from time to time as determined at the discretion of the compensation committee. Subject to the share limit and maximum dollar value set forth above under Limits on Awards to Participants, the compensation committee has the discretion to determine (i) the number of shares of common stock under, or the dollar value of, a performance award and (ii) the conditions that must be satisfied for grant or for vesting, which typically will be based principally or solely on achievement of performance goals.

Performance Criteria. With respect to awards intended to qualify as performance-based compensation under Code Section 162(m), at the compensation committee's discretion, performance goals for restricted stock awards, restricted stock units, performance awards or other share-based awards shall be based on the attainment of specified levels of one or any combination of the following:

net sales;

revenue;

revenue growth or product revenue growth;

operating income (before or after taxes);

pre- or after-tax income (before or after allocation of corporate overhead and bonus);

earnings per share;

net income (before or after taxes);

Table of Contents

return on equity;

total shareholder return;

return on assets or net assets;

return on capital (including return on total capital or return on invested capital);

cash flow return on investment;

appreciation in and/or maintenance of the price of our common stock or any of our other securities, including publicly-traded securities or a tracking security whether actual or constructed;

appreciation in and/or maintenance of our market capitalization;

market share;

gross profits;

earnings (including earnings before taxes, earnings before interest and taxes or earnings before interest, taxes, depreciation and amortization);

economic value-added models or equivalent metrics;

comparisons with various stock market indices or other companies;

reductions in costs;

cash flow or cash flow per share (before or after dividends);

improvement in or attainment of expense levels, working capital levels or other levels of cash, cash equivalents and/or short-term investments at specified points in time, including year-end;

operating margins, gross margins or cash margin;

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reductions in debt or accrued liabilities;

stockholders' equity;

research and development achievements;

manufacturing achievements (including manufacturing registration on process validation batches, scale-up activities, obtaining particular yields from manufacturing runs and other measurable objectives related to process development activities);

regulatory achievements (including submitting or filing applications or other documents with regulatory authorities, having any such applications or other documents accepted for review by the applicable regulatory authority or receiving approval of any such applications or other documents);

passing pre-approval inspections (whether of our company or a third-party manufacturer of ours) and validation of manufacturing processes (whether our company's or that of a third-party manufacturer of ours);

clinical achievements (including initiating clinical or bioequivalence studies; initiating enrollment, achieving particular rates of enrollment or enrollment of particular numbers of subjects, or completing enrollment in clinical or bioequivalence studies; dosing the first patient in a clinical or bioequivalence study; completing phases of a clinical or bioequivalence study (including the treatment phase) or announcing or presenting preliminary or final data from clinical or bioequivalence studies (in each case, whether on particular timelines or generally));

strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; establishing relationships with commercial entities with respect to the marketing, distribution and sale of our products (including with group purchasing organizations, distributors and other vendors); supply

Table of Contents

chain achievements (including establishing relationships with manufacturers or suppliers of active pharmaceutical ingredients and other component materials and manufacturers of our products); co-development, co-marketing, profit sharing, joint venture or other similar arrangements);

financing and other capital raising transactions (including sales of our equity or debt securities; factoring transactions; sales or licenses of our assets, including our intellectual property, whether in a particular jurisdiction or territory or globally; or through partnering transactions); and

implementation, completion or attainment of measurable objectives with respect to research, development, manufacturing, commercialization, products or projects, production volume levels, acquisitions and divestitures and recruiting and maintaining personnel.

The performance goals may be based solely by reference to our performance or the performance of one or more of our subsidiaries, parents, divisions, business segments or business units, or based upon the relative performance of other companies or upon comparisons of any of the indicators of performance relative to other companies. The compensation committee may also exclude under the terms of the performance awards, the impact of an event or occurrence that the compensation committee determines should appropriately be excluded, including (i) restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, (ii) an event either not directly related to our operations or not within our management's reasonable control, or (iii) the cumulative effects of tax or accounting changes in accordance with U.S. generally accepted accounting principles.

Adjustments to Awards Subject to Performance Criteria. The compensation committee may make downward, but not upward, adjustments with respect to any amount payable pursuant to any restricted stock award, restricted stock unit award, performance award or other share-based payment award that is subject to performance criteria. The compensation committee may not waive achievement of performance goals, except in the case of death, disability or as otherwise determined by the compensation committee in special circumstances.

Dividends; Dividend Equivalents. Awards other than options and SARs may, if determined by the compensation committee, provide that the participant will be entitled to receive, currently or on a deferred basis, cash, stock or other property dividends, or cash payments in amounts equivalent to cash, stock, or other property dividends declared with respect to shares of common stock covered by an award. The compensation committee may provide that such amounts will be deemed to have been reinvested in additional shares of common stock or otherwise, and that they are subject to the same vesting or performance conditions as the underlying award. Any dividends or dividend equivalents provided with respect to performance awards or restricted stock, restricted stock unit or other share-based awards that are subject to the attainment of specified performance goals will be subject to the same restrictions and risk of forfeiture as the underlying awards.

No Repricing. The 2014 Plan prohibits option and SAR repricings (other than to reflect mergers, stock splits, spin-offs or other corporate events as described under *Adjustments upon Changes in Capitalization* below, or in connection with a change in control of the Company) unless stockholder approval is obtained. For purposes of the 2014 Plan, a repricing means a reduction in the exercise price of an option or the grant price of a SAR, the exchange or cancellation of an option or SAR for cash or another award under the 2014 Plan if the exercise price or grant price of the option or SAR is greater than the fair market value of our common stock (except in connection with a change in control, or for awards granted in assumption of or in substitution for awards previously granted by a company acquired by the Company or a subsidiary or with which the Company or a subsidiary combines), or any other action with respect to an option or SAR that may be treated as a repricing under the rules of the Principal Exchange.

Nontransferability of Awards. No award under the 2014 Plan, and no shares subject to awards that have not been issued or as to which any applicable restriction, performance or deferral period has not lapsed, may be sold, assigned, transferred, pledged or otherwise encumbered, other than by will or the laws of descent and distribution, and an award may be exercised during the participant's lifetime only by the participant or the participant's guardian or legal representative, except that the compensation committee may provide in an award

Table of Contents

agreement that a participant may transfer an award without consideration to certain family members, family trusts, or other family-owned entities, or for charitable donations under such terms and conditions determined by the compensation committee.

Adjustments upon Changes in Capitalization. In the event of any 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 our corporate structure affecting our common stock or the value thereof, appropriate adjustments to the 2014 Plan and awards will be made as the compensation committee determines to be equitable or appropriate, including adjustments in the number and class of shares of stock available for awards under the 2014 Plan, the number, class and exercise or grant price of shares subject to awards outstanding under the 2014 Plan, and the limits on the number of awards that any person may receive.

Change in Control. Agreements evidencing awards under the 2014 Plan may provide that upon a change in control (as defined in the 2014 Plan), unless otherwise provided in the agreement evidencing an award), outstanding options and SARs shall be cancelled and terminated without payment if the fair market value of one share of our common stock as of the date of the change in control is less than the per share option exercise price or SAR grant price and all performance awards shall be considered earned and payable and any limitations shall lapse and such awards shall be immediately settled or distributed.

Except as otherwise provided in the agreement evidencing an award, in the event of a change in control in which the successor company assumes or substitutes for an option, SAR, restricted stock award, restricted stock unit award or other share-based award, if a participant's employment with such successor company terminates within 24 months following such change in control, outstanding options and SARs will immediately vest, become fully exercisable and may thereafter be exercised for 24 months and restrictions, limitations and other conditions applicable to restricted stock, restricted stock units and other share-based compensation shall lapse and they shall become free of all restrictions and limitations and become fully vested. Except as otherwise provided in the agreement evidencing an award, to the extent the successor company does not assume or substitute for outstanding awards, then upon such change in control those outstanding options and SARs shall immediately vest and become fully exercisable and restrictions and other limitations on restricted stock, restricted stock units and other share-based awards shall lapse and they shall become fully vested.

The compensation committee, in its discretion, may determine that, upon a change in control, each outstanding option and SAR shall terminate within a specified number of days after notice to the participant, and/or that each participant shall receive, with respect to each share subject to such option or SAR, an amount equal to the excess of fair market value of such share immediately prior to the occurrence of such change in control over the exercise price per share of such option and/or SAR; such amount to be payable in cash, in one or more kinds of stock or property, or in a combination thereof, as the compensation committee, in its discretion, shall determine.

Generally, under the 2014 Plan, a change in control occurs upon (i) the consummation of a merger or consolidation of our company with or into another entity, (ii) the consummation of the sale, transfer or other disposition of all or substantially all of our assets, (iii) certain changes in the majority of our board of directors within a period of 36 consecutive months, (iv) 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, or (v) approval by our stockholders of a plan of complete liquidation or dissolution.

Termination of Employment. The compensation committee will determine and set forth in the award agreement whether any awards will continue to be exercisable, and the terms of such exercise, on and after the date the participant ceases to be employed by, or to otherwise provide services to, us, whether by reason of death, disability, voluntary or involuntary termination of employment or service, or otherwise.

Table of Contents

Recoupment of Compensation; Forfeiture Events. If we are required to prepare an accounting restatement due to our material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws, any participant who knowingly or through gross negligence engaged in the misconduct, or who knowingly or through gross negligence failed to prevent the misconduct, and any participant who is one of the individuals subject to automatic forfeiture under Section 304 of the Sarbanes-Oxley Act of 2002, shall reimburse us for (i) the amount of any payment in settlement of an award received by such participant during the 12-month period following the first public issuance or filing with the SEC (whichever first occurred) of the financial document embodying such financial reporting requirement, and (ii) any profits realized by such participant from the sale of our securities during such 12-month period. In addition, to the extent claw-back or similar provisions applicable to awards are required by applicable law, listing standards and/or policies we adopt, awards granted under the 2014 Plan shall be subject to such provisions.

Effective Date of Plan; Amendment and Termination. The 2014 Plan shall be effective on the date of its approval by the holders of a sufficient number of the shares entitled to vote at a duly constituted meeting of our stockholders, and on such date, the 2014 Plan shall amend and restate in its entirety the Existing Plan. No awards may be granted under the 2014 Plan until its effective date. The 2014 Plan shall be null and void and of no effect if not duly approved by our stockholders. The 2014 Plan may be amended or terminated by our board of directors except that stockholder approval is required for any amendment to the 2014 Plan that:

would increase the number of shares of common stock available for awards under the 2014 Plan,

expand the types of awards available under the 2014 Plan,

materially expand the class of persons eligible to participate in the 2014 Plan,

permit the grant of options or SARs with an exercise or grant price of less than 100% of fair market value on the date of grant,

increase the maximum permissible term of any option or SAR granted under the 2014 Plan,

amend the provisions of the Existing Plan prohibiting the repricing of options and SARs (as described above under *No Repricing*),

increase the limits as to any participant on the number of shares subject to awards or the dollar value payable with respect to performance awards, or

take any action with respect to an option or SAR that may be treated as a repricing under the rules of the Principal Exchange.

In addition, no amendment or termination may materially impair a participant's rights under an award previously granted under the Existing Plan without the written consent of the participant.

The 2014 Plan will expire on and no further awards may be granted after the 10th anniversary of its effective date, which, if the 2014 Plan is approved by our stockholders at the Annual Meeting, will be June 19, 2024. Awards granted under the 2014 Plan on or prior to its expiration date shall remain in effect until they have been exercised or terminated or have expired.

Federal Income Tax Consequences

The following discussion summarizes certain federal income tax considerations (as of the date this proxy statement is first delivered to our stockholders) of awards under the 2014 Plan. However, it does not purport to be complete and does not describe the state, local or foreign tax considerations or the consequences for any particular individual.

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Stock Options. A participant does not realize ordinary income on the grant of a stock option. Upon exercise of a nonstatutory stock option, the participant will realize ordinary income equal to the excess of the fair market value of the shares of common stock over the option exercise price. The cost basis of the shares acquired

Table of Contents

for capital gain treatment is their fair market value at the time of exercise. Upon exercise of an incentive stock option, the excess of the fair market value of the shares of common stock acquired over the option exercise price will be an item of tax preference to the participant, which may be subject to an alternative minimum tax for the year of exercise. If no disposition of the shares is made within two years from the date of granting of the incentive stock option or within one year after exercise of the option by the participant, the participant does not realize ordinary income for tax purposes as a result of exercising the incentive stock option. Instead, the sale of the shares will be a capital transaction. In this case, the tax basis of the shares received for capital gain treatment is the option exercise price and any gain or loss realized on the sale of the shares is long-term capital gain or loss. If the participant disposes of the shares within the two-year or one-year periods referred to above, the participant will recognize ordinary income equal to the lesser of (i) the excess of the fair market value over the exercise price of the shares on the date of exercise, or (ii) the excess of the amount realized on the disposition over the exercise price for the shares. Any remaining gain or loss will be long-term or short-term capital gain or loss depending on whether the participant has held the shares for more than one year. Utilization of losses is subject to special rules and limitations.

Stock Appreciation Rights. No ordinary income will be realized by a participant in connection with the grant of a SAR. When the SAR is exercised, the participant will realize ordinary income in an amount equal to the sum of the amount of any cash received and the fair market value of the shares of common stock or other property received upon the exercise.

Restricted Stock, Performance and Restricted Stock Unit Awards. The participant will not realize ordinary income on the grant of a restricted stock award (or a performance award if the shares of common stock are issued on grant), but will realize ordinary income when the shares subject to the award become vested in an amount equal to the excess of (i) the fair market value of the shares on the vesting date over (ii) the purchase price, if any, paid for the shares. The participant may, however, elect under Section 83(b) of the Code to include as ordinary income in the year the shares are granted an amount equal to the excess of (i) the fair market value of the shares on the date of issuance, over (ii) the purchase price, if any, paid for the shares. If the Section 83(b) election is made, the participant will not realize any additional taxable income when the shares become vested.

The participant will not realize ordinary income on the grant of a restricted stock unit award, (or a performance award under which shares of common stock are not issued on grant), but will realize ordinary income when the shares subject to the award are issued to the participant after they become vested. The amount of ordinary income will generally be equal to the fair market value of the shares on the date they are issued.

Upon disposition of shares of common stock acquired under a restricted stock award, performance award or restricted stock unit award, the participant will realize a capital gain or loss equal to the difference between the selling price and the sum of the amount paid for the shares plus any amount realized as ordinary income upon grant (or vesting) of the shares.

Company Tax Deduction. We generally will be entitled to a tax deduction in connection with an award under the 2014 Plan, subject to the provisions of Section 162(m) of the Code, in an amount equal to the ordinary income realized by a participant at the time the participant realizes such income (for example, on the exercise of a nonqualified stock option). Section 162(m) of the Code may limit the deductibility of compensation paid to the Company's chief executive officer and to each of the next three most highly compensated executive officers other than the Company's chief financial officer. Under Section 162(m) of the Code, the annual compensation paid to any of these executives will be deductible to the extent that it does not exceed \$1,000,000 or if the compensation is performance-based compensation under Section 162(m) of the Code. Compensation attributable to stock options and SARs under the 2014 Plan may qualify as performance-based compensation if the awards (subject to the limitations set forth above) are made by the compensation committee (provided the compensation committee is composed of outside directors (as defined in Section 162(m) of the Code)) and the exercise or grant price of the award is no less than the fair market value of our common stock on the date of grant. Compensation attributable to restricted stock awards, restricted stock unit awards and performance awards (subject to the limitations set forth above) may qualify as performance-based compensation if (i) the

Table of Contents

compensation is approved by the compensation committee, (ii) the compensation is paid only upon the achievement of an objective performance goal(s) established in writing by the compensation committee while the outcome is substantially uncertain, and (iii) the compensation committee certifies in writing prior to the payment of the compensation that the performance goal(s) has been satisfied. In addition to the foregoing, other technical requirements must be satisfied in order for awards granted under the 2014 Plan to qualify as performance-based compensation. The compensation committee will have discretion to grant one or more awards under the 2014 Plan that do not qualify as performance-based compensation.

Past Awards under the Existing Plan

The following table sets forth awards granted under the Existing Plan and its predecessor plans (the Amended and Restated 2008 Plan and the 2008 Plan) through April 22, 2014 to the persons and groups specified below. The information in the table reflects retrospective application of the 1-for-25 reverse stock split of our outstanding common stock effected on April 23, 2010.

Name and Position	Stock Option Awards (Number of Shares)	Restricted Stock Unit Awards (Number of Shares)
Named Executive Officers		
Brian M. Culley, Chief Executive Officer	2,603,248	48,000(1)
Patrick L. Keran, President & Chief Operating Officer	2,603,248	34,000(1)
Santosh J. Vetticaden, Chief Medical Officer & Senior Vice President	1,020,100	
All current executive officers as a group (6 persons)	7,705,946	82,000(1)
All current directors who are not executive officers as a group (3 persons)	342,088	
Each associate of any such executive officers, directors or director nominees (0 persons)		
Each other person who received 5% of such options, warrants or rights (0 persons)		
All current employees as a group, excluding current executive officers (19 persons)	1,343,859	

(1) The restricted stock units, which were granted in January 2009, were forfeited by Messrs. Culley and Keran in July 2009 prior to vesting.

Registration under the Securities Act of 1933

We plan to register the securities issuable under the 2014 Plan pursuant to a registration statement on Form S-8 as soon as practicable following stockholder approval of the 2014 Plan.

Interest of Certain Persons

Each of our directors and executive officers would be eligible to participate in the 2014 Plan. As a result, approval of the 2014 Plan impacts each of our directors and executive officers and each of them has a personal interest in this proposal and its approval by our stockholders.

Vote Required

Assuming a quorum is present at the Annual Meeting, the affirmative vote of the holders of a majority of the shares of our common stock having voting power present in person or represented by proxy at the Annual Meeting is required to approve this proposal. Abstentions will have the same effect as negative votes. Broker non-votes will not be counted toward the vote total and therefore will have no effect on the outcome of this proposal.

Our board of directors unanimously recommends a vote FOR the approval of the 2014 Omnibus Incentive Plan.

Table of Contents

OTHER MATTERS

As of the time of preparation of this proxy statement, neither our board of directors nor our management knows of any matter to be presented at the Annual Meeting that is not listed in the Notice of Annual Meeting accompanying this proxy statement and described in this proxy statement. If any other matters should properly come before the Annual Meeting or any adjournment or postponement thereof, however, the holders of proxies solicited by this proxy statement will vote on such matters in accordance with their judgment.

STOCKHOLDER PROPOSALS FOR 2015 ANNUAL MEETING

The deadline for submitting a stockholder proposal for inclusion in our proxy materials for our 2015 annual meeting of stockholders is December 30, 2014, which is 120 days prior to the first anniversary of the mailing date of this proxy statement. These proposals must be delivered to our principal executive offices and comply with the requirements as to form and substance established by the SEC for such proposals in order to be included in our proxy materials. Stockholders who wish to nominate persons for election to our board of directors or make a proposal at the 2015 annual meeting of stockholders without including the proposal in our proxy materials relating to that meeting must notify us in writing delivered to our principal executive offices no earlier than February 19, 2015 and no later than March 21, 2015. Stockholders are advised to review our bylaws, which contain additional advance notice requirements. A copy of our bylaws is available to stockholders upon written request to our corporate secretary.

By Order of the Board of Directors,

Brian M. Culley

Chief Executive Officer

San Diego, California

April 29, 2014

YOUR VOTE IS IMPORTANT!

You are cordially invited to attend the Annual Meeting. However, to ensure the presence of a quorum and that your shares are represented at the Annual Meeting, as well as to save us additional proxy solicitation costs, we encourage you to submit your proxy or voting instructions as soon as possible. For specific instructions as to how to vote your shares, please refer to the instructions in the Notice of Internet Availability of Proxy Materials you received in the mail, or, if you've requested and received printed proxy materials, please refer to the instructions in the enclosed proxy card. Even if you have voted by proxy, you may still vote in person if you attend the Annual Meeting. Please note, however, that if your shares are held of record by a broker or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

Table of Contents

Appendix A

MAST THERAPEUTICS, INC.

2014 OMNIBUS INCENTIVE PLAN

Mast Therapeutics, Inc., a Delaware corporation (the *Company*), hereby establishes and adopts the following 2014 Omnibus Incentive Plan (this *Plan*), which amends, restates and renames the 2013 Plan (defined below), effective as of the Effective Date.

1. PURPOSE OF THIS PLAN

The purpose of this Plan is to assist the Company and its Affiliates in attracting and retaining selected individuals to serve as employees, directors, consultants and/or advisors of the Company and its Affiliates who are expected to contribute to the Company's success and to achieve long-term objectives that will benefit stockholders of the Company through the additional incentives inherent in the Awards hereunder.

2. DEFINITIONS

2.1 *2013 Plan* shall mean the Company's 2013 Omnibus Incentive Plan, which amended, restated and renamed the Company's Amended and Restated 2008 Omnibus Incentive Plan as of June 19, 2013, the date on which it was approved by the stockholders of the Company.

2.2 *Affiliate* shall mean, at the time of determination, any parent or subsidiary of the Company as such terms are defined in Rule 405 of the Securities Act of 1933, as amended. The Board or the Committee shall have the authority to determine the time or times at which parent or subsidiary status is determined within the foregoing definition.

2.3 *Award* shall mean any Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award, Other Share-Based Award, Performance Award or any other right, interest or option relating to Shares or other property (including cash) granted pursuant to the provisions of this Plan.

2.4 *Award Agreement* shall mean any written agreement, contract or other instrument or document evidencing any Award granted hereunder, including through an electronic medium.

2.5 *Board* shall mean the board of directors of the Company.

2.6 *Code* shall mean the Internal Revenue Code of 1986, as amended from time to time.

2.7 *Committee* shall mean the Compensation Committee of the Board or a subcommittee thereof formed by the Compensation Committee to act as the Committee hereunder. The Committee shall consist of no fewer than two Directors, each of whom is (i) a Non-Employee Director within the meaning of Rule 16b-3 of the Exchange Act, (ii) an outside director within the meaning of Section 162(m) of the Code, to the extent the Board has members meeting such qualifications, and (iii) an independent director for purpose of the rules of the principal U.S. national securities exchange on which the Shares are traded, to the extent required by such rules. Anything to the contrary in this Plan notwithstanding, the Board reserves all authority to administer this Plan and to act as if the Committee hereunder.

2.8 *Consultant* shall mean any consultant or advisor who is a natural person and who provides services to the Company or any Affiliate, so long as such person (i) renders bona fide services that are not in connection with the offer and sale of the Company's securities in a capital-raising transaction and (ii) does not directly or indirectly promote or maintain a market for the Company's securities.

Table of Contents

- 2.9 *Covered Employee* shall mean an employee of the Company or its subsidiaries who is a covered employee within the meaning of Section 162(m) of the Code.
- 2.10 *Director* shall mean a non-employee member of the Board.
- 2.11 *Dividend Equivalents* shall have the meaning set forth in Section 12.5.
- 2.12 *Effective Date* shall have the meaning set forth in Section 13.13.
- 2.13 *Employee* shall mean any employee of the Company or any Affiliate and any prospective employee conditioned upon, and effective not earlier than, such person becoming an employee of the Company or any Affiliate.
- 2.14 *Exchange Act* shall mean the Securities Exchange Act of 1934, as amended.
- 2.15 *Fair Market Value* shall mean, with respect to Shares as of any date, (i) the per Share closing sale price of the Shares reported as having occurred on the principal U.S. national securities exchange on which the Shares are listed and traded on such date, or, if there was no such sale on that date, then on the last preceding date on which such a sale was reported; (ii) if the Shares are not then listed on any national securities exchange but are quoted in an inter-dealer quotation system on a last sale basis, the final ask price reported on such date, or, if there is no such sale on such date, then on the last preceding date on which a sale was reported; or (iii) if the Shares are not listed on a national securities exchange nor quoted on an inter-dealer quotation system on a last sale basis, the amount determined by the Committee to be the fair market value of the Shares as determined by the Committee in its sole discretion. The Fair Market Value of any property other than Shares shall mean the market value of such property determined by such methods or procedures as shall be established from time to time by the Committee, subject to the requirements of Section 409A of the Code.
- 2.16 *Incentive Stock Option* shall mean an Option that when granted is intended to be, and qualifies as, an incentive stock option for purposes of Section 422 of the Code.
- 2.17 *Limitations* shall have the meaning set forth in Section 10.5.
- 2.18 *Net Exercise* shall mean the delivery of a properly executed exercise notice followed by a procedure pursuant to which (1) the Company will reduce the number of shares otherwise issuable to a Participant upon the exercise of an Option by the largest whole number of shares having a Fair Market Value that does not exceed the aggregate exercise price for the shares with respect to which the Option is exercised, and (2) the Participant shall pay to the Company in cash the remaining balance of such aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued.
- 2.19 *Option* shall mean any right granted to a Participant under this Plan allowing such Participant to purchase Shares at such price or prices and during such period or periods as the Committee shall determine.
- 2.20 *Other Share-Based Award* shall have the meaning set forth in Section 8.1.
- 2.21 *Participant* shall mean an Employee, Consultant or Director who is selected by the Committee to receive an Award under this Plan.
- 2.22 *Payee* shall have the meaning set forth in Section 13.2.
- 2.23 *Performance Award* shall mean any Award of Performance Cash, Performance Shares or Performance Units granted pursuant to Article 9.
- 2.24 *Performance Cash* shall mean any cash incentives granted pursuant to Article 9 payable to the Participant upon the achievement of such performance goals as the Committee shall establish.

Table of Contents

- 2.25 *Performance Period* shall mean the period established by the Committee during which any performance goals specified by the Committee with respect to such Award are to be measured.
- 2.26 *Performance Share* shall mean any grant pursuant to Article 9 of a unit valued by reference to a designated number of Shares, which value will be paid to the Participant upon achievement of such performance goals as the Committee shall establish.
- 2.27 *Performance Unit* shall mean any grant pursuant to Article 9 of a unit valued by reference to a designated amount of cash or property other than Shares, which value will be paid to the Participant upon achievement of such performance goals during the Performance Period as the Committee shall establish.
- 2.28 *Permitted Assignee* shall have the meaning set forth in Section 12.3.
- 2.29 *Prior Plans* shall mean, collectively, (i) the Company's 2005 Equity Incentive Plan, which was approved by the stockholders of the Company on May 24, 2005, (ii) the Company's 2008 Omnibus Incentive Plan, which was approved by the stockholders of the Company on May 28, 2008, (iii) the Company's Amended and Restated 2008 Omnibus Incentive Plan, which amended, restated and renamed the 2008 Omnibus Incentive Plan as of June 15, 2011, the date it was approved by the stockholders of the Company, and (iv) the 2013 Plan. Awards granted under the Prior Plans continue to be governed under the terms of the Prior Plans.
- 2.30 *Restricted Stock* shall mean any Share issued with the restriction that the holder may not sell, transfer, pledge or assign such Share and with such other restrictions as the Committee, in its sole discretion, may impose (including any restriction on the right to vote such Share and the right to receive any dividends), which restrictions may lapse separately or in combination at such time or times, in installments or otherwise, as the Committee may deem appropriate.
- 2.31 *Restricted Stock Award* shall have the meaning set forth in Section 7.1.
- 2.32 *Restricted Stock Unit* means an Award that is valued by reference to a Share, which value may be paid to the Participant by delivery of such property as the Committee shall determine, including without limitation, cash or Shares, or any combination thereof, and that has such restrictions as the Committee, in its sole discretion, may impose, including without limitation, any restriction on the right to retain such Awards, to sell, transfer, pledge or assign such Awards, and/or to receive any cash Dividend Equivalents with respect to such Awards, which restrictions may lapse separately or in combination at such time or times, in installments or otherwise, as the Committee may deem appropriate.
- 2.33 *Restricted Stock Unit Award* shall have the meaning set forth in Section 7.1
- 2.34 *Services* shall mean services provided to the Company or any Affiliate or any successor company (or a subsidiary or parent thereof), whether as an Employee, Consultant or Director, unless, in connection with the conversion, if any, of a Participant from one classification (i.e., Employee, Consultant or Director) to another, the Committee, in its sole and absolute discretion, determines that any on-going services to the Company or any Affiliate or any successor company (or a subsidiary or parent thereof) shall not constitute Services.
- 2.35 *Shares* shall mean the shares of common stock of the Company, par value \$0.001 per share.
- 2.36 *Stock Appreciation Right* shall mean the right granted to a Participant pursuant to Article 6.
- 2.37 *Substitute Awards* shall mean Awards granted or Shares issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, in each case by a company acquired by the Company or any Affiliate or with which the Company or any Affiliate combines.

Table of Contents

3. SHARES SUBJECT TO THIS PLAN

3.1 Number of Shares. (a) Subject to adjustment as provided in Section 12.2, a total of 16,700,000 Shares shall be authorized for Awards granted under this Plan, less one (1) Share for every one (1) Share that was subject to an option or a stock appreciation right granted after December 31, 2013 under the 2013 Plan and 1.2 Shares for every one (1) Share that was subject to an award other than an option or stock appreciation right granted after December 31, 2013 under the 2013 Plan. Any Shares that are subject to Options or Stock Appreciation Rights granted under this Plan shall be counted against this limit as one (1) Share for every one (1) Share granted, any Shares that are subject to Awards other than Options or Stock Appreciation Rights shall be counted against this limit as 1.2 Shares for every one (1) Share granted. As of the Effective Date, no awards may be granted under any of the Prior Plans.

(b) Subject at all times to Section 13.17, if any Shares subject to an Award are forfeited or an Award expires or is settled for cash (in whole or in part) or, after December 31, 2013, any Shares subject to an award under any of the Prior Plans are forfeited or an award under any Prior Plan expires or is settled for cash (in whole or in part), the Shares subject to such Award or award under the Prior Plan shall, to the extent of such forfeiture, expiration or cash settlement, again be available for Awards under this Plan, in accordance with Section 3.1(d) below. In the event that withholding tax liabilities arising from an Award other than an Option or Stock Appreciation Right or, after December 31, 2013, an award other than an option or stock appreciation right under any Prior Plan are satisfied by the tendering of Shares (either actually or by attestation) or by the withholding of Shares by the Company, the Shares so tendered or withheld shall be added to the Shares available for Awards under this Plan in accordance with Section 3.1(d) below. Notwithstanding anything to the contrary contained herein, the following Shares shall not be added to the Shares authorized for grant under paragraph (a) of this Section: (i) Shares tendered by the Participant or withheld by the Company in payment of the purchase price of an Option, or, after December 31, 2013, an option under any Prior Plan, (ii) Shares tendered by the Participant or withheld by the Company to satisfy any tax withholding obligation with respect to an Option or Stock Appreciation Right or an option or stock appreciation right granted under any of the Prior Plans, (iii) Shares subject to a Stock Appreciation Right or, after December 31, 2013, a stock appreciation right under any Prior Plan that are not issued in connection with the stock settlement of the Stock Appreciation Right on exercise thereof, and (iv) Shares reacquired by the Company on the open market or otherwise using cash proceeds from the exercise of Options or options granted under any of the Prior Plans.

(c) Shares issued under Substitute Awards shall not reduce the Shares authorized for grant under this Plan or authorized for grant to a Participant under Section 10.5 nor shall Shares subject to a Substitute Award be added to the Shares available for Awards under the Plan as provided in paragraph (b) above. Additionally, in the event that a company acquired by the Company or any Affiliate or with which the Company or any Affiliate combines has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under this Plan and shall not reduce the Shares authorized for grant under this Plan (and Shares subject to such Awards shall not be added to the Shares available for Awards under the Plan as provided in paragraphs (b) above); provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not Employees or Directors prior to such acquisition or combination.

(d) Any Share that again becomes available for grant pursuant to this Article shall be added back as (i) one (1) Share if such Share was subject to an Option or a Stock Appreciation Right granted under this Plan or an option or a stock appreciation right granted under any of the Prior Plans, and (ii) 1.2 Shares if such Share was subject to an Award other than an Option or a Stock Appreciation Right granted under this Plan or an award other than an option or a stock appreciation right granted under any of the Prior Plans.

Table of Contents

5.2 *Character of Shares.* Any Shares issued hereunder may consist, in whole or in part, of authorized and unissued shares, treasury shares or shares purchased in the open market or otherwise.

4. ELIGIBILITY AND ADMINISTRATION

4.1 *Eligibility.* Any Employee, Consultant or Director shall be eligible to be selected as a Participant.

4.2 *Administration.* (a) This Plan shall be administered by the Committee. The Committee shall have full power and authority, subject to the provisions of this Plan and subject to such orders or resolutions not inconsistent with the provisions of this Plan as may from time to time be adopted by the Board, to: (i) select the Employees and Directors to whom Awards may from time to time be granted hereunder; (ii) determine the type or types of Awards, not inconsistent with the provisions of this Plan, to be granted to each Participant hereunder; (iii) determine the number of Shares to be covered by each Award granted hereunder; (iv) determine the terms and conditions, not inconsistent with the provisions of this Plan, of any Award granted hereunder; (v) determine whether, to what extent and under what circumstances Awards may be settled in cash, Shares or other property; (vi) determine whether, to what extent, and under what circumstances cash, Shares, other property and other amounts payable with respect to an Award made under this Plan shall be deferred either automatically or at the election of the Participant; (vii) determine whether, to what extent and under what circumstances any Award shall be canceled or suspended; (viii) interpret and administer this Plan and any instrument or agreement entered into under or in connection with this Plan, including any Award Agreement; (ix) correct any defect, supply any omission or reconcile any inconsistency in this Plan or any Award in the manner and to the extent that the Committee shall deem desirable to carry it into effect; (x) establish such rules and regulations and appoint such agents as it shall deem appropriate for the proper administration of this Plan; (xi) determine whether any Award, other than an Option or Stock Appreciation Right, will have Dividend Equivalents; and (xii) make any other determination and take any other action that the Committee deems necessary or desirable for administration of this Plan.

(b) Decisions of the Committee shall be final, conclusive and binding on all persons or entities, including the Company, any Participant, and any Affiliate.

(c) To the extent not inconsistent with applicable law, including Section 162(m) of the Code, or the rules and regulations of the principal U.S. national securities exchange on which the Shares are traded, the Committee may delegate to (i) a committee of one or more directors of the Company any of the authority of the Committee under this Plan, including the right to grant, cancel, suspend or amend Awards and (ii) to the extent permitted by law, to one or more officers (as that term is defined in Rule 16(a)-1(f) of the Exchange Act) of the Company, or a committee of such officers, the right to grant Awards to Employees who are not Directors or such officers and the authority to take action on behalf of the Committee pursuant to this Plan to cancel or suspend Awards to Employees who are not Directors or such officers of the Company. The Board may take any action under this Plan that the Committee is authorized to take. In the event the Board takes such action, references to the Committee hereunder shall be understood to refer to the Board.

4.3 *Annual Limit on Awards to Directors.* Notwithstanding any other provision of this Plan to the contrary, the aggregate grant date fair value (calculated as of the date of grant in accordance with applicable financial accounting rules) of all Awards granted to any Director during any 12-month period shall not exceed \$3,000,000.

5. OPTIONS

5.1 *Grant of Options.* Options may be granted hereunder to Participants either alone or in addition to other Awards granted under this Plan. Any Option shall be subject to the terms and conditions of this Article and to such additional terms and conditions, not inconsistent with the provisions of this Plan, as the Committee shall deem desirable.

Table of Contents

5.2 Award Agreements. All Options granted pursuant to this Article shall be evidenced by a written Award Agreement in such form and containing such terms and conditions as the Committee shall determine which are not inconsistent with the provisions of this Plan. The terms of Options need not be the same with respect to each Participant. Granting an Option pursuant to this Plan shall impose no obligation on the recipient to exercise such Option. Any individual who is granted an Option pursuant to this Article may hold more than one Option granted pursuant to this Plan at the same time.

5.3 Option Price. Other than in connection with Substitute Awards, the option price per each Share purchasable under any Option granted pursuant to this Article shall not be less than 100% of the Fair Market Value of one Share on the date of grant of such Option. Other than pursuant to Section 12.2, the Committee shall not without the approval of the Company's stockholders (a) lower the option price per Share of an Option after it is granted, (b) cancel an Option when the option price per Share exceeds the Fair Market Value of one Share in exchange for cash or another Award (other than in connection with a Change in Control or a Substitute Award), or (c) take any other action with respect to an Option that would be treated as a repricing under the rules and regulations of the principal securities exchange on which the Shares are traded.

5.4 Option Term. The term of each Option shall be fixed by the Committee in its sole discretion; provided that no Option shall be exercisable after the expiration of ten (10) years from the date the Option is granted, except in the event of death or disability. Notwithstanding the foregoing, in the event that on the last business day of the term of an Option that was granted under this Plan, (i) the exercise of the Option, other than an Incentive Stock Option, is prohibited by applicable law or (ii) Shares may not be purchased or sold by certain employees or directors of the Company due to the black-out period of a Company insider trading policy, the term of the Option shall be extended for a period of thirty (30) days following the end of the legal prohibition or black-out period, as applicable.

5.5 Exercise of Options. (a) Options granted under this Plan shall be exercised by the Participant or by a Permitted Assignee thereof (or by the Participant's executors, administrators, guardian or legal representative, as may be provided in an Award Agreement) as to all or part of the Shares covered thereby, by giving notice of exercise to the Company or its designated agent, specifying the number of Shares to be purchased. The notice of exercise shall be in such form, made in such manner, and in compliance with such other requirements consistent with the provisions of this Plan as the Committee may prescribe from time to time.

(b) Unless otherwise provided in an Award Agreement, full payment of such purchase price shall be made at the time of exercise and shall be made (i) in cash or cash equivalents (including certified check or bank check or wire transfer of immediately available funds), (ii) by tendering previously acquired Shares (either actually or by attestation, valued at their then Fair Market Value), (iii) with the consent of the Committee, by delivery of other consideration having a Fair Market Value on the exercise date equal to the total purchase price, (iv) with the consent of the Committee, by withholding Shares otherwise issuable in connection with the exercise of the Option, including a Net Exercise procedure, (v) through same-day sales through a broker, unless the Committee provides otherwise in an Award Agreement, (vi) through any other method specified in an Award Agreement, or (vii) through any combination of any of the foregoing. The notice of exercise, accompanied by such payment, shall be delivered to the Company at its principal business office or such other office as the Committee may from time to time direct, and shall be in such form, containing such further provisions consistent with the provisions of this Plan, as the Committee may from time to time prescribe. In no event may any Option granted hereunder be exercised for a fraction of a Share. No adjustment shall be made for cash dividends or other rights for which the record date is prior to the date of such issuance.

(c) Notwithstanding the foregoing, an Award Agreement may provide that if on the last day of the term of an Option the Fair Market Value of one Share exceeds the option price per Share, the Participant has not exercised the Option (or a tandem Stock Appreciation Right, if applicable) and the Option has not expired, the Option shall be deemed to have been exercised by the Participant on such day with payment made by withholding Shares otherwise issuable in connection with the exercise of the Option. In such event, the Company

Table of Contents

shall deliver to the Participant the number of Shares for which the Option was deemed exercised, less the number of Shares required to be withheld for the payment of the total purchase price and required withholding taxes; provided, however, any fractional Share shall be settled in cash.

5.6 Form of Settlement. In its sole discretion, the Committee may provide that the Shares to be issued upon an Option's exercise shall be in the form of Restricted Stock or other similar securities.

5.7 Incentive Stock Options. The Committee may grant Options intended to qualify as incentive stock options as defined in Section 422 of the Code, to any employee of the Company or any Affiliate, subject to the requirements of Section 422 of the Code. Solely for purposes of determining whether Shares are available for the grant of Incentive Stock Options under this Plan, the maximum aggregate number of Shares that may be issued pursuant to Incentive Stock Options granted under this Plan shall be the number of Shares set forth in the first sentence of Section 3.1(a), subject to adjustments provided in Section 12.2.

6. STOCK APPRECIATION RIGHTS

6.1 Grant and Exercise. The Committee may provide Stock Appreciation Rights (a) in conjunction with all or part of any Option granted under this Plan or at any subsequent time during the term of such Option, (b) in conjunction with all or part of any Award (other than an Option) granted under this Plan or at any subsequent time during the term of such Award, or (c) without regard to any Option or other Award in each case upon such terms and conditions as the Committee may establish in its sole discretion.

6.2 Terms and Conditions. Stock Appreciation Rights shall be subject to such terms and conditions, not inconsistent with the provisions of this Plan, as shall be determined from time to time by the Committee, including the following:

(a) Upon the exercise of a Stock Appreciation Right, the holder shall have the right to receive the excess of (i) the Fair Market Value of one Share on the date of exercise (or such amount less than such Fair Market Value as the Committee shall so determine at any time during a specified period before the date of exercise) over (ii) the grant price of the Stock Appreciation Right on the date of grant, which, except in the case of Substitute Awards or in connection with an adjustment provided in Section 12.2, shall not be less than the Fair Market Value of one Share on such date of grant of the Stock Appreciation Right.

(b) The Committee shall determine in its sole discretion whether payment of a Stock Appreciation Right shall be made in cash, in whole Shares or other property, or any combination thereof.

(c) The provisions of Stock Appreciation Rights need not be the same with respect to each recipient.

(d) The Committee may impose such other conditions or restrictions on the terms of exercise and the grant price of any Stock Appreciation Right, as it shall deem appropriate. A Stock Appreciation Right shall have (i) a grant price not less than Fair Market Value on the date of grant (subject to the requirements of Section 409A of the Code with respect to a Stock Appreciation Right granted in conjunction with, but subsequent to, an Option), and (ii) a term not greater than ten (10) years except in the event of death or disability. Notwithstanding clause (ii) of the preceding sentence, in the event that on the last business day of the term of a Stock Appreciation Right granted under this Plan (x) the exercise of the Stock Appreciation Right is prohibited by applicable law or (y) Shares may not be purchased or sold by certain employees or directors of the Company due to the black-out period of a Company insider trading policy, the term of the Stock Appreciation Right shall be extended for a period of thirty (30) days following the end of the legal prohibition or black-out period, as applicable.

(e) Without the approval of the Company's stockholders, other than pursuant to Section 12.2, the Committee shall not (i) reduce the grant price of any Stock Appreciation Right after the date of grant (ii) cancel any Stock

Table of Contents

Appreciation Right when the grant price per Share exceeds the Fair Market Value of the underlying Shares in exchange for cash or another Award (other than in connection with a Change in Control or a Substitute Award)), or (iii) take any other action with respect to a Stock Appreciation Right that would be treated as a repricing under the rules and regulations of the principal U.S. national securities exchange on which the Shares are traded.

(f) The Committee may impose such terms and conditions on Stock Appreciation Rights granted in conjunction with any Award (other than an Option) as the Committee shall determine in its sole discretion.

(g) Notwithstanding the foregoing, An Award Agreement may provide that if on the last day of the term of a Stock Appreciation Right the Fair Market Value of one Share exceeds the grant price per Share of the Stock Appreciation Right, the Participant has not exercised the Stock Appreciation Right or the tandem Option (if applicable), and the Stock Appreciation Right has not otherwise expired, the Stock Appreciation Right shall be deemed to have been exercised by the Participant on such day. In such event, the Company shall make payment to the Participant in accordance with this Section, reduced by the number of Shares (or cash) required for withholding taxes; any fractional Share shall be settled in cash.

7. RESTRICTED STOCK AND RESTRICTED STOCK UNITS

7.1 Grants. Awards of Restricted Stock and of Restricted Stock Units may be issued hereunder to Participants either alone or in addition to other Awards granted under this Plan (a Restricted Stock Award or Restricted Stock Unit Award, respectively), and such Restricted Stock Awards and Restricted Stock Unit Awards shall also be available as a form of payment of Performance Awards and other earned cash-based incentive compensation. A Restricted Stock Award or Restricted Stock Unit Award may be subject to vesting restrictions imposed by the Committee covering a period of time specified by the Committee. The Committee has absolute discretion to determine whether any consideration (other than Services) is to be received by the Company or any Affiliate as a condition precedent to the issuance of Restricted Stock or Restricted Stock Units.

7.2 Award Agreements. The terms of any Restricted Stock Award or Restricted Stock Unit Award granted under this Plan shall be set forth in an Award Agreement which shall contain provisions determined by the Committee and not inconsistent with this Plan. The terms of Restricted Stock Awards and Restricted Stock Unit Awards need not be the same with respect to each Participant.

7.3 Rights of Holders of Restricted Stock and Restricted Stock Units. Unless otherwise provided in the Award Agreement, beginning on the date of grant of the Restricted Stock Award and subject to execution of the Award Agreement, the Participant shall become a stockholder of the Company with respect to all Shares subject to the Award Agreement and shall have all of the rights of a stockholder, including the right to vote such Shares and the right to receive distributions made with respect to such Shares. A Participant receiving a Restricted Stock Unit Award shall not possess voting rights with respect to such Award. Except as otherwise provided in an Award Agreement any Shares or any other property (other than cash) distributed as a dividend or otherwise with respect to any Restricted Stock Award or Restricted Stock Unit Award as to which the restrictions have not yet lapsed shall be subject to the same restrictions as such Restricted Stock Award or Restricted Stock Unit Award. Notwithstanding the provisions of this Section, cash dividends, stock and any other property (other than cash) distributed as a dividend or otherwise with respect to any Restricted Stock Award or Restricted Stock Unit Award that vests based on achievement of performance goals shall either (i) not be paid or credited or (ii) be accumulated, shall be subject to restrictions and risk of forfeiture to the same extent as the Restricted Stock or Restricted Stock Units with respect to which such cash, stock or other property has been distributed and shall be paid at the time such restrictions and risk of forfeiture lapse.

7.4 Issuance of Shares. Any Restricted Stock granted under this Plan may be evidenced in such manner as the Board may deem appropriate, including book-entry registration or issuance of a stock certificate or certificates, which certificate or certificates shall be held by the Company or its designee. Such certificate or certificates shall be registered in the name of the Participant and shall bear an appropriate legend referring to the restrictions applicable to such Restricted Stock.

Table of Contents

8. OTHER SHARE-BASED AWARDS

8.1 *Grants.* Other Awards of Shares and other Awards that are valued in whole or in part by reference to, or are otherwise based on, Shares or other property (Other Share-Based Awards), including deferred stock units, may be granted hereunder to Participants either alone or in addition to other Awards granted under this Plan. Other Share-Based Awards shall also be available as a form of payment of other Awards granted under this Plan and other earned cash-based compensation. Other Share-Based Awards may be subject to vesting restrictions imposed by the Committee covering a period of time specified by the Committee. The Committee has absolute discretion to determine whether any consideration (other than Services) is to be received by the Company or any Affiliate as a condition precedent to the issuance of Other Share-Based Awards.

8.2 *Award Agreements.* The terms of Other Share-Based Awards granted under this Plan shall be set forth in a written Award Agreement which shall contain provisions determined by the Committee and not inconsistent with this Plan. The terms of such Awards need not be the same with respect to each Participant. Notwithstanding the provisions of this Section, Dividend Equivalents and any property (other than cash) distributed as a dividend or otherwise with respect to the number of Shares covered by a Other Share-Based Award that vests based on achievement of performance goals shall be subject to restrictions and risk of forfeiture to the same extent as the Shares covered by a Other Share-Based Award with respect to which such cash, Shares or other property has been distributed.

8.3 *Payment.* Except as may be provided in an Award Agreement, Other Share-Based Awards may be paid in cash, Shares, other property, or any combination thereof, in the sole discretion of the Committee. Other Share-Based Awards may be paid in a lump sum or in installments or, in accordance with procedures established by the Committee, on a deferred basis subject to the requirements of Section 409A of the Code.

9. PERFORMANCE AWARDS

9.1 *Grants.* Performance Awards in the form of Performance Cash, Performance Shares or Performance Units, as determined by the Committee in its sole discretion, may be granted hereunder to Participants, for no consideration or for such minimum consideration as may be required by applicable law, either alone or in addition to other Awards granted under this Plan. The performance goals to be achieved for each Performance Period shall be conclusively determined by the Committee and may be based upon the criteria set forth in Section 10.2.

9.2 *Award Agreements.* The terms of any Performance Award granted under this Plan shall be set forth in an Award Agreement which shall contain provisions determined by the Committee and not inconsistent with this Plan. If a Performance Award will have Dividend Equivalents, provision for such shall be contained in the applicable Award Agreement, subject to Section 12.5 below. The terms of Performance Awards need not be the same with respect to each Participant.

9.3 *Terms and Conditions.* The performance criteria to be achieved during any Performance Period and the length of the Performance Period shall be determined by the Committee prior to the grant of each Performance Award. The amount of the Award to be distributed shall be conclusively determined by the Committee.

9.4 *Payment.* Except as provided in Article 11 or as may be provided in an Award Agreement, Performance Awards will be distributed only after the end of the relevant Performance Period. Performance Awards may be paid in cash, Shares, other property, or any combination thereof, in the sole discretion of the Committee. Performance Awards may be paid in a lump sum or in installments following the close of the Performance Period or, in accordance with procedures established by the Committee, on a deferred basis subject to the requirements of Section 409A of the Code.

Table of Contents**10. CODE SECTION 162(m) PROVISIONS**

10.1 Covered Employees. Notwithstanding any other provision of this Plan, if the Committee determines at the time a Restricted Stock Award, a Restricted Stock Unit Award, a Performance Award or an Other Share-Based Award is granted to a Participant who is, or is likely to be, as of the end of the tax year in which the Company would claim a tax deduction in connection with such Award, a Covered Employee, then the Committee may provide that this Article 10 is applicable to such Award.

10.2 Performance Criteria. If the Committee determines that a Restricted Stock Award, a Restricted Stock Unit, a Performance Award or an Other Share-Based Award is intended to be subject to this Article 10, the lapsing of restrictions thereon and the distribution of cash, Shares or other property pursuant thereto, as applicable, shall be subject to the achievement of one or more objective performance goals established by the Committee, which shall be based on the attainment of specified levels of one or any combination of the following: net sales; revenue; revenue growth or product revenue growth; operating income (before or after taxes); pre- or after-tax income (before or after allocation of corporate overhead and bonus); earnings per share; net income (before or after taxes); return on equity; total shareholder return; return on assets or net assets; return on capital (including return on total capital or return on invested capital); cash flow return on investment; appreciation in and/or maintenance of the price of the Shares or any other securities of the Company, including its publicly-traded securities or a tracking security whether actual or constructed; appreciation in and/or maintenance of the Company's market capitalization; market share; gross profits; earnings (including earnings before taxes, earnings before interest and taxes or earnings before interest, taxes, depreciation and amortization); economic value-added models or equivalent metrics; comparisons with various stock market indices or other companies; reductions in costs; cash flow or cash flow per share (before or after dividends); improvement in or attainment of expense levels, working capital levels or other levels of cash, cash equivalents and/or short-term investments at specified points in time, including year-end; operating margins, gross margins or cash margin; reductions in debt or accrued liabilities; stockholders' equity; research and development achievements; manufacturing achievements (including manufacturing registration on process validation batches, scale-up activities, obtaining particular yields from manufacturing runs and other measurable objectives related to process development activities); regulatory achievements (including submitting or filing applications or other documents with regulatory authorities, having any such applications or other documents accepted for review by the applicable regulatory authority or receiving approval of any such applications or other documents); passing pre-approval inspections (whether of the Company or the Company's third-party manufacturer) and validation of manufacturing processes (whether the Company's or the Company's third-party manufacturer's); clinical achievements (including initiating clinical or bioequivalence studies; initiating enrollment, achieving particular rates of enrollment or enrollment of particular numbers of subjects, or completing enrollment in clinical or bioequivalence studies; dosing the first patient in a clinical or bioequivalence study; completing phases of a clinical or bioequivalence study (including the treatment phase) or announcing or presenting preliminary or final data from clinical or bioequivalence studies (in each case, whether on particular timelines or generally)); strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; establishing relationships with commercial entities with respect to the marketing, distribution and sale of the Company's products (including with group purchasing organizations, distributors and other vendors); supply chain achievements (including establishing relationships with manufacturers or suppliers of active pharmaceutical ingredients and other component materials and manufacturers of the Company's products); co-development, co-marketing, profit sharing, joint venture or other similar arrangements); financing and other capital raising transactions (including sales of the Company's equity or debt securities; factoring transactions; sales or licenses of the Company's assets, including its intellectual property, whether in a particular jurisdiction or territory or globally; or through partnering transactions); and implementation, completion or attainment of measurable objectives with respect to research, development, manufacturing, commercialization, products or projects, production volume levels, acquisitions and divestitures and recruiting and maintaining personnel. Such performance goals also may be based solely by reference to the Company's performance or the performance of a Affiliate, division, business segment or business unit of the Company, or based upon the relative performance of other companies or upon comparisons of any of the indicators of performance relative to other companies. The

Table of Contents

Committee may also exclude charges related to an event or occurrence which the Committee determines should appropriately be excluded, including (a) restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, (b) an event either not directly related to the operations of the Company or not within the reasonable control of the Company's management, or (c) the cumulative effects of tax or accounting changes in accordance with U.S. generally accepted accounting principles. Such performance goals (and any exclusions) shall be set by the Committee within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m) of the Code, and the regulations thereunder.

10.3 Adjustments. Notwithstanding any provision of this Plan (other than Article 11), with respect to any Restricted Stock Award, Restricted Stock Unit Award, Performance Award or Other Share-Based Award that is subject to this Section 10, the Committee may adjust downwards, but not upwards, the amount payable pursuant to such Award, and the Committee may not waive the achievement of the applicable performance goals, except in the case of the death or disability of the Participant or as otherwise determined by the Committee in special circumstances.

10.4 Restrictions. The Committee shall have the power to impose such other restrictions on Awards subject to this Article as it may deem necessary or appropriate to ensure that such Awards satisfy all requirements for performance-based compensation within the meaning of Section 162(m) of the Code.

10.5 Limitations on Grants to Individual Participants. Subject to adjustment as provided in Section 12.2, no Participant may (i) be granted Options or Stock Appreciation Rights during any 12-month period with respect to more than 4,000,000 Shares and (ii) earn more than 4,000,000 Shares under Restricted Stock Awards, Restricted Stock Unit Awards, Performance Awards and/or Other Share-Based Awards in any 12-month period that are intended to comply with the performance-based exception under Code Section 162(m) and are denominated in Shares (collectively, the Limitations). In addition to the foregoing, the maximum dollar value that may be earned by any Participant in any 12-month period with respect to Performance Awards that are intended to comply with the performance-based exception under Code Section 162(m) and are denominated in cash is \$2,000,000. Each of the limitations in this section shall be multiplied by two (2) with respect to Awards granted to a Participant during the first calendar year in which the Participant commences employment with the Company or any Company subsidiaries. If an Award is cancelled, the cancelled Award shall continue to be counted toward the applicable Limitations.

11. CHANGE IN CONTROL PROVISIONS

11.1 Impact on Certain Awards. Award Agreements may provide that in the event of a Change in Control (as defined in Section 11.3): (i) Options and Stock Appreciation Rights outstanding as of the date of the Change in Control shall be cancelled and terminated without payment if the Fair Market Value of one Share as of the date of the Change in Control is less than the per Share Option exercise price or Stock Appreciation Right grant price, and (ii) all Performance Awards shall be considered to be earned and payable (either in full or pro rata based on the portion of Performance Period completed as of the date of the Change in Control), and any limitations or other restrictions shall lapse and such Performance Awards shall be immediately settled or distributed.

11.2 Assumption or Substitution of Certain Awards. (a) Unless otherwise provided in an Award Agreement, in the event of a Change in Control in which the successor company (or a subsidiary or parent thereof) assumes or substitutes for an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award, if a Participant's employment with such successor company (or a subsidiary or parent thereof) terminates within 24 months following such Change in Control (or such other period set forth in the Award Agreement, including prior thereto if applicable) and under the circumstances specified in the Award Agreement: (i) Options and Stock Appreciation Rights outstanding as of the date of such termination of employment will immediately vest, become fully exercisable, and may thereafter be exercised for 24 months (or the period of time set forth in the Award Agreement), (ii) restrictions, limitations and other conditions applicable to Restricted Stock and Restricted Stock Units shall lapse and the Restricted Stock and

Table of Contents

Restricted Stock Units shall become free of all restrictions and limitations and become fully vested, and (iii) the restrictions, limitations and other conditions applicable to any Other Share-Based Awards or any other Awards shall lapse, and such Other Share-Based Awards or such other Awards shall become free of all restrictions, limitations or conditions and become fully vested and transferable to the full extent of the original grant. For the purposes of this Section 11.2, an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award shall be considered assumed or substituted for if following the Change in Control the Award (or its substitute) confers the right to purchase or receive, for each Share subject to the Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award immediately prior to the Change in Control, the consideration (whether stock, cash or other securities or property) received in the transaction constituting a Change in Control by holders of Shares for each Share held on the effective date of such transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares); provided, however, that if such consideration received in the transaction constituting a Change in Control is not solely common stock of the successor company (or a subsidiary or parent thereof), the Committee may, with the consent of the successor company (or a subsidiary or parent thereof), provide that the consideration to be received upon the exercise or vesting of an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award, for each Share subject thereto, will be solely common stock of the successor company (or a subsidiary or parent thereof) substantially equal in fair market value to the per share consideration received by holders of Shares in the transaction constituting a Change in Control. The determination of such substantial equality of value of consideration shall be made by the Committee in its sole discretion and its determination shall be conclusive and binding.

(b) Unless otherwise provided in an Award Agreement, in the event of a Change in Control to the extent the successor company (or a subsidiary or parent thereof) does not assume or substitute for an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award: (i) those Options and Stock Appreciation Rights outstanding as of the date of the Change in Control that are not assumed or substituted for shall immediately vest and become fully exercisable, (ii) restrictions and other limitations on Restricted Stock and Restricted Stock Units that are not assumed or substituted for shall lapse and the Restricted Stock and Restricted Stock Units shall become free of all restrictions and limitations and become fully vested, and (iii) the restrictions, other limitations and other conditions applicable to any Other Share-Based Awards or any other Awards that are not assumed or substituted for shall lapse, and such Other Share-Based Awards or such other Awards shall become free of all restrictions, limitations or conditions and become fully vested and transferable to the full extent of the original grant.

(c) The Committee, in its discretion, may determine that, upon the occurrence of a Change in Control, each Option and Stock Appreciation Right outstanding shall terminate within a specified number of days after notice to the Participant, and/or that each Participant shall receive, with respect to each Share subject to such Option or Stock Appreciation Right, an amount equal to the excess of the Fair Market Value of such Share immediately prior to the occurrence of such Change in Control over the exercise price per share of such Option and/or Stock Appreciation Right; such amount to be payable in cash, in one or more kinds of stock or property (including the stock or property, if any, payable in the transaction) or in a combination thereof, as the Committee, in its discretion, shall determine.

11.3 *Change in Control.* For purposes of this Plan, unless otherwise provided in an Award Agreement, Change in Control means the occurrence of any one of the following events after the date of approval of this Plan by the Board:

(a) Over a period of 36 consecutive months or less, there is a change in the composition of the Board such that a majority of the Board members (rounded up to the next whole number, if a fraction) ceases, by reason of one or more proxy contests for the election of Board members, to be composed of individuals who either (i) have been Board members continuously since the beginning of that period, or (ii) have been elected or nominated for election as Board members during such period by at least a majority of the Board members

Table of Contents

described in the preceding clause (i) who were still in office at the time that election or nomination was approved by the Board; provided, however, that no individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to directors or as a result of any other actual or threatened solicitation of proxies by or on behalf of any person other than the Board shall be deemed to satisfy the criteria described in the preceding clause (ii);

(b) Any person or group of persons (within the meaning of Section 13(d)(3) of the Exchange Act) directly or indirectly acquires beneficial ownership (determined pursuant to Rule 13d-3 promulgated under the Exchange Act) of securities possessing more than 50% of the total combined voting power of the Company's outstanding securities pursuant to a tender or exchange offer made directly to the Company's stockholders that the Board does not recommend such stockholders accept, other than (i) the Company or any corporation, partnership, limited liability company, business trust, or other entity controlling, controlled by or under common control with the Company (each, for purposes of this Section 11.3(b), an affiliate), (ii) an employee benefit plan of the Company or an affiliate, (iii) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or an affiliate, or (iv) an underwriter temporarily holding securities pursuant to an offering of such securities;

(c) The consummation of a merger or consolidation of the Company with or into another person or the sale, transfer, or other disposition of all or substantially all of the Company's assets to one or more other persons in a single transaction or series of related transactions that requires the approval of the Company's stockholders, whether for such transaction or the issuance of securities in such transaction (a Business Combination), unless in connection with such Business Combination securities possessing more than 50% of the total combined voting power of the survivor's or acquiror's outstanding securities (or the securities of any parent thereof) are held by a person or persons who held securities possessing more than 50% of the total combined voting power of the Company's outstanding securities (Company Voting Securities) immediately prior to such Business Combination and such voting power among the holders thereof is in substantially the same proportion as the voting power of such Company Voting Securities among the holders thereof immediately prior to such Business Combination;

(d) The stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or the consummation of a sale of all or substantially all of the Company's assets; or

Notwithstanding the foregoing, a Change in Control shall not be deemed to occur solely because any person acquires beneficial ownership of more than 50% of the Company Voting Securities as a result of the acquisition of Company Voting Securities by the Company which reduces the number of Company Voting Securities outstanding; provided, that if after such acquisition by the Company such person becomes the beneficial owner of additional Company Voting Securities that increases the percentage of outstanding Company Voting Securities beneficially owned by such person, a Change in Control shall then occur.

12. GENERALLY APPLICABLE PROVISIONS

12.1 *Amendment and Termination of this Plan.* The Board may, from time to time, alter, amend, suspend or terminate this Plan as it shall deem advisable, subject to any requirement for stockholder approval imposed by applicable law, including the rules and regulations of the principal U.S. national securities exchange on which the Shares are traded; provided that the Board may not amend this Plan in any manner that would result in noncompliance with Rule 16b-3 of the Exchange Act; and further provided that the Board may not, without the approval of the Company's stockholders, amend this Plan to (a) increase the number of Shares that may be the subject of Awards under this Plan (except for adjustments pursuant to Section 12.2), (b) expand the types of awards available under this Plan, (c) materially expand the class of persons eligible to participate in this Plan, (d) amend any provision of Section 5.3 or Section 6.2(e), (e) increase the maximum permissible term of any Option specified by Section 5.4 or the maximum permissible term of a Stock Appreciation Right specified by Section 6.2(d), or (f) increase the Limitations. The Board may not, without the approval of the Company's

Table of Contents

stockholders, take any other action with respect to an Option or Stock Appreciation Right that would be treated as a repricing under the rules and regulations of the principal securities exchange on which the Shares are traded, including a reduction of the exercise price of an Option or the grant price of a Stock Appreciation Right, the exchange or cancellation of an Option or Stock Appreciation Right for another Award, or the exchange or cancellation of an Option or Stock Appreciation Right for cash. In addition, no amendments to, or termination of, this Plan shall impair the rights of a Participant in any material respect under any Award previously granted without such Participant's consent.

12.2 Adjustments. In the event of any 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 the Shares or the value thereof, such adjustments and other substitutions shall be made to this Plan and to Awards as the Committee deems equitable or appropriate taking into consideration the accounting and tax consequences, including such adjustments in the aggregate number, class and kind of securities that may be delivered under this Plan, the Limitations, the maximum number of Shares that may be issued as Incentive Stock Options and, in the aggregate or to any one Participant, in the number, class, kind and option or exercise price of securities subject to outstanding Awards granted under this Plan (including, if the Committee deems appropriate, the substitution of similar options to purchase the shares of, or other awards denominated in the shares of, another company) as the Committee may determine to be appropriate; provided, however, that the number of Shares subject to any Award shall always be a whole number.

12.3 Transferability of Awards. Except as provided below, no Award and no Shares that have not been issued or as to which any applicable restriction, performance or deferral period has not lapsed, may be sold, assigned, transferred, pledged or otherwise encumbered, other than by will or the laws of descent and distribution, and such Award may be exercised during the life of the Participant only by the Participant or the Participant's guardian or legal representative. To the extent and under such terms and conditions as determined by the Committee, a Participant may assign or transfer an Award without consideration (each transferee thereof, a Permitted Assignee) to (i) the Participant's spouse, children or grandchildren (including any adopted and step children or grandchildren), parents, grandparents or siblings, (ii) to a trust for the benefit of one or more of the Participant or the persons referred to in clause (i), (iii) to a partnership, limited liability company or corporation in which the Participant or the persons referred to in clause (i) are the only partners, members or shareholders or (iv) for charitable donations; provided that such Permitted Assignee shall be bound by and subject to all of the terms and conditions of this Plan and the Award Agreement relating to the transferred Award and shall execute an agreement satisfactory to the Company evidencing such obligations; and provided further that such Participant shall remain bound by the terms and conditions of this Plan. The Company shall cooperate with any Permitted Assignee and the Company's transfer agent in effectuating any transfer permitted under this Section.

12.4 Termination of Employment. The Committee shall determine and set forth in each Award Agreement whether any Awards granted in such Award Agreement will continue to be exercisable, and the terms of such exercise, on and after the date that a Participant ceases to be employed by or to provide services to the Company or any Affiliate (including as a Director), whether by reason of death, disability, voluntary or involuntary termination of employment or services, or otherwise. The date of termination of a Participant's employment or services will be determined by the Committee, which determination will be final.

12.5 Deferral; Dividend Equivalents. The Committee shall be authorized to establish procedures pursuant to which the payment of any Award may be deferred. Subject to the provisions of this Plan and any Award Agreement, the recipient of an Award other than an Option or Stock Appreciation Right may, if so determined by the Committee, be entitled to receive, currently or on a deferred basis, cash, stock or other property dividends, or cash payments in amounts equivalent to cash, stock or other property dividends on Shares (Dividend Equivalents) with respect to the number of Shares covered by the Award, as determined by the Committee, in its sole discretion. The Committee may provide that such amounts and Dividend Equivalents (if any) shall be deemed to have been reinvested in additional Shares or otherwise reinvested and may provide that such amounts and Dividend Equivalents are subject to the same vesting or performance conditions as the underlying Award.

Table of Contents

Notwithstanding the foregoing, Dividend Equivalents credited in connection with an Award that vests based on the achievement of performance goals shall be subject to restrictions and risk of forfeiture to the same extent as the Award with respect to which such Dividend Equivalents have been credited.

13. MISCELLANEOUS

13.1 Award Agreements. Each Award Agreement shall either be (a) in writing in a form approved by the Committee and executed by the Company by an officer duly authorized to act on its behalf, or (b) an electronic notice in a form approved by the Committee and recorded by the Company (or its designee) in an electronic recordkeeping system used for the purpose of tracking one or more types of Awards as the Committee may provide; in each case and if required by the Committee, the Award Agreement shall be executed or otherwise electronically accepted by the recipient of the Award in such form and manner as the Committee may require. The Committee may authorize any officer of the Company to execute any or all Award Agreements on behalf of the Company. The Award Agreement shall set forth the material terms and conditions of the Award as established by the Committee consistent with the provisions of this Plan.

13.2 Tax Withholding. The Company shall have the right to make all payments or distributions pursuant to this Plan to a Participant (or a Permitted Assignee thereof) (any such person, a Payee) net of any applicable federal, state and local taxes required to be paid or withheld as a result of (a) the grant of any Award, (b) the exercise of an Option or Stock Appreciation Right, (c) the delivery of Shares or cash, (d) the lapse of any restrictions in connection with any Award or (e) any other event occurring pursuant to this Plan. The Company or any Affiliate shall have the right to withhold from wages or other amounts otherwise payable to such Payee such withholding taxes as may be required by law, or to otherwise require the Payee to pay such withholding taxes. If the Payee shall fail to make such tax payments as are required, the Company or its Affiliates shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to such Payee or to take such other action as may be necessary to satisfy such withholding obligations. The Committee shall be authorized to establish procedures for election by Participants to satisfy such obligation for the payment of such taxes by tendering previously acquired Shares (either actually or by attestation, valued at their then Fair Market Value), or by directing the Company to retain Shares (up to the Participant's minimum required tax withholding rate or such other rate that will not cause an adverse accounting consequence or cost) otherwise deliverable in connection with the Award.

13.3 Right of Discharge Reserved; Claims to Awards. Nothing in this Plan nor the grant of an Award hereunder shall confer upon any Employee or Director the right to continue in the employment or service of the Company or any Affiliate or affect any right that the Company or any Affiliate may have to terminate the employment or service of (or to demote or to exclude from future Awards under this Plan) any such Employee or Director at any time for any reason. Except as specifically provided by the Committee, the Company shall not be liable for the loss of existing or potential profit from an Award granted in the event of termination of an employment or other relationship. No Employee or Participant shall have any claim to be granted any Award under this Plan, and there is no obligation for uniformity of treatment of Employees or Participants under this Plan.

13.4 Substitute Awards. Notwithstanding any other provision of this Plan, the terms of Substitute Awards may vary from the terms set forth in this Plan to the extent the Committee deems appropriate to conform, in whole or in part, to the provisions of the awards in substitution for which they are granted.

13.5 Cancellation of Award; Forfeiture of Gain. Notwithstanding anything to the contrary contained herein, an Award Agreement may provide that the Award shall be canceled if the Participant, without the consent of the Company, while employed by, or providing services to, the Company or any Affiliate or after termination of such employment or services, violates a non-competition, non-solicitation or non-disclosure covenant or agreement or otherwise engages in activity that is in conflict with or adverse to the interest of the Company or any Affiliate (including conduct contributing to any financial restatements or financial irregularities), as

Table of Contents

determined by the Committee in its sole discretion. The Committee may provide in an Award Agreement that if within the time period specified in the Agreement the Participant establishes a relationship with a competitor or engages in an activity referred to in the preceding sentence, the Participant will forfeit any gain realized on the vesting or exercise of the Award and must repay such gain to the Company.

13.6 Stop Transfer Orders. All certificates for Shares delivered under this Plan pursuant to any Award shall be subject to such stop-transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations and other requirements of the Securities and Exchange Commission, any stock exchange upon which the Shares are then listed, and any applicable federal or state securities law, and the Committee may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

13.7 Nature of Payments. All Awards made pursuant to this Plan are in consideration of services performed or to be performed for the Company or any Affiliate, division or business unit of the Company. Any income or gain realized pursuant to Awards under this Plan constitute a special incentive payment to the Participant and shall not be taken into account, to the extent permissible under applicable law, as compensation for purposes of any of the employee benefit plans of the Company or any Affiliate except as may be determined by the Committee or by the Board or board of directors of the applicable Affiliate.

13.8 Other Plans. Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, subject to stockholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

13.9 Severability. If any provision of this Plan shall be held unlawful or otherwise invalid or unenforceable in whole or in part by a court of competent jurisdiction, such provision shall (a) be deemed limited to the extent that such court of competent jurisdiction deems it lawful, valid and/or enforceable and as so limited shall remain in full force and effect, and (b) not affect any other provision of this Plan or part thereof, each of which shall remain in full force and effect. If the making of any payment or the provision of any other benefit required under this Plan shall be held unlawful or otherwise invalid or unenforceable by a court of competent jurisdiction, such unlawfulness, invalidity or unenforceability shall not prevent any other payment or benefit from being made or provided under this Plan, and if the making of any payment in full or the provision of any other benefit required under this Plan in full would be unlawful or otherwise invalid or unenforceable, then such unlawfulness, invalidity or unenforceability shall not prevent such payment or benefit from being made or provided in part, to the extent that it would not be unlawful, invalid or unenforceable, and the maximum payment or benefit that would not be unlawful, invalid or unenforceable shall be made or provided under this Plan.

13.10 Construction. As used in this Plan, the words *include* and *including*, and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words *without limitation*.

13.11 Unfunded Status of this Plan. This Plan is intended to constitute an *unfunded* plan for incentive compensation. With respect to any payments not yet made to a Participant by the Company, nothing contained herein shall give any such Participant any rights that are greater than those of a general creditor of the Company. In its sole discretion, the Committee may authorize the creation of trusts or other arrangements to meet the obligations created under this Plan to deliver the Shares or payments in lieu of or with respect to Awards hereunder; provided, however, that the existence of such trusts or other arrangements is consistent with the unfunded status of this Plan.

13.12 Governing Law. This Plan and all determinations made and actions taken thereunder, to the extent not otherwise governed by the Code or the laws of the United States, shall be governed by the laws of the State of California, without reference to principles of conflict of laws, and construed accordingly.

13.13 Effective Date of Plan; Termination of Plan. This Plan shall be effective on the date of the approval of this Plan by the holders of a sufficient number of the shares entitled to vote at a duly constituted meeting of the

Table of Contents

stockholders of the Company (the Effective Date), and on such date this Plan shall amend and restate in its entirety the 2013 Plan. This Plan shall be null and void and of no effect if the foregoing condition is not fulfilled and, in such event, the 2013 Plan shall remain in effect as adopted on June 19, 2013. Awards may be granted under this Plan at any time and from time to time on or prior to the tenth anniversary of the Effective Date, on which date this Plan will expire except as to Awards then outstanding under this Plan. Such outstanding Awards shall remain in effect until they have been exercised or terminated, or have expired.

13.14 *Foreign Participants.* Awards may be granted to Participants who are foreign nationals or employed or providing Services outside the United States, or both, on such terms and conditions different from those applicable to Awards to Participants employed or providing Services in the United States as may, in the judgment of the Committee, be necessary or desirable in order to recognize differences in local law or tax policy. The Committee also may impose conditions on the exercise or vesting of Awards in order to minimize the Company's obligation with respect to tax equalization for Participants on assignments outside their home country.

13.15 *Compliance with Section 409A of the Code.* This Plan is intended to comply and shall be administered in a manner that is intended to comply with Section 409A of the Code and shall be construed and interpreted in accordance with such intent. To the extent that an Award or the payment, settlement or deferral thereof is subject to Section 409A of the Code, the Award shall be granted, paid, settled or deferred in a manner that will comply with Section 409A of the Code, including regulations or other guidance issued with respect thereto, except as otherwise determined by the Committee. Any provision of this Plan that would cause the grant of an Award or the payment, settlement or deferral thereof to fail to satisfy Section 409A of the Code shall be amended to comply with Section 409A of the Code on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A of the Code.

13.16 *Captions.* The captions in this Plan are for convenience of reference only, and are not intended to narrow, limit or affect the substance or interpretation of the provisions contained herein.

13.17 *No Registration Rights; No Right to Settle in Cash.* The Company has no obligation to register with any governmental body or organization (including, without limitation, the U.S. Securities and Exchange Commission (SEC)) any of (a) the offer or issuance of any Award, (b) any Shares issuable upon the exercise of any Award, or (c) the sale of any Shares issued upon exercise of any Award, regardless of whether the Company in fact undertakes to register any of the foregoing. In particular, in the event that any of (x) any offer or issuance of any Award, (y) any Shares issuable upon exercise of any Award, or (z) the sale of any Shares issued upon exercise of any Award are not registered with any governmental body or organization (including, without limitation, the SEC), the Company will not under any circumstance be required to settle its obligations, if any, under this Plan in cash.

13.18 *Forfeiture Events.* If the Company is required to prepare an accounting restatement due to the material noncompliance of the Company, as a result of misconduct, with any financial reporting requirement under the securities laws, any Participant who knowingly or through gross negligence engaged in the misconduct, or who knowingly or through gross negligence failed to prevent the misconduct, and any Participant who is one of the individuals subject to automatic forfeiture under Section 304 of the Sarbanes-Oxley Act of 2002, shall reimburse the Company for (i) the amount of any payment in settlement of an Award received by such Participant during the 12-month period following the first public issuance or filing with the United States Securities and Exchange Commission (whichever first occurred) of the financial document embodying such financial reporting requirement, and (ii) any profits realized by such Participant from the sale of securities of the Company during such 12-month period. In addition, to the extent claw-back or similar provisions applicable to Awards are required by applicable law, listing standards and/or policies adopted by the Company, Awards granted under the Plan shall be subject to such provisions.

Table of Contents

MAST THERAPEUTICS, INC.

ATTN: CORPORATE SECRETARY

12390 EL CAMINO REAL, SUITE 150

SAN DIEGO, CA 92130

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

IF YOU HAVE VOTED VIA THE INTERNET OR BY TELEPHONE, THERE IS NO NEED FOR YOU TO MAIL BACK YOUR PROXY CARD. THANK

YOU FOR VOTING.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

M74481-P47011

KEEP THIS PORTION FOR YOUR
RECORDS

DETACH AND RETURN THIS PORTION
ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

MAST THERAPEUTICS, INC.

The Board of Directors recommends you vote FOR

the following:

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

Nominees:	For	Against	Abstain
1a. Brian M. Culley
1b. Jack Lief
1c. David A. Ramsay
1d. Lewis J. Shuster

The Board of Directors recommends you vote FOR proposals 2 and 3:

For Against Abstain

- | | | | |
|---|----|----|----|
| 2. To ratify the appointment of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2014. | .. | .. | .. |
| 3. To approve the Mast Therapeutics, Inc. 2014 Omnibus Incentive plan. | .. | .. | .. |

Table of Contents

**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of
Stockholders to be held on June 19, 2014:**

The Notice and Proxy Statement and Annual Report are available at www.proxyvote.com.

M74482-P47011

**MAST THERAPEUTICS, INC.
This proxy is solicited by the Board of Directors
for use at the
Annual Meeting of Stockholders to be held on June 19, 2014**

The stockholder(s) hereby appoint(s) Patrick L. Keran and Brandi L. Roberts, or either of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this proxy card and in their discretion upon any other matter that may properly come before the meeting and any adjournment or postponement thereof, all shares of common stock of MAST THERAPEUTICS, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 9:00 AM PDT on June 19, 2014, at the offices of Sheppard, Mullin, Richter & Hampton, LLP, 12275 El Camino Real, Suite 200, San Diego, California 92130, and any adjournment or postponement thereof. By signing this proxy, the stockholder(s) revoke any prior proxy given for use at the Annual Meeting.

This proxy, when properly executed, will be voted as specified by the stockholder(s) on the reverse side. If no choice is specified, this proxy will be voted FOR each of the director nominees listed on the reverse side and FOR Proposals 2 and 3.

Address Changes/Comments:

(If you noted any Address Changes/Comments above, please mark corresponding box on the reverse side.)

Continued and to be signed on reverse side