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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): March 23, 2016

Mast Therapeutics, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-32157
(Commission File Number)

84-1318182
(IRS Employer
Identification No.)

**3611 Valley Centre Drive, Suite 500,
San Diego, CA**
(Address of Principal Executive Offices)

92130
(Zip Code)

Registrant's Telephone Number, Including Area Code: (858) 552-0866

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

On March 23, 2016, Mast Therapeutics, Inc. (the “Company”) entered into an Executive Severance Agreement with each of Brian M. Culley, the Company’s Chief Executive Officer, Brandi L. Roberts, the Company’s Chief Financial Officer, and R. Martin Emanuele, the Company’s Senior Vice President, Development (each, an “Executive,” and collectively, the “Executives”). The new agreements replaced and superseded the Executives’ previous severance arrangements.

Pursuant to the Executive Severance Agreements, an Executive is eligible for the severance benefits provided therein in the event that (a) the Executive’s employment has been terminated due to an involuntary termination (as such term is defined in the agreement) or due to the Executive’s resignation for good reason (as such term is defined in the agreement), in either case, prior to or within 24 months after the effective date of a change in control (as such term is defined in the agreement) (any such event is referred to as a “Covered Termination”), and (b) the Executive (i) executes and delivers a general release of claims in favor of the Company, its subsidiaries, affiliates, successors and assigns, and its and their directors, officers, shareholders, employees and representatives, in a form acceptable to the Company (the “Release”) and the Release becomes effective no later than 60 days following the date of the Executive’s termination, (ii) complies with the terms of the Release (iii) resigns any other positions he or she holds with the Company, (iv) returns all Company property, and (v) complies with any confidentiality, non-disclosure, non-competition, non-solicitation, trade secret and/or assignment of inventions and other intellectual property provisions to which the Executive’s employment was subject.

In the event of a Covered Termination and the Executive’s compliance with the Release and other conditions described above, an Executive will be eligible for the following severance benefits:

- An amount equal to 24 months (for Mr. Culley) or nine months (for the other Executives) of his or her base salary then in effect, payable in lump sum within ten business days of the effective date of the Release;
- An amount equal to the premiums necessary to continue the health insurance coverage then in effect for the Executive and his or her covered dependents for 24 months (for Mr. Culley) or nine months (for the other Executives), payable in lump sum within ten business days of the effective date of the Release;
- Accelerated vesting of stock options then held by the Executive such that each option becomes vested with respect to 25% (for Mr. Culley) or 18.75% (for the other Executives) of the number of shares that were subject to the option on its date of grant; provided that, in the event of a Covered Termination following a change in control in which the successor company assumed or substituted for the options, the options shall become fully vested; and
- Extension of the exercise period for the vested portion of stock options then held by the Executive such that the vested portion of each option is exercisable any time after the Release becomes effective until the close of business on the last calendar day of the 12th (for Mr. Culley) or ninth (for the other Executives) full calendar month following the date of the Covered Termination; provided that, in the event of a Covered Termination following a change in control in which the successor company assumed or substituted for the option, the vested portion of each option shall be exercisable any time after the Release becomes effective until the close of business on the tenth anniversary of the date of grant of the option.

On March 23, 2016, the Company’s Retention and Severance Plan dated as of July 21, 2009 was terminated. Mr. Culley was the only participant in such plan at the time of its termination.

On March 23, 2016, the Company’s Change in Control Severance Plan dated as of December 6, 2012 was amended to remove Ms. Roberts as a participant.

The Executive Severance Agreements between the Company and each of Mr. Culley, Ms. Roberts, and Dr. Emanuele are filed herewith as Exhibits 10.1, 10.2, and 10.3, respectively, and are incorporated herein by reference. The foregoing description of the Executive Severance Agreements does not purport to be complete and is qualified in its entirety by reference to such exhibits.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

The list of exhibits called for by this Item is incorporated by reference to the Exhibit Index immediately following the signature page of this report.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Mast Therapeutics, Inc.

Date: March 25, 2016

By: /s/ Brandi L. Roberts

Brandi L. Roberts

Chief Financial Officer and Senior Vice President

Exhibit Index

Exhibit Number	Description
10.1	Executive Severance Agreement, dated March 23, 2016, Mast Therapeutics, Inc. and Brian M. Culley
10.2	Executive Severance Agreement, dated March 23, 2016, Mast Therapeutics, Inc. and Brandi L. Roberts
10.3	Executive Severance Agreement, dated March 23, 2016, Mast Therapeutics, Inc. and R. Martin Emanuele

MAST THERAPEUTICS, INC.

EXECUTIVE SEVERANCE AGREEMENT

This EXECUTIVE SEVERANCE AGREEMENT ("**Agreement**") is dated March 23, 2016 ("**Effective Date**"), and is between **Brian M. Culley** ("**Executive**") and **MAST THERAPEUTICS, INC.**, a Delaware corporation ("**Company**"). Each of the Company and Executive are a "**Party**" and, collectively, they are the "**Parties**." Any capitalized but undefined term in this Agreement shall have the meaning assigned to it in Section 3 of this Agreement.

Executive was a Participant under the ADVENTRX Pharmaceuticals, Inc. Retention and Severance Plan dated as of July 21, 2009 (the "**Prior Agreement**"); and

The Parties acknowledge and agree that this Agreement shall replace and supersede the Prior Agreement in its entirety; and

The Parties desire to enter into this Agreement to continue to provide certain benefits to Executive in the event of Executive's separation from employment with the Company.

Accordingly, in consideration of the mutual promises and covenants contained herein, the Parties agree to the following:

1. SEVERANCE BENEFITS.

1.1 Eligibility for Severance Benefits. In the event that (a) Executive's employment has been terminated due to an Involuntary Termination or due to Executive's resignation for Good Reason, in either case, prior to or within twenty-four (24) months after the effective date of a Change in Control (such event is referred to as a "**Covered Termination**") and (b) Executive complies with the obligations described below in Section 1.3, then Executive will be eligible for the severance benefits describe below in Section 1.2, subject to the restrictions and limitations in this Agreement. If Executive's employment with the Company terminates for any reason other than a Covered Termination, then Executive will not be eligible to receive any compensation under this Agreement.

1.2 Severance Benefits. Following a Covered Termination and subject to the terms and conditions set forth in Section 1.3, Executive will be eligible for the following severance benefits:

(a) An amount payable by the Company to Executive equal to twenty four (24) months of Executive's base salary in effect on the Termination Date, disregarding any decrease in Executive's base salary that forms the basis for Good Reason (the "**Benefit Period**"), which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the date the Release described in Section 1.3 becomes effective and can no longer be revoked by Executive (the "**Release Effective Date**"), provided the Company has received the Release from Executive by such date;

(b) If Executive is participating in the Company's group health insurance plans on the Termination Date, an amount payable by the Company to Executive equal to the premiums necessary to continue Executive's health insurance coverage in effect for Executive and Executive's covered dependents under the Consolidated Omnibus Reconciliation Act of 1985, for a period equal to the Benefit Period, which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the Release Effective Date, provided the Company has received the Release from Executive by such date;

(c) Each stock option granted to Executive (individually, an "**Option**") to purchase certain shares of common stock of the Company, par value \$0.001 per share (the "**Shares**") pursuant to the Mast Therapeutics, Inc. 2015 Omnibus Incentive Plan, as may be amended or restated from time to time, or such other equity incentive plan as may be adopted by the Board of Directors and approved by the stockholders of the

Company (the “**Plan**”), regardless of whether such Option was granted before, on, or after the Effective Date, shall immediately prior to such Covered Termination (unless such Option has earlier terminated) become vested with respect to 25% of the total number of Shares that were subject to such Option on its date of grant; *provided, however*, that notwithstanding the increased vesting provided for in the preceding sentence, in no event shall any Option become vested and exercisable for more than the total number of Shares that were subject to such Option on its date of grant (subject to adjustment as provided in the applicable Grant Agreement);

(d) The exercise period for each Option (regardless of whether granted before, on, or after the Effective Date) shall be extended such that Executive may exercise each such Option, to the extent vested as of such Covered Termination (for clarity, after taking into account the vesting acceleration provision of paragraph (c) of this Section 1.2) and in accordance with the terms of the written agreement, contract or other instrument or document evidencing such Option (the “**Grant Agreement**”), any time after the Release Effective Date (provided that the Company has received the Release from Executive by such date) and prior to the close of business on the last calendar day of the 12th full calendar month following the date of such Covered Termination; and

(e) Notwithstanding paragraphs (c) and (d) of this Section 1.2, in the event of a Covered Termination following a Change in Control in which the successor company (or a subsidiary or parent thereof) assumed or substituted for an 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)), then (i) any such Option (regardless of whether granted before, on, or after the Effective Date) shall become fully (100%) vested; and (ii) any such Option (regardless of whether granted before, on, or after the Effective Date) may be exercised in accordance with the terms of the Grant Agreement at any time after the Release Effective Date (provided that the Company or the successor company, as applicable, has received the Release from Executive by such date) and prior to the close of business on the tenth (10th) anniversary of the date of grant of the Option.

1.3 Release and Other Conditions. Before any severance benefits will be payable to Executive or will be continued under this Agreement, Executive must satisfy all of the following conditions: (i) Executive executes and delivers to the Company and does not revoke a general release of claims in favor of the Company, its subsidiaries, affiliates, successors and assigns, and its and their directors, officers, shareholders, employees and representatives, in a form acceptable to the Company (the “**Release**”), such that the Release Effective Date occurs no later than sixty (60) days following the Termination Date; (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the Termination Date (or such other date as requested by the Company); (iii) Executive returns all Company property; (iv) Executive complies with any confidentiality, non-disclosure, non-competition, non-solicitation, trade secret, and/or assignment of inventions and other intellectual property provisions to which Executive’s employment was subject; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release. The Release shall specifically relate to all of Executive’s rights and claims in existence at the time of such execution. Notwithstanding Section 1.2 of this Agreement, in the event the severance benefits described in Section 1.2 are subject to the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations and other guidance thereunder and any state law of similar effect (collectively, “**Section 409A**”), and the sixty (60) day period following the Termination Date begins in one calendar year and ends in a subsequent calendar year, the severance payments will not be paid until the subsequent calendar year even if the Release Effective Date occurs in the first year.

1.4 No Other Severance. The severance benefits provided to Executive pursuant to this Agreement are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any other severance agreement between Executive and the Company, any Company severance plan, policy or program, and any individually negotiated severance provisions as part of any offer letter or employment agreement between the Company and Executive.

1.5 Effect of Statutory Benefits. To the extent that any severance benefits are required to be paid to Executive upon termination of employment with the Company as a result of any requirement of law or any governmental entity in any applicable jurisdiction, the aggregate amount of severance benefits payable pursuant to Section 1.2 shall be reduced by such amount.

1.6 Basis of Payments. All payments under this Agreement shall be paid by the Company. This Agreement shall be unfunded, and benefits hereunder shall be paid by the Company or the Company’s successor or parent (if subsequent to a Change in Control).

1.7 **Tax Consequences - Loss of Incentive Stock Option Status.** The parties acknowledge that by amending the Options granted to Executive before the Effective Date to extend their post-termination exercise periods as set forth in Section 1.2(e) above, such Options that currently qualify as incentive stock options may no longer qualify as incentive stock options and instead may be treated as nonstatutory stock options.

1.8 **Expiration of Offer to Amend Option.** If this Agreement is not agreed to and executed by Executive on or before the earlier of (a) the date on which Executive executes the Agreement and (b) twenty-one (21) days after the Agreement is delivered to Executive, the offer to amend an Option that was granted to Executive before the Effective Date as set forth in Section 1.2(e) above shall be terminated and the provisions described therein shall not be effective.

2. **GENERAL PROVISIONS.**

2.1 **Employment Status.** This Agreement does not constitute a contract of employment or impose on Executive any obligation to remain as an employee, or impose on the Company any obligation to (a) retain Executive as an employee, (b) change the status of Executive as an at-will employee or (c) change the Company's policies regarding termination of employment.

2.2 **Notices.** Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or three (3) days after having been mailed by U.S. registered or certified mail, return receipt requested and postage prepaid. In the case of Executive, mailed notices shall be addressed to him or her at the home address that he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

2.3 **Severability.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

2.4 **Waiver.** If either Party should waive any breach of any provisions of this Agreement, Executive or the Company shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

2.5 **Complete Agreement.** This Agreement, including **Exhibit A**, constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the provisions addressing this subject matter in the Prior Agreement. With respect to the benefits provided in Sections 1.2(c) and (d) of this Agreement, the terms of this Agreement are intended to supersede the specific provisions of any Grant Agreement that may conflict with the terms hereof. For clarity, Section 1.2(d) does not supersede any provision in any Grant Agreement regarding effect on an Option to the extent a successor company (or a subsidiary or parent thereof) does not assume or substitute for an 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)). This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein.

2.6 **Amendments.** This Agreement may be amended, modified or terminated only in writing signed by the Company and Executive, except as set forth in Section 2.14(a) below. The Company may only consent to an amendment or modification of this Agreement after such amendment or modification has been approved by the Company's Board of Directors (the "**Board**").

2.7 **Counterparts.** This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one Party, but all of which taken together will constitute one and the same Agreement.

2.8 **Headings.** The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

2.9 **Successors and Assigns.** This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign any of Executive's duties hereunder and Executive may not assign any of Executive's rights hereunder without the written consent of the Company. For all purposes under this Agreement, the term "Company" shall include any successor (or, if warranted, a subsidiary or parent of such successor) to the Company's business and/or assets which is required to assume the Company's obligations as described in this section or which becomes bound by the terms of this Agreement by operation of law.

2.10 **Choice of Law.** All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of California.

2.11 **Arbitration.** The terms and provisions of Exhibit A hereto are incorporated herein as if fully set forth herein.

2.12 **Opportunity for Independent Counsel and Advisors.** Executive acknowledges that Executive has had an opportunity to retain and consult with independent counsel and tax advisors to review this Agreement.

2.13 **Withholding and Employment Taxes.** Executive shall be responsible for any applicable taxes of any nature (including any penalties or interest that may apply to such taxes) that the Company reasonably determines apply to any payment made hereunder. Executive's receipt of any benefit hereunder is conditioned on his or her satisfaction of any applicable withholding or similar obligations that apply to such benefit, and any cash payment owed hereunder will be reduced to satisfy any such withholding or similar obligations that may apply.

2.14 **Section 409A of the Code.**

(a) The Company is offering severance to Executive in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4), and this Agreement is intended to comply with, or otherwise be exempt from, Section 409A and any regulations and Treasury guidance promulgated thereunder. The Company shall undertake to administer, interpret, and construe this Agreement in a manner that does not result in the imposition on Executive of any additional tax, penalty, or interest under Section 409A. If the Company determines in good faith that any provision of this Agreement would cause Executive to incur an additional tax, penalty, or interest under Section 409A, the Board may, without the consent of Executive amend this Agreement as may be necessary to ensure compliance with the distribution provisions of Section 409A or as otherwise needed to ensure that this Agreement complies with Section 409A. The preceding provisions, however, shall not be construed as a guarantee by the Company of any particular tax effect to Executive under this Agreement. The Company shall not be liable to Executive for any payment made under this Agreement that is determined to result in an additional tax, penalty, or interest under Section 409A, nor for reporting in good faith any payment made under this Agreement as an amount includible in gross income under Section 409A.

(b) To the extent required to avoid the imposition of additional taxes and penalties under Section 409A, amounts payable under this Agreement on account of any termination of employment shall only be paid if Executive experiences a "separation from service" as defined in Section 409A.

(c) If upon Executive's "separation from service" (within the meaning of Section 409A) with the Company, Executive is then a "specified employee" (as defined in Section 409A), then solely to the extent necessary to comply with Section 409A and avoid the imposition of taxes under Section 409A, the Company shall defer payment of "nonqualified deferred compensation" subject to Section 409A which is payable as a result of and within six (6) months following such separation from service until the earlier of: (a) the first business day of the seventh month following Executive's separation from service, or (b) ten (10) days after the Company receives written notification of such Executive's death. All such delayed payments shall be made without accrual of interest.

(d) Notwithstanding anything to the contrary contained in any other document or agreement pursuant to which Executive becomes entitled to severance payments that constitute “deferred compensation” within the meaning of Section 409A, the form and timing of such payments shall be determined based on the form and timing rules set forth in this Agreement.

3. **DEFINITIONS.**

For purposes of this Agreement, the following terms shall have the following meanings:

3.1 “**Cause**” shall mean (i) any act of personal dishonesty taken by Executive in connection with Executive’s responsibilities as an employee which is intended to result in substantial personal enrichment of Executive; (ii) Executive’s conviction of a felony that the Board reasonably believes has had or will have a material detrimental effect on the reputation or business of the Company, its parents, affiliates or subsidiaries; (iii) a willful act by Executive that constitutes misconduct and is materially injurious to the Company, its parents, affiliates or subsidiaries; (iv) any material breach by Executive of any offer letter, confidential information, non-solicitation or invention assignment agreement or other agreement by and between the Parties; or (v) continued willful violations by Executive of Executive’s obligations to the Company, its parents, affiliates or subsidiaries after there has been delivered to Executive a written demand for performance from the Company that describes the basis for the Company’s belief that Executive has not substantially performed Executive’s duties.

3.2 “**Change in Control**” shall have the meaning ascribed to such term in the Plan. Notwithstanding the foregoing, an event is not a “Change in Control” unless it also is a “change in ownership of a corporation” or a “change in ownership of a substantial portion of a corporation’s assets” under Treasury Regulation section 1.409A-3(i)(5)(v) and (vii).

3.3 “**Disability**” shall mean either (a) Executive is unable due to a physical or mental condition to perform the essential functions of Executive’s position with or without reasonable accommodation for one hundred eighty (180) days in the aggregate during any twelve (12) month period, or (b) a determination of disability due to mental or physical impairment by Executive’s medical practitioner that it is reasonably likely that an impairment exists with respect to Executive which will, with the passage of time, satisfy clause (a). This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law.

3.4 “**Involuntary Termination**” shall mean that Executive’s employment is terminated by the Company without Cause; *provided, however*, that the termination of Executive’s employment as a result of Executive’s death or Disability shall not be deemed to be an “Involuntary Termination.” For clarity, transferring employment to the acquiring, surviving or successor entity in the Change in Control or their affiliates shall not be deemed to be an “Involuntary Termination.”

3.5 “**Good Reason**” shall mean: (i) without Executive’s express written consent, a material reduction or alteration of Executive’s duties, position or responsibilities relative to Executive’s duties, position or responsibilities in effect immediately prior to such reduction or alteration, or Executive’s removal from such position, duties or responsibilities; (ii) without Executive’s express written consent, a material reduction by the Company of Executive’s base salary as in effect immediately prior to such reduction (unless pursuant to a salary reduction program applicable generally to the Company’s similarly situated employees); and (iii) without Executive’s express written consent, the relocation of Executive’s principal place of employment with the Company by more than fifty (50) miles. Notwithstanding the foregoing, “Good Reason” shall not be deemed to occur until the Company has received written notice from Executive of the occurrence of an event triggering Good Reason and had thirty (30) days after the Company’s receipt of such notice to cure or remedy such Good Reason (the “**Remedy Period**”). Any such notice provided by Executive shall indicate the specific termination provision relied upon, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination under the provision so indicated, and shall specify the effective date of Executive’s “separation from service” within the meaning of Section 409A of the Code. In order to be effective, a resignation for Good Reason must occur within ten (10) business days after the end of the Remedy Period in which the Company failed to cure or remedy the Good Reason and Executive must have provided the foregoing written notice of the occurrence of a Good Reason event to the Company within ninety (90) days of Executive’s awareness of the initial existence of the applicable Good Reason event.

3.6 “*Termination Date*” shall mean the effective date of a Covered Termination that constitutes a “separation from service” (as such term is defined in Treasury Regulation Section 1.409A-1(h)).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Executive Severance Agreement on the Effective Date first written above.

MAST THERAPEUTICS, INC.

By: /s/ Brandi L. Roberts

Name: Brandi L. Roberts
Title: CFO and Senior VP

BRIAN M. CULLEY

By: /s/ Brian M. Culley

Exhibit A

ARBITRATION

Any dispute or controversy arising out of, relating to, or in connection with this Agreement, or the interpretation, validity, construction, performance, breach, or termination thereof, shall be settled by binding arbitration to be held in the County of San Diego, State of California in accordance with the Employment Arbitration Rules and Mediation Procedures (or its successor rules) then in effect of the American Arbitration Association (the "Rules"). The arbitrator may grant injunctions or other relief in such dispute or controversy. The decision of the arbitrator shall be final, conclusive and binding on the Parties to the arbitration, and judgment may be entered on the arbitrator's decision in any court having jurisdiction.

The arbitrator(s) shall apply California law to the merits of any dispute or claim, without reference to conflicts of law rules. The arbitration proceedings shall be governed by federal arbitration law and by the Rules, without reference to state arbitration law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Executive and the Company consent to the personal jurisdiction of the state and federal courts located in California for such action or for any action or proceeding relating to any arbitration in which the Parties are participants.

Nothing in this Exhibit A modifies Executive's at-will employment status. Either Executive or the Company can terminate the employment relationship at any time, with or without Cause.

SUBMISSION OF ANY CLAIMS ARISING OUT OF, RELATING TO, OR IN CONNECTION WITH THIS AGREEMENT, OR THE INTERPRETATION, VALIDITY, CONSTRUCTION, PERFORMANCE, BREACH OR TERMINATION THEREOF TO BINDING ARBITRATION, CONSTITUTES A WAIVER OF THE PARTY'S RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF THE EMPLOYER-EMPLOYEE RELATIONSHIP, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

ANY AND ALL CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT; BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED; BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED; NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS; NEGLIGENT OR INTENTIONAL MISREPRESENTATION; NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE; AND DEFAMATION;

ANY AND ALL CLAIMS FOR VIOLATION OF ANY FEDERAL STATE OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, THE CALIFORNIA FAIR EMPLOYMENT AND HOUSING ACT, AND LABOR CODE SECTION 201, *et seq.*; and

ANY AND ALL CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

MAST THERAPEUTICS, INC.

EXECUTIVE SEVERANCE AGREEMENT

This EXECUTIVE SEVERANCE AGREEMENT ("**Agreement**") is dated March 23, 2016 ("**Effective Date**"), and is between **Brandi L. Roberts** ("**Executive**") and **MAST THERAPEUTICS, INC.**, a Delaware corporation ("**Company**"). Each of the Company and Executive are a "**Party**" and, collectively, they are the "**Parties**." Any capitalized but undefined term in this Agreement shall have the meaning assigned to it in Section 3 of this Agreement.

Executive was a Participant under the ADVENTRX Pharmaceuticals, Inc. Change in Control Severance Plan effective as of December 6, 2012 (the "**Prior Agreement**"); and

The Parties acknowledge and agree that this Agreement shall replace and supersede the Prior Agreement in its entirety; and

The Parties desire to enter into this Agreement to continue to provide certain benefits to Executive in the event of Executive's separation from employment with the Company.

Accordingly, in consideration of the mutual promises and covenants contained herein, the Parties agree to the following:

1. SEVERANCE BENEFITS.

1.1 Eligibility for Severance Benefits. In the event that (a) Executive's employment has been terminated due to an Involuntary Termination or due to Executive's resignation for Good Reason, in either case, prior to or within twenty-four (24) months after the effective date of a Change in Control (such event is referred to as a "**Covered Termination**") and (b) Executive complies with the obligations described below in Section 1.3, then Executive will be eligible for the severance benefits describe below in Section 1.2, subject to the restrictions and limitations in this Agreement. If Executive's employment with the Company terminates for any reason other than a Covered Termination, then Executive will not be eligible to receive any compensation under this Agreement.

1.2 Severance Benefits. Following a Covered Termination and subject to the terms and conditions set forth in Section 1.3, Executive will be eligible for the following severance benefits:

(a) An amount payable by the Company to Executive equal to nine (9) months of Executive's base salary in effect on the Termination Date, disregarding any decrease in Executive's base salary that forms the basis for Good Reason (the "**Benefit Period**"), which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the date the Release described in Section 1.3 becomes effective and can no longer be revoked by Executive (the "**Release Effective Date**"), provided the Company has received the Release from Executive by such date;

(b) If Executive is participating in the Company's group health insurance plans on the Termination Date, an amount payable by the Company to Executive equal to the premiums necessary to continue Executive's health insurance coverage in effect for Executive and Executive's covered dependents under the Consolidated Omnibus Reconciliation Act of 1985, for a period equal to the Benefit Period, which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the Release Effective Date, provided the Company has received the Release from Executive by such date;

(c) Each stock option granted to Executive (individually, an "**Option**") to purchase certain shares of common stock of the Company, par value \$0.001 per share (the "**Shares**") pursuant to the Mast

Therapeutics, Inc. 2015 Omnibus Incentive Plan, as may be amended or restated from time to time, or such other equity incentive plan as may be adopted by the Board of Directors and approved by the stockholders of the Company (the "**Plan**"), regardless of whether such Option was granted before, on, or after the Effective Date, shall immediately prior to such Covered Termination (unless such Option has earlier terminated) become vested with respect to 18.75% of the total number of Shares that were subject to such Option on its date of grant; *provided, however*, that notwithstanding the increased vesting provided for in the preceding sentence, in no event shall any Option become vested and exercisable for more than the total number of Shares that were subject to such Option on its date of grant (subject to adjustment as provided in the applicable Grant Agreement);

(d) The exercise period for each Option (regardless of whether granted before, on, or after the Effective Date) shall be extended such that Executive may exercise each such Option, to the extent vested as of such Covered Termination (for clarity, after taking into account the vesting acceleration provision of paragraph (c) of this Section 1.2) and in accordance with the terms of the written agreement, contract or other instrument or document evidencing such Option (the "**Grant Agreement**"), any time after the Release Effective Date (provided that the Company has received the Release from Executive by such date) and prior to the close of business on the last calendar day of the 9th full calendar month following the date of such Covered Termination; and

(e) Notwithstanding paragraphs (c) and (d) of this Section 1.2, in the event of a Covered Termination following a Change in Control in which the successor company (or a subsidiary or parent thereof) assumed or substituted for an 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)), then (i) any such Option (regardless of whether granted before, on, or after the Effective Date) shall become fully (100%) vested; and (ii) any such Option (regardless of whether granted before, on, or after the Effective Date) may be exercised in accordance with the terms of the Grant Agreement at any time after the Release Effective Date (provided that the Company or the successor company, as applicable, has received the Release from Executive by such date) and prior to the close of business on the tenth (10th) anniversary of the date of grant of the Option.

1.3 Release and Other Conditions. Before any severance benefits will be payable to Executive or will be continued under this Agreement, Executive must satisfy all of the following conditions: (i) Executive executes and delivers to the Company and does not revoke a general release of claims in favor of the Company, its subsidiaries, affiliates, successors and assigns, and its and their directors, officers, shareholders, employees and representatives, in a form acceptable to the Company (the "**Release**"), such that the Release Effective Date occurs no later than sixty (60) days following the Termination Date; (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the Termination Date (or such other date as requested by the Company); (iii) Executive returns all Company property; (iv) Executive complies with any confidentiality, non-disclosure, non-competition, non-solicitation, trade secret, and/or assignment of inventions and other intellectual property provisions to which Executive's employment was subject; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release. The Release shall specifically relate to all of Executive's rights and claims in existence at the time of such execution. Notwithstanding Section 1.2 of this Agreement, in the event the severance benefits described in Section 1.2 are subject to the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations and other guidance thereunder and any state law of similar effect (collectively, "**Section 409A**"), and the sixty (60) day period following the Termination Date begins in one calendar year and ends in a subsequent calendar year, the severance payments will not be paid until the subsequent calendar year even if the Release Effective Date occurs in the first year.

1.4 No Other Severance. The severance benefits provided to Executive pursuant to this Agreement are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any other severance agreement between Executive and the Company, any Company severance plan, policy or program, and any individually negotiated severance provisions as part of any offer letter or employment agreement between the Company and Executive.

1.5 Effect of Statutory Benefits. To the extent that any severance benefits are required to be paid to Executive upon termination of employment with the Company as a result of any requirement of law or any governmental entity in any applicable jurisdiction, the aggregate amount of severance benefits payable pursuant to Section 1.2 shall be reduced by such amount.

1.6 **Basis of Payments.** All payments under this Agreement shall be paid by the Company. This Agreement shall be unfunded, and benefits hereunder shall be paid by the Company or the Company's successor or parent (if subsequent to a Change in Control).

1.7 **Tax Consequences - Loss of Incentive Stock Option Status.** The parties acknowledge that by amending the Options granted to Executive before the Effective Date to extend their post-termination exercise periods as set forth in Section 1.2(d) above, such Options that currently qualify as incentive stock options may no longer qualify as incentive stock options and instead may be treated as nonstatutory stock options.

1.8 **Expiration of Offer to Amend Option.** If this Agreement is not agreed to and executed by Executive on or before the earlier of (a) the date on which Executive executes the Agreement and (b) twenty-one (21) days after the Agreement is delivered to Executive, the offer to amend an Option that was granted to Executive before the Effective Date as set forth in Section 1.2(d) above shall be terminated and the provisions described therein shall not be effective.

2. **GENERAL PROVISIONS.**

2.1 **Employment Status.** This Agreement does not constitute a contract of employment or impose on Executive any obligation to remain as an employee, or impose on the Company any obligation to (a) retain Executive as an employee, (b) change the status of Executive as an at-will employee or (c) change the Company's policies regarding termination of employment.

2.2 **Notices.** Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or three (3) days after having been mailed by U.S. registered or certified mail, return receipt requested and postage prepaid. In the case of Executive, mailed notices shall be addressed to him or her at the home address that he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

2.3 **Severability.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

2.4 **Waiver.** If either Party should waive any breach of any provisions of this Agreement, Executive or the Company shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

2.5 **Complete Agreement.** This Agreement, including **Exhibit A**, constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the provisions addressing this subject matter in the Prior Agreement. With respect to the benefits provided in Sections 1.2(c) and (d) of this Agreement, the terms of this Agreement are intended to supersede the specific provisions of any Grant Agreement that may conflict with the terms hereof. For clarity, Section 1.2(d) does not supersede any provision in any Grant Agreement regarding effect on an Option to the extent a successor company (or a subsidiary or parent thereof) does not assume or substitute for an 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)). This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein.

2.6 **Amendments.** This Agreement may be amended, modified or terminated only in writing signed by the Company and Executive, except as set forth in Section 2.14(a) below. The Company may only

consent to an amendment or modification of this Agreement after such amendment or modification has been approved by the Company's Board of Directors (the "**Board**").

2.7 **Counterparts.** This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one Party, but all of which taken together will constitute one and the same Agreement.

2.8 **Headings.** The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

2.9 **Successors and Assigns.** This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign any of Executive's duties hereunder and Executive may not assign any of Executive's rights hereunder without the written consent of the Company. For all purposes under this Agreement, the term "Company" shall include any successor (or, if warranted, a subsidiary or parent of such successor) to the Company's business and/or assets which is required to assume the Company's obligations as described in this section or which becomes bound by the terms of this Agreement by operation of law.

2.10 **Choice of Law.** All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of California.

2.11 **Arbitration.** The terms and provisions of Exhibit A hereto are incorporated herein as if fully set forth herein.

2.12 **Opportunity for Independent Counsel and Advisors.** Executive acknowledges that Executive has had an opportunity to retain and consult with independent counsel and tax advisors to review this Agreement.

2.13 **Withholding and Employment Taxes.** Executive shall be responsible for any applicable taxes of any nature (including any penalties or interest that may apply to such taxes) that the Company reasonably determines apply to any payment made hereunder. Executive's receipt of any benefit hereunder is conditioned on his or her satisfaction of any applicable withholding or similar obligations that apply to such benefit, and any cash payment owed hereunder will be reduced to satisfy any such withholding or similar obligations that may apply.

2.14 **Section 409A of the Code.**

(a) The Company is offering severance to Executive in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4), and this Agreement is intended to comply with, or otherwise be exempt from, Section 409A and any regulations and Treasury guidance promulgated thereunder. The Company shall undertake to administer, interpret, and construe this Agreement in a manner that does not result in the imposition on Executive of any additional tax, penalty, or interest under Section 409A. If the Company determines in good faith that any provision of this Agreement would cause Executive to incur an additional tax, penalty, or interest under Section 409A, the Board may, without the consent of Executive amend this Agreement as may be necessary to ensure compliance with the distribution provisions of Section 409A or as otherwise needed to ensure that this Agreement complies with Section 409A. The preceding provisions, however, shall not be construed as a guarantee by the Company of any particular tax effect to Executive under this Agreement. The Company shall not be liable to Executive for any payment made under this Agreement that is determined to result in an additional tax, penalty, or interest under Section 409A, nor for reporting in good faith any payment made under this Agreement as an amount includible in gross income under Section 409A.

(b) To the extent required to avoid the imposition of additional taxes and penalties under Section 409A, amounts payable under this Agreement on account of any termination of employment shall only be paid if Executive experiences a "separation from service" as defined in Section 409A.

(c) If upon Executive's "separation from service" (within the meaning of Section 409A) with the Company, Executive is then a "specified employee" (as defined in Section 409A), then solely to the extent necessary to comply with Section 409A and avoid the imposition of taxes under Section 409A, the Company shall defer payment of "nonqualified deferred compensation" subject to Section 409A which is payable as a result of and within six (6) months following such separation from service until the earlier of: (a) the first business day of the seventh month following Executive's separation from service, or (b) ten (10) days after the Company receives written notification of such Executive's death. All such delayed payments shall be made without accrual of interest.

(d) Notwithstanding anything to the contrary contained in any other document or agreement pursuant to which Executive becomes entitled to severance payments that constitute "deferred compensation" within the meaning of Section 409A, the form and timing of such payments shall be determined based on the form and timing rules set forth in this Agreement.

3. DEFINITIONS.

For purposes of this Agreement, the following terms shall have the following meanings:

3.1 "Cause" shall mean (i) any act of personal dishonesty taken by Executive in connection with Executive's responsibilities as an employee which is intended to result in substantial personal enrichment of Executive; (ii) Executive's conviction of a felony that the Board reasonably believes has had or will have a material detrimental effect on the reputation or business of the Company, its parents, affiliates or subsidiaries; (iii) a willful act by Executive that constitutes misconduct and is materially injurious to the Company, its parents, affiliates or subsidiaries; (iv) any material breach by Executive of any offer letter, confidential information, non-solicitation or invention assignment agreement or other agreement by and between the Parties; or (v) continued willful violations by Executive of Executive's obligations to the Company, its parents, affiliates or subsidiaries after there has been delivered to Executive a written demand for performance from the Company that describes the basis for the Company's belief that Executive has not substantially performed Executive's duties.

3.2 "Change in Control" shall have the meaning ascribed to such term in the Plan. Notwithstanding the foregoing, an event is not a "Change in Control" unless it also is a "change in ownership of a corporation" or a "change in ownership of a substantial portion of a corporation's assets" under Treasury Regulation section 1.409A-3(i)(5)(v) and (vii).

3.3 "Disability" shall mean either (a) Executive is unable due to a physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for one hundred eighty (180) days in the aggregate during any twelve (12) month period, or (b) a determination of disability due to mental or physical impairment by Executive's medical practitioner that it is reasonably likely that an impairment exists with respect to Executive which will, with the passage of time, satisfy clause (a). This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law.

3.4 "Involuntary Termination" shall mean that Executive's employment is terminated by the Company without Cause; *provided, however*, that the termination of Executive's employment as a result of Executive's death or Disability shall not be deemed to be an "Involuntary Termination." For clarity, transferring employment to the acquiring, surviving or successor entity in the Change in Control or their affiliates shall not be deemed to be an "Involuntary Termination."

3.5 "Good Reason" shall mean: (i) without Executive's express written consent, a material reduction or alteration of Executive's duties, position or responsibilities relative to Executive's duties, position or responsibilities in effect immediately prior to such reduction or alteration, or Executive's removal from such position, duties or responsibilities; (ii) without Executive's express written consent, a material reduction by the Company of Executive's base salary as in effect immediately prior to such reduction (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); and (iii) without Executive's express written consent, the relocation of Executive's principal place of employment with the Company by more than fifty (50) miles. Notwithstanding the foregoing, "Good Reason" shall not be deemed to occur until the Company has received written notice from Executive of the occurrence of an event triggering Good Reason and

had thirty (30) days after the Company's receipt of such notice to cure or remedy such Good Reason (the "**Remedy Period**"). Any such notice provided by Executive shall indicate the specific termination provision relied upon, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination under the provision so indicated, and shall specify the effective date of Executive's "separation from service" within the meaning of Section 409A of the Code. In order to be effective, a resignation for Good Reason must occur within ten (10) business days after the end of the Remedy Period in which the Company failed to cure or remedy the Good Reason and Executive must have provided the foregoing written notice of the occurrence of a Good Reason event to the Company within ninety (90) days of Executive's awareness of the initial existence of the applicable Good Reason event.

3.6 "**Termination Date**" shall mean the effective date of a Covered Termination that constitutes a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Executive Severance Agreement on the Effective Date first written above.

MAST THERAPEUTICS, INC.

By: /s/ Brian M. Culley

Name: Brian M. Culley

Title: CEO

BRANDI L. ROBERTS

By: /s/ Brandi L. Roberts

Exhibit A

ARBITRATION

Any dispute or controversy arising out of, relating to, or in connection with this Agreement, or the interpretation, validity, construction, performance, breach, or termination thereof, shall be settled by binding arbitration to be held in the County of San Diego, State of California in accordance with the Employment Arbitration Rules and Mediation Procedures (or its successor rules) then in effect of the American Arbitration Association (the "Rules"). The arbitrator may grant injunctions or other relief in such dispute or controversy. The decision of the arbitrator shall be final, conclusive and binding on the Parties to the arbitration, and judgment may be entered on the arbitrator's decision in any court having jurisdiction.

The arbitrator(s) shall apply California law to the merits of any dispute or claim, without reference to conflicts of law rules. The arbitration proceedings shall be governed by federal arbitration law and by the Rules, without reference to state arbitration law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Executive and the Company consent to the personal jurisdiction of the state and federal courts located in California for such action or for any action or proceeding relating to any arbitration in which the Parties are participants.

Nothing in this Exhibit A modifies Executive's at-will employment status. Either Executive or the Company can terminate the employment relationship at any time, with or without Cause.

SUBMISSION OF ANY CLAIMS ARISING OUT OF, RELATING TO, OR IN CONNECTION WITH THIS AGREEMENT, OR THE INTERPRETATION, VALIDITY, CONSTRUCTION, PERFORMANCE, BREACH OR TERMINATION THEREOF TO BINDING ARBITRATION, CONSTITUTES A WAIVER OF THE PARTY'S RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF THE EMPLOYER-EMPLOYEE RELATIONSHIP, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

ANY AND ALL CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT; BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED; BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED; NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS; NEGLIGENT OR INTENTIONAL MISREPRESENTATION; NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE; AND DEFAMATION;

ANY AND ALL CLAIMS FOR VIOLATION OF ANY FEDERAL STATE OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, THE CALIFORNIA FAIR EMPLOYMENT AND HOUSING ACT, AND LABOR CODE SECTION 201, *et seq.*; and

ANY AND ALL CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

MAST THERAPEUTICS, INC.

EXECUTIVE SEVERANCE AGREEMENT

This EXECUTIVE SEVERANCE AGREEMENT ("**Agreement**") is dated March 23, 2016 ("**Effective Date**"), and is between **R. Martin Emanuele** ("**Executive**") and **MAST THERAPEUTICS, INC.**, a Delaware corporation ("**Company**"). Each of the Company and Executive are a "**Party**" and, collectively, they are the "**Parties**." Any capitalized but undefined term in this Agreement shall have the meaning assigned to it in Section 3 of this Agreement.

The Company and Executive previously entered into an offer letter agreement dated as of March 28, 2011 (the "**Prior Agreement**"); and

The Parties acknowledge and agree that this Agreement shall replace and supersede the Prior Agreement in its entirety; and

The Parties desire to enter into this Agreement to continue to provide certain benefits to Executive in the event of Executive's separation from employment with the Company.

Accordingly, in consideration of the mutual promises and covenants contained herein, the Parties agree to the following:

1. SEVERANCE BENEFITS.

1.1 Eligibility for Severance Benefits. In the event that (a) Executive's employment has been terminated due to an Involuntary Termination or due to Executive's resignation for Good Reason, in either case, prior to or within twenty-four (24) months after the effective date of a Change in Control (such event is referred to as a "**Covered Termination**") and (b) Executive complies with the obligations described below in Section 1.3, then Executive will be eligible for the severance benefits describe below in Section 1.2, subject to the restrictions and limitations in this Agreement. If Executive's employment with the Company terminates for any reason other than a Covered Termination, then Executive will not be eligible to receive any compensation under this Agreement.

1.2 Severance Benefits. Following a Covered Termination and subject to the terms and conditions set forth in Section 1.3, Executive will be eligible for the following severance benefits:

(a) An amount payable by the Company to Executive equal to nine (9) months of Executive's base salary in effect on the Termination Date, disregarding any decrease in Executive's base salary that forms the basis for Good Reason (the "**Benefit Period**"), which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the date the Release described in Section 1.3 becomes effective and can no longer be revoked by Executive (the "**Release Effective Date**"), provided the Company has received the Release from Executive by such date;

(b) If Executive is participating in the Company's group health insurance plans on the Termination Date, an amount payable by the Company to Executive equal to the premiums necessary to continue Executive's health insurance coverage in effect for Executive and Executive's covered dependents under the Consolidated Omnibus Reconciliation Act of 1985, for a period equal to the Benefit Period, which payment will be subject to standard payroll deductions and withholdings and will be made in a lump sum within ten (10) business days following the Release Effective Date, provided the Company has received the Release from Executive by such date;

(c) Each stock option granted to Executive (individually, an "**Option**") to purchase certain shares of common stock of the Company, par value \$0.001 per share (the "**Shares**") pursuant to the Mast

Therapeutics, Inc. 2015 Omnibus Incentive Plan, as may be amended or restated from time to time, or such other equity incentive plan as may be adopted by the Board of Directors and approved by the stockholders of the Company (the "**Plan**"), regardless of whether such Option was granted before, on, or after the Effective Date, shall immediately prior to such Covered Termination (unless such Option has earlier terminated) become vested with respect to 18.75% of the total number of Shares that were subject to such Option on its date of grant; *provided, however*, that notwithstanding the increased vesting provided for in the preceding sentence, in no event shall any Option become vested and exercisable for more than the total number of Shares that were subject to such Option on its date of grant (subject to adjustment as provided in the applicable Grant Agreement);

(d) The exercise period for each Option (regardless of whether granted before, on, or after the Effective Date) shall be extended such that Executive may exercise each such Option, to the extent vested as of such Covered Termination (for clarity, after taking into account the vesting acceleration provision of paragraph (c) of this Section 1.2) and in accordance with the terms of the written agreement, contract or other instrument or document evidencing such Option (the "**Grant Agreement**"), any time after the Release Effective Date (provided that the Company has received the Release from Executive by such date) and prior to the close of business on the last calendar day of the 9th full calendar month following the date of such Covered Termination; and

(e) Notwithstanding paragraphs (c) and (d) of this Section 1.2, in the event of a Covered Termination following a Change in Control in which the successor company (or a subsidiary or parent thereof) assumed or substituted for an 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)), then (i) any such Option (regardless of whether granted before, on, or after the Effective Date) shall become fully (100%) vested; and (ii) any such Option (regardless of whether granted before, on, or after the Effective Date) may be exercised in accordance with the terms of the Grant Agreement at any time after the Release Effective Date (provided that the Company or the successor company, as applicable, has received the Release from Executive by such date) and prior to the close of business on the tenth (10th) anniversary of the date of grant of the Option.

1.3 Release and Other Conditions. Before any severance benefits will be payable to Executive or will be continued under this Agreement, Executive must satisfy all of the following conditions: (i) Executive executes and delivers to the Company and does not revoke a general release of claims in favor of the Company, its subsidiaries, affiliates, successors and assigns, and its and their directors, officers, shareholders, employees and representatives, in a form acceptable to the Company (the "**Release**"), such that the Release Effective Date occurs no later than sixty (60) days following the Termination Date; (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the Termination Date (or such other date as requested by the Company); (iii) Executive returns all Company property; (iv) Executive complies with any confidentiality, non-disclosure, non-competition, non-solicitation, trade secret, and/or assignment of inventions and other intellectual property provisions to which Executive's employment was subject; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release. The Release shall specifically relate to all of Executive's rights and claims in existence at the time of such execution. Notwithstanding Section 1.2 of this Agreement, in the event the severance benefits described in Section 1.2 are subject to the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations and other guidance thereunder and any state law of similar effect (collectively, "**Section 409A**"), and the sixty (60) day period following the Termination Date begins in one calendar year and ends in a subsequent calendar year, the severance payments will not be paid until the subsequent calendar year even if the Release Effective Date occurs in the first year.

1.4 No Other Severance. The severance benefits provided to Executive pursuant to this Agreement are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any other severance agreement between Executive and the Company, any Company severance plan, policy or program, and any individually negotiated severance provisions as part of any offer letter or employment agreement between the Company and Executive.

1.5 Effect of Statutory Benefits. To the extent that any severance benefits are required to be paid to Executive upon termination of employment with the Company as a result of any requirement of law or any governmental entity in any applicable jurisdiction, the aggregate amount of severance benefits payable pursuant to Section 1.2 shall be reduced by such amount.

1.6 **Basis of Payments.** All payments under this Agreement shall be paid by the Company. This Agreement shall be unfunded, and benefits hereunder shall be paid by the Company or the Company's successor or parent (if subsequent to a Change in Control).

1.7 **Tax Consequences - Loss of Incentive Stock Option Status.** The parties acknowledge that by amending the Options granted to Executive before the Effective Date to extend their post-termination exercise periods as set forth in Section 1.2(d) above, such Options that currently qualify as incentive stock options may no longer qualify as incentive stock options and instead may be treated as nonstatutory stock options.

1.8 **Expiration of Offer to Amend Option.** If this Agreement is not agreed to and executed by Executive on or before the earlier of (a) the date on which Executive executes the Agreement and (b) twenty-one (21) days after the Agreement is delivered to Executive, the offer to amend an Option that was granted to Executive before the Effective Date as set forth in Section 1.2(d) above shall be terminated and the provisions described therein shall not be effective.

2. **GENERAL PROVISIONS.**

2.1 **Employment Status.** This Agreement does not constitute a contract of employment or impose on Executive any obligation to remain as an employee, or impose on the Company any obligation to (a) retain Executive as an employee, (b) change the status of Executive as an at-will employee or (c) change the Company's policies regarding termination of employment.

2.2 **Notices.** Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or three (3) days after having been mailed by U.S. registered or certified mail, return receipt requested and postage prepaid. In the case of Executive, mailed notices shall be addressed to him or her at the home address that he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

2.3 **Severability.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

2.4 **Waiver.** If either Party should waive any breach of any provisions of this Agreement, Executive or the Company shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

2.5 **Complete Agreement.** This Agreement, including **Exhibit A**, constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the provisions addressing this subject matter in the Prior Agreement. With respect to the benefits provided in Sections 1.2(c) and (d) of this Agreement, the terms of this Agreement are intended to supersede the specific provisions of any Grant Agreement that may conflict with the terms hereof. For clarity, Section 1.2(d) does not supersede any provision in any Grant Agreement regarding effect on an Option to the extent a successor company (or a subsidiary or parent thereof) does not assume or substitute for an 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)). This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein.

2.6 **Amendments.** This Agreement may be amended, modified or terminated only in writing signed by the Company and Executive, except as set forth in Section 2.14(a) below. The Company may only

consent to an amendment or modification of this Agreement after such amendment or modification has been approved by the Company's Board of Directors (the "**Board**").

2.7 **Counterparts.** This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one Party, but all of which taken together will constitute one and the same Agreement.

2.8 **Headings.** The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

2.9 **Successors and Assigns.** This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign any of Executive's duties hereunder and Executive may not assign any of Executive's rights hereunder without the written consent of the Company. For all purposes under this Agreement, the term "Company" shall include any successor (or, if warranted, a subsidiary or parent of such successor) to the Company's business and/or assets which is required to assume the Company's obligations as described in this section or which becomes bound by the terms of this Agreement by operation of law.

2.10 **Choice of Law.** All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of California.

2.11 **Arbitration.** The terms and provisions of Exhibit A hereto are incorporated herein as if fully set forth herein.

2.12 **Opportunity for Independent Counsel and Advisors.** Executive acknowledges that Executive has had an opportunity to retain and consult with independent counsel and tax advisors to review this Agreement.

2.13 **Withholding and Employment Taxes.** Executive shall be responsible for any applicable taxes of any nature (including any penalties or interest that may apply to such taxes) that the Company reasonably determines apply to any payment made hereunder. Executive's receipt of any benefit hereunder is conditioned on his or her satisfaction of any applicable withholding or similar obligations that apply to such benefit, and any cash payment owed hereunder will be reduced to satisfy any such withholding or similar obligations that may apply.

2.14 **Section 409A of the Code.**

(a) The Company is offering severance to Executive in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4), and this Agreement is intended to comply with, or otherwise be exempt from, Section 409A and any regulations and Treasury guidance promulgated thereunder. The Company shall undertake to administer, interpret, and construe this Agreement in a manner that does not result in the imposition on Executive of any additional tax, penalty, or interest under Section 409A. If the Company determines in good faith that any provision of this Agreement would cause Executive to incur an additional tax, penalty, or interest under Section 409A, the Board may, without the consent of Executive amend this Agreement as may be necessary to ensure compliance with the distribution provisions of Section 409A or as otherwise needed to ensure that this Agreement complies with Section 409A. The preceding provisions, however, shall not be construed as a guarantee by the Company of any particular tax effect to Executive under this Agreement. The Company shall not be liable to Executive for any payment made under this Agreement that is determined to result in an additional tax, penalty, or interest under Section 409A, nor for reporting in good faith any payment made under this Agreement as an amount includible in gross income under Section 409A.

(b) To the extent required to avoid the imposition of additional taxes and penalties under Section 409A, amounts payable under this Agreement on account of any termination of employment shall only be paid if Executive experiences a "separation from service" as defined in Section 409A.

(c) If upon Executive's "separation from service" (within the meaning of Section 409A) with the Company, Executive is then a "specified employee" (as defined in Section 409A), then solely to the extent necessary to comply with Section 409A and avoid the imposition of taxes under Section 409A, the Company shall defer payment of "nonqualified deferred compensation" subject to Section 409A which is payable as a result of and within six (6) months following such separation from service until the earlier of: (a) the first business day of the seventh month following Executive's separation from service, or (b) ten (10) days after the Company receives written notification of such Executive's death. All such delayed payments shall be made without accrual of interest.

(d) Notwithstanding anything to the contrary contained in any other document or agreement pursuant to which Executive becomes entitled to severance payments that constitute "deferred compensation" within the meaning of Section 409A, the form and timing of such payments shall be determined based on the form and timing rules set forth in this Agreement.

3. DEFINITIONS.

For purposes of this Agreement, the following terms shall have the following meanings:

3.1 "**Cause**" shall mean (i) any act of personal dishonesty taken by Executive in connection with Executive's responsibilities as an employee which is intended to result in substantial personal enrichment of Executive; (ii) Executive's conviction of a felony that the Board reasonably believes has had or will have a material detrimental effect on the reputation or business of the Company, its parents, affiliates or subsidiaries; (iii) a willful act by Executive that constitutes misconduct and is materially injurious to the Company, its parents, affiliates or subsidiaries; (iv) any material breach by Executive of any offer letter, confidential information, non-solicitation or invention assignment agreement or other agreement by and between the Parties; or (v) continued willful violations by Executive of Executive's obligations to the Company, its parents, affiliates or subsidiaries after there has been delivered to Executive a written demand for performance from the Company that describes the basis for the Company's belief that Executive has not substantially performed Executive's duties.

3.2 "**Change in Control**" shall have the meaning ascribed to such term in the Plan. Notwithstanding the foregoing, an event is not a "Change in Control" unless it also is a "change in ownership of a corporation" or a "change in ownership of a substantial portion of a corporation's assets" under Treasury Regulation section 1.409A-3(i)(5)(v) and (vii).

3.3 "**Disability**" shall mean either (a) Executive is unable due to a physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for one hundred eighty (180) days in the aggregate during any twelve (12) month period, or (b) a determination of disability due to mental or physical impairment by Executive's medical practitioner that it is reasonably likely that an impairment exists with respect to Executive which will, with the passage of time, satisfy clause (a). This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law.

3.4 "**Involuntary Termination**" shall mean that Executive's employment is terminated by the Company without Cause; *provided, however*, that the termination of Executive's employment as a result of Executive's death or Disability shall not be deemed to be an "Involuntary Termination." For clarity, transferring employment to the acquiring, surviving or successor entity in the Change in Control or their affiliates shall not be deemed to be an "Involuntary Termination."

3.5 "**Good Reason**" shall mean: (i) without Executive's express written consent, a material reduction or alteration of Executive's duties, position or responsibilities relative to Executive's duties, position or responsibilities in effect immediately prior to such reduction