

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

**FORM S-8**  
**REGISTRATION STATEMENT**  
*UNDER*  
**THE SECURITIES ACT OF 1933**

**Mast Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
 (State or other jurisdiction of  
 incorporation or organization)

**12390 El Camino Real, Suite 150**  
**San Diego, California**  
 (Address of Principal Executive Offices)

**84-1318182**  
 (I.R.S. Employer  
 Identification No.)

**92130**  
 (Zip Code)

**Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan**  
 (Full title of the plans)

**Patrick L. Keran**  
**President and Chief Operating Officer**  
**Mast Therapeutics, Inc.**  
**12390 El Camino Real, Suite 150**  
**San Diego, California, 92130**  
 (Name and Address of Agent For Service)

**(858) 552-0866**  
 (Telephone number, including area code, of agent for service)

*Copies to:*  
**Kirt W. Shuldberg, Esq.**  
**Sheppard, Mullin, Richter & Hampton LLP**  
**12275 El Camino Real, Suite 200**  
**San Diego, California 92130**  
**(858) 720-8900**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated filer  Accelerated filer   
 Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

**CALCULATION OF REGISTRATION FEE**

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.001 per share: To be issued under the Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan (2)	10,556,050 shares	\$0.46(3)	\$4,855,783(3)	\$663

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of common stock that may become issuable under the Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan (the "2013 Plan") by reason of any stock split, stock dividend, recapitalization, or any other similar transaction effected without receipt of consideration that results in an increase in the Registrant's outstanding shares of common stock.
- (2) Represents (i) 6,539,207 shares of the Registrant's common stock that became available for issuance on June 19, 2013 under the 2013 Plan, (ii) 4,016,843 shares that may be added to the 2013 Plan upon the forfeiture, expiration or cash settlement of outstanding awards granted under the Registrant's Amended and Restated 2008 Omnibus Incentive Plan, 2008 Omnibus Incentive Plan, and 2005 Equity Incentive Plan (the "Prior Plans"). As of June 19, 2013, no new awards may be granted under any of the Prior Plans.
- (3) Estimated pursuant to Rules 457(c) and 457(h) under the Securities Act solely for the purpose of calculating the registration fee, based on the average of the high and low prices of the Registrant's common stock on the NYSE MKT equities market on July 30, 2013.

The Registration Statement shall become effective upon filing in accordance with Rule 462(a) under the Securities Act.

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**PART I**

**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

**Item 1. Plan Information.\***

**Item 2. Registrant Information and Employee Plan Annual Information.\***

\* The documents containing the information specified in “Item 1. Plan Information” and “Item 2. Registrant Information and Employee Plan Annual Information” of Form S-8 will be sent or given to participants of the 2013 Plan, as specified by Rule 428(b)(1) under the Securities Act. Such documents are not required to be, and are not, filed with the Securities and Exchange Commission (the “SEC”) either as part of this Registration Statement or as a prospectus or prospectus supplement pursuant to Rule 424 under the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

**PART II**

**INFORMATION REQUIRED IN REGISTRATION STATEMENT**

**Item 3. Incorporation of Documents by Reference.**

The SEC allows the Registrant to “incorporate by reference” information contained in documents that the Registrant files with the SEC. This means that the Registrant can disclose important information to you by referring you to those documents and that the information in this Registration Statement is not complete. You should read the information incorporated by reference for more detail. The Registrant incorporates by reference in two ways. First, the Registrant incorporates by reference by listing below certain documents that the Registrant has already filed with the SEC. The information in these documents is considered part of this Registration Statement. Second, the information in documents that the Registrant files in the future will update and supersede the information currently in, and be incorporated by reference in, this Registration Statement.

The Registrant incorporates by reference into this Registration Statement the documents listed below and any filings it makes with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), after the date of this Registration Statement until the filing of a post-effective amendment that terminates this offering (in each case, except for the information furnished under Item 2.02 or Item 7.01 in any current report on Form 8-K or amendment to such current report):

- (a) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed with the SEC on March 19, 2013, including all material incorporated by reference therein;
- (b) The Registrant’s Quarterly Reports on Form 10-Q for the quarters ended March 31, 2013 and June 30, 2013, filed with the SEC on May 15, 2013 and August 5, 2013, respectively, including all material incorporated by reference therein;
- (c) The Registrant’s Current Reports on Form 8-K filed on January 3, 2013, February 8, 2013, February 26, 2013, March 1, 2013, March 12, 2013, June 17, 2013 and June 21, 2013, including all material incorporated by reference therein; and
- (d) The description of the Registrant’s common stock contained in the Registrant’s Registration Statement on Form 8-A filed with the SEC on April 27, 2004, pursuant to Section 12(b) of the Exchange Act, including any amendments or reports filed for the purpose of updating such descriptions.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

**Item 4. Description of Securities.**

Not applicable.

**Item 5. Interests of Named Experts and Counsel.**

Not applicable.

**Item 6. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact of their prior or current service to the corporation as a director or officer, in accordance with the provisions of Section 145, which are sufficiently broad to permit indemnification under certain circumstances for liabilities arising under the Securities Act. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

The Registrant's amended and restated certificate of incorporation, as amended (the "Certificate of Incorporation") provides that, to the fullest extent permitted by the Delaware General Corporation Law, (1) a director shall not be personally liable to the Registrant or its stockholders for monetary damages for breach of fiduciary duty as a director, and (2) the Registrant shall indemnify any director or officer made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact of such person's current or prior service as a director or officer of the Registrant, any predecessor of the Registrant or any other enterprise per the Registrant's or any predecessor to the Registrant's request.

The Registrant amended and restated bylaws (the "Bylaws"), provide that (a) the Registrant shall indemnify its directors and officers to the maximum extent and in the manner permitted by the Delaware General Corporation Law against expenses (including attorneys' fees), judgments, fines, ERISA excise taxes, settlements and other amounts actually and reasonably incurred in connection with any proceeding, whether civil, criminal, administrative or investigative, arising by reason of the fact that such person is or was an agent of the corporation, subject to certain limited exceptions, (b) the Registrant shall advance expenses incurred by any director or officer prior to the final disposition of any proceeding to which the director or officer was or is or is threatened to be made a party promptly following a request therefore, subject to certain limited exceptions, and (c) the rights conferred in the Bylaws are not exclusive.

The Registrant has entered into indemnification agreements with each of its directors and executive officers to give such directors and officers additional contractual assurances regarding the scope of the indemnification set forth in the Certificate of Incorporation and the Bylaws and to provide additional procedural protections. These agreements, among other things, provide that the Registrant will indemnify its directors and executive officers for expenses (including attorneys' fees), judgments, fines, penalties and amounts paid in settlement (including all interest, assessments and other charges paid or payable in connection therewith) actually and reasonably incurred by a director or executive officer in connection with any action or proceeding to which such person was, is or is threatened to be made a party, a witness or other participant by reason of such person's services as a director or executive officer of the Registrant, any of the Registrant's subsidiaries or any other company or enterprise to which the person provides services at the Registrant's request, and any federal, state, local or foreign taxes imposed on the director or executive officer as a result of the actual or deemed receipt of any payments under the indemnification agreements. In addition, the indemnification agreements provide that, upon the request of a director or executive officer, the Registrant shall advance expenses (including attorneys' fees) to the director or officer. The Registrant intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Registrant has also obtained insurance policies covering its directors and officers with respect to certain liabilities, including liabilities arising under the Securities Act.

**Item 7. Exemption From Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

<u>Exhibit No.</u>	<u>Description of Document</u>	<u>Incorporation by Reference</u>
4.1	Composite Amended and Restated Certificate of Incorporation, as amended, of the Registrant	Filed with the Registrant's Registration Statement on Form S-1 on May 28, 2013 (SEC File No. 333-188870-13873232)
4.2	Certificate of Ownership and Merger, effective as of March 11, 2013	Filed with the Registrant's Current Report on Form 8-K on March 1, 2013 (SEC File No. 001-32157-13657723)
4.3	Amended and Restated Bylaws of the Registrant, effective as of March 11, 2013	Filed with the Registrant's Current Report on Form 8-K on March 1, 2013 (SEC File No. 001-32157-13657723)
4.4	Form of common stock certificate of the Registrant	Filed with the Registrant's Annual Report on Form 10-K on March 19, 2013 (SEC File No. 001-32157-13702619)
5.1	Opinion of Sheppard, Mullin, Richter & Hampton LLP	Filed herewith
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm	Filed herewith
23.2	Consent of CohnReznick LLP, Independent Registered Public Accounting Firm	Filed herewith
23.3	Consent of Sheppard, Mullin, Richter & Hampton LLP	Included in Exhibit 5.1 filed herewith
24.1	Power of Attorney	Included as part of the signature page to this Registration Statement
99.1	Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan	Filed with the Registrant's Current Report on Form 8-K on June 21, 2013 (SEC File No. 001-32157-13927320)
99.2	Form of Non-Statutory Stock Option Grant Agreement—Director (for grants to non-employee directors) under 2013 Omnibus Incentive Plan	Filed with the Registrant's Current Report on Form 8-K on June 21, 2013 (SEC File No. 001-32157-13927320)
99.3	Form of Incentive Stock Option Grant Agreement (for grants to employees) under the 2013 Omnibus Incentive Plan	Filed with the Registrant's Current Report on Form 8-K on June 21, 2013 (SEC File No. 001-32157-13927320)
99.4	Form of Non-Statutory Stock Option Grant Agreement (for grants to consultants) under the 2013 Omnibus Incentive Plan	Filed herewith
99.5	Form of Senior Executive Incentive Stock Option Grant Agreement (for grants to the Registrant's chief executive officer and president and chief operating officer) under the 2013 Omnibus Incentive Plan	Filed with the Registrant's Current Report on Form 8-K on June 21, 2013 (SEC File No. 001-32157-13927320)
99.6	Form of CMO Incentive Stock Option Grant Agreement (for grants to the Registrant's chief medical officer) under the 2013 Omnibus Incentive Plan	Filed with the Registrant's Current Report on Form 8-K on June 21, 2013 (SEC File No. 001-32157-13927320)

**Item 9. Undertakings.**

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

*Provided, however,* that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on August 5, 2013.

**Mast Therapeutics, Inc.**

By: /s/ Brian M. Culley  
Brian M. Culley  
Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Brian M. Culley, Patrick L. Keran and Brandi L. Roberts, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign: (1) this registration statement on Form S-8 under the Securities Act, in connection with the registration under the Securities Act of shares of common stock of the Registrant to be issued in connection with the Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan; and (2) any one or more amendments to any part of the foregoing registration statement, including any post-effective amendments, or appendices or supplements that may be required to be filed under the Securities Act to keep such registration statement effective or to terminate its effectiveness; and/or to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them or their substitute or resubstitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Brian M. Culley</u> Brian M. Culley	Chief Executive Officer and Director (Principal Executive Officer)	August 5, 2013
<u>/s/ Brandi L. Roberts</u> Brandi L. Roberts	Chief Financial Officer and Senior Vice President (Principal Financial and Accounting Officer)	August 5, 2013
<u>/s/ Jack Lief</u> Jack Lief	Chair of the Board	August 5, 2013
<u>/s/ Ted W. Love</u> Ted W. Love	Director	August 5, 2013
<u>/s/ David A. Ramsay</u> David A. Ramsay	Director	August 5, 2013
<u>/s/ Lewis J. Shuster</u> Lewis J. Shuster	Director	August 5, 2013



## INDEX TO EXHIBITS

The following documents are filed as exhibits to this registration statement:

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## OPINION OF SHEPPARD, MULLIN, RICHTER &amp; HAMPTON LLP

August 5, 2013

Mast Therapeutics, Inc.  
12390 El Camino Real, Suite 150  
San Diego, California, 92130

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as special counsel to Mast Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the filing of a registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended, covering 10,556,050 shares (the "Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), which may be issued pursuant to the Company's 2013 Omnibus Incentive Plan (the "Plan").

This opinion is being furnished in accordance with the requirements of Item 8 of Form S-8 and Item 601(b)(5)(i) of Regulation S-K.

In connection with this opinion, we have reviewed the Registration Statement, the Company's charter documents, the proceedings taken by the Company with respect to the authorization and adoption of the Plan, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. With respect to the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as certified or reproduced copies. We have assumed that (a) shares of Common Stock reserved for issuance under the Plan will remain available for the issuance of the Shares, and (b) neither the Company's charter documents nor any of the proceedings relating to the Plan or any of the award agreements relating to the Shares, will be rescinded, amended or otherwise modified prior to the issuance of the Shares. We have obtained a certificate from an officer of the Company as to certain factual matters and, insofar as this opinion is based on matters of fact, we have relied on such certificate without independent investigation.

Based on the foregoing review, and in reliance thereon, we are of the opinion that if, as and when the Shares are issued and sold by the Company in accordance with the terms of the award agreements provided for under the Plan, and payment in full of the consideration therefor is received by the Company, the Shares will be validly issued, fully paid and nonassessable.

We consent to the filing of this letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus incorporated by reference to the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, the rules and regulations of the Securities and Exchange Commission promulgated thereunder or Item 509 of Regulation S-K.

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law. We express no opinion herein as to any other laws, statutes, ordinances, rules or regulations.

Respectfully submitted,

By: /s/ SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

Sheppard, Mullin, Richter and Hampton LLP

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 19, 2013 relating to the consolidated financial statements that appear in the annual report on Form 10-K of Mast Therapeutics, Inc. for the year ended December 31, 2012.

/s/ PricewaterhouseCoopers LLP

San Diego, California  
August 5, 2013

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8, of our report dated March 10, 2011 with respect to our audit of the consolidated statements of operations, stockholders' equity (deficit) and comprehensive loss and cash flows of Mast Therapeutics, Inc. (formerly, ADVENTRX Pharmaceuticals, Inc.) and Subsidiaries (a development stage enterprise) for the period from January 1, 2002 through December 31, 2010, included in the Annual Report on Form 10-K of Mast Therapeutics, Inc. for the year ended December 31, 2012.

/s/ CohnReznick LLP

San Diego, California  
August 5, 2013

**Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan****Non-Statutory Stock Option Grant Agreement**

THIS NON-STATUTORY STOCK OPTION GRANT AGREEMENT (this "Agreement"), effective as of [ ] (the "Grant Date"), is entered into by and between Mast Therapeutics, Inc., a Delaware corporation (the "Company"), and [ ] (the "Grantee").

1. Grant of Option. The Company hereby grants to the Grantee a non-statutory stock option (the "Option") to purchase [ ] shares of common stock of the Company, par value \$0.001 per share (the "Shares"), at the exercise price of \$[ ] per Share (the "Exercise Price") pursuant to the Mast Therapeutics, Inc. 2013 Omnibus Incentive Plan (the "Plan"). The Option is not intended to qualify as an incentive stock option under Section 422 of the Code.

2. Subject to the Plan/Administration. This Agreement is subject to the provisions of the Plan, and, unless the context requires otherwise, terms used herein shall have the same meaning as in the Plan. In the event of a conflict between the provisions of the Plan and this Agreement, the Plan shall control. All questions of interpretation concerning this Agreement and the Plan shall be determined by the Committee or its designee. All such determinations shall be final or conclusive, and binding upon all persons having an interest in the Option as provided in the Plan.

3. Term of Option. Unless the Option terminates earlier pursuant to the provisions of this Agreement, the Option shall expire ten years from the Grant Date, except as provided in paragraph (f) of Section 6.

4. Vesting. [The Option shall become vested with respect to [ ] of the Shares on [ ], and as to 1/48th of the remaining amount of the Shares on each monthly anniversary of [ ] such that all of the Shares will have vested by [ ]; provided, however, that the Grantee is providing Services on each such vesting date.] / [The Option shall become vested with respect to 1/48th of the Shares on each monthly anniversary of [ ]; provided, however, that the Grantee is then providing Services.]

5. Exercise of Option

(a) Manner of Exercise. To the extent vested, the Option may be exercised, in whole or in part, by delivering notice to the Company in accordance with paragraph (g) of Section 8 in such form as the Company may require from time to time (the "Exercise Notice"). Such Exercise Notice shall specify the number of Shares subject to the Option as to which the Option is being exercised, and shall be accompanied by full payment of the Exercise Price of such Shares in a manner permitted under the terms of Section 5.5 of the Plan, except that payment with previously acquired Shares may only be made with the consent of the Committee. The Option may be exercised only in multiples of whole Shares and no fractional Shares shall be issued.

(b) Issuance of Shares. Upon exercise of the Option and payment of the Exercise Price for the Shares as to which the Option is exercised, the Company shall issue to the Grantee the applicable number of Shares in the form of fully paid and non-assessable Shares.

(c) Capitalization Adjustments. The number of Shares subject to the Option and the Exercise Price shall be equitably and appropriately adjusted as provided in Section 12.2 of the Plan.

## 6. Termination of Option

(a) Termination of Employment or Service Relationship Other Than Due to Retirement, Death, Disability or Cause. Unless the Option has earlier terminated, the Option shall terminate in its entirety, regardless of whether the Option is vested, ninety (90) days after the date the Grantee ceases to provide Services for any reason other than, as applicable, the Grantee's Retirement, death, Disability or termination for Cause. Except as provided in paragraphs (b) or (c) of this Section, any portion of the Option that is not vested at the time the Grantee ceases to provide Services shall immediately terminate.

(b) Death. Upon the Grantee's death, unless the Option has earlier terminated, the Grantee's executor or personal representative, the person to whom the Option shall have been transferred by will or the laws of descent and distribution, or such other permitted transferee, as the case may be, may exercise the Option in accordance with paragraph (a) of Section 5, to the extent vested, provided such exercise occurs within twelve (12) months after the date of the Grantee's death or the end of the term of the Option pursuant to Section 3, whichever is earlier.

(c) Disability. In the event that the Grantee ceases to provide Services by reason of Disability, unless the Option has earlier terminated, the Option may be exercised, in accordance with paragraph (a) of Section 5, to the extent vested, provided such exercise occurs within six (6) months after the date of Disability or the end of the term of the Option pursuant to Section 3, whichever is earlier. For purposes of this Agreement, "Disability" shall mean the Grantee's becoming disabled within the meaning of Section 22(e)(3) of the Code, or as otherwise determined by the Committee in its discretion. The Committee may require such proof of Disability as the Committee in its sole and absolute discretion deems appropriate and the Committee's determination as to whether the Grantee has incurred a Disability shall be final and binding on all parties concerned.

(d) Termination for Cause. Upon termination by the Company or an Affiliate or a successor company (or a subsidiary or parent thereof) of the Grantee's Service for Cause, unless the Option has earlier terminated, the Option shall immediately terminate in its entirety and shall thereafter not be exercisable to any extent whatsoever. For purposes of this Agreement, except as otherwise provided in a written employment or severance agreement between the Grantee and the Company or a severance plan of the Company covering the Grantee (including a change in control severance agreement or plan), "Cause" shall mean: the commission of any act of fraud, embezzlement or dishonesty by Grantee, any unauthorized use or disclosure by such person of confidential information or trade secrets of the Company or an Affiliate or a successor company (or a subsidiary or parent thereof), or any other intentional misconduct by such person adversely affecting the business affairs of the Company or an Affiliate or a successor company (or a subsidiary or parent thereof) in a material manner.

(e) Automatic Extension of Exercise Period. Notwithstanding any provisions of Section 3 or paragraphs (a), (b), or (c) of this Section to the contrary, if on the last business day of the term of the Option under Section 3 or if following termination of Service and during any part of the time period set forth in the applicable paragraph of this Section (i) exercise of the Option is prohibited by applicable law or (ii) the Grantee may not purchase or sell Shares due to a "black-out period" of a Company insider trading policy, the term of the Option under Section 3 or the time period to exercise the Option under Section 3 or paragraphs (a), (b), or (c) of this Section, as applicable, shall be extended until the later of (x) thirty (30) days after the end of the applicable legal prohibition or black-out period or (y) the end of the time period set forth in the applicable paragraph of this Section.

## 7. Change in Control.

(a) Effect on Option. 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 the Option on substantially the same terms and conditions (which may include settlement in the common stock of the successor company (or a subsidiary or parent thereof)), the Option shall (i) vest and become exercisable on the day prior to the date of the Change in Control if the Grantee (A) is then providing Services or (B) was terminated without Cause as an Employee, Consultant, or Director in connection with or in contemplation of the Change in Control and (ii) terminate on the date of the Change in Control. In the event of a Change in Control and solely if the Grantee was an Employee on the date of the Change of Control and is an Employee on the date of termination (as contemplated below), in both cases regardless of whether the Grantee was also a Director on such dates, to the extent the successor company (or a subsidiary or parent thereof) assumes or substitutes for the Option on substantially the same terms and conditions (which may include providing for settlement in the common stock of the successor company (or a subsidiary or parent thereof)), if within 24 months following the date of the Change in Control the Grantee's employment is terminated by the Company or an Affiliate or the successor company (or a subsidiary or parent thereof) without Cause or by the Grantee for Good Reason, the Option shall become fully vested and exercisable, and may be exercised by the Grantee at any time until the tenth anniversary of the Grant Date.

(b) Good Reason. For purposes of this Agreement, except as otherwise provided in paragraph (c) of this Section, “Good Reason” shall mean, in each case without Grantee’s explicit written consent, which Grantee may withhold or provide in Grantee’s sole and absolute discretion, (i) a reduction by the Company or an Affiliate or a successor company (or a subsidiary or parent thereof) of more than 10% in Grantee’s rate of annual base salary as in effect immediately prior to such Change in Control; (ii) a reduction by the Company or an Affiliate or a successor company (or a subsidiary or parent thereof) of more than 10% of Grantee’s individual annual target or bonus opportunity, except under circumstances where the Company or the Affiliate or the successor company (or a subsidiary or parent thereof) implement changes to the bonus structure of similarly situated employees, including but not limited to changes to the bonus structure designed to integrate the Company’s or the Affiliate’s personnel with other personnel of the successor company (or a subsidiary or parent thereof); (iii) a change in position that materially reduces Grantee’s level of responsibility, including the level of person to whom Grantee reports; or (iv) a relocation following the Change in Control of Grantee’s primary office location (A) by more than 50 miles or (B) that would reasonably be expected to increase Grantee’s commute such that Grantee’s total (i.e., round-trip) commute would reasonably be expected to increase by more than 1 hour per day.

(c) Other Agreement or Plan. The provisions of this Section (including the definitions of Cause and Good Reason), shall be superseded by the specific provisions, if any, of a written employment or severance or service agreement between the Grantee and the Company or a severance plan of the Company covering the Grantee, including a change in control severance agreement or plan, to the extent such a provision provides a greater benefit to the Grantee.

#### 8. Miscellaneous.

(a) No Rights of Stockholder. The Grantee shall not have any of the rights of a stockholder with respect to the Shares subject to this Option until such Shares have been issued upon the due exercise of the Option.

(b) 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 (including this Option), (b) any Shares issuable upon the exercise of this Option, or (c) the sale of any Shares issued upon exercise of this Option, 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 this Option, (y) any Shares issuable upon exercise of this Option, or (z) the sale of any Shares issued upon exercise of this Option 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.

(c) Nontransferability of Option. Except to the extent and under such terms and conditions as determined by the Committee, the Option shall be nontransferable otherwise than by will or the laws of descent and distribution, and during the lifetime of the Grantee, the Option may be exercised only by the Grantee or, during the period the Grantee is under a legal disability, by the Grantee’s guardian or legal representative. Notwithstanding the foregoing, the Grantee may, by delivering written notice to the Company, in a form provided by or otherwise satisfactory to the Company, designate a third party who, in the event of the Grantee’s death, shall thereafter be entitled to exercise the Option.

(d) Severability. If any provision of this Agreement shall be held unlawful or otherwise invalid or unenforceable in whole or in part by a court of competent jurisdiction, such provision shall (i) 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 (ii) not affect any other provision of this Agreement or part thereof, each of which shall remain in full force and effect.

(e) Governing Law. This Agreement shall be governed by, and interpreted in accordance with, the laws of the State of California, other than its conflict of laws principles.

(f) Headings. The headings in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

(g) Notices. Any document relating to participation in the Plan or any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given (except to the extent that this Agreement provides for effectiveness only upon actual receipt of such notice) upon personal delivery, electronic delivery at the e-mail address, if any, provided for Grantee by the Company (or, if applicable the Affiliate for whom Grantee provides Services), or upon deposit in the U.S. Post Office or foreign postal service, by registered or certified mail, or with a nationally recognized overnight courier service, with postage and fees prepaid, addressed to the other party at the address of such party set forth or at such other address as such party may designate in writing from time to time to the other party. Notice by mail shall be deemed delivered on the date on which it is postmarked.

Mailed notices to the Company should be addressed to:

Mast Therapeutics, Inc.  
12390 El Camino Real, Suite 150  
San Diego, CA 92130  
Attention: Legal Department

Mailed notices to the Grantee should be addressed to the Grantee at the Grantee's address as it appears on the records of the Company or the Affiliate for whom Grantee is providing Services or a successor company (or a subsidiary or parent thereof). The Company or the Grantee may by writing to the other party, designate a different address for notices.

The Plan documents, which may include but do not necessarily include: the Plan, this Agreement, the Plan Prospectus, and any reports of the Company provided generally to the Company's stockholders, may be delivered to Grantee electronically. In addition, if permitted by the Company, Grantee may deliver electronically the Exercise Notice called for by paragraph (a) of Section 5 to the Company or to such third party involved in administering the Plan as the Company may designate from time to time. Such means of electronic delivery may include but do not necessarily include the delivery of a link to a Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other means of electronic delivery specified by the Company.

Grantee acknowledges that Grantee has read this paragraph (g) of Section 8 and consents to the electronic delivery of the Plan documents and, if permitted by the Company, the delivery of the Exercise Notice, as described above. Grantee acknowledges that he or she may receive from the Company a paper copy of any documents delivered electronically at no cost to Grantee by contacting the Company by telephone or in writing. Grantee further acknowledges that the Grantee will be provided with a paper copy of any documents if the attempted electronic delivery of such documents fails. Similarly, Grantee understands that Grantee must provide the Company or any designated third party administrator with a paper copy of any documents if the attempted electronic delivery of such documents fails. Grantee may revoke his or her consent to the electronic delivery of documents described above or may change the electronic mail address to which such documents are to be delivered (if Grantee has provided an electronic mail address) at any time by notifying the Company of such revoked consent or revised e-mail address by telephone, postal service or electronic mail. Finally, Grantee understands that he or she is not required to consent to electronic delivery of documents.

(h) Agreement Not a Contract. This Agreement (and the grant of the Option) is not an employment or service contract, and nothing in the Option shall be deemed to create in any way whatsoever any obligation on Grantee's part to continue as an employee or director of or consultant to the Company or any Affiliate or a successor company (or a subsidiary or parent thereof), or of the Company or any Affiliate or a successor company (or a subsidiary or parent thereof) to continue Grantee's Service as such an employee, director or consultant.



(i) Entire Agreement; Modification. This Agreement and the Plan contain the entire agreement between the parties with respect to the subject matter contained herein and may not be modified, except as provided in the Plan or in a written document signed by each of the parties hereto, and may be rescinded only by a written agreement signed by both parties.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the Grant Date.

**MAST THERAPEUTICS, INC.**

By: \_\_\_\_\_

\_\_\_\_\_  
Grantee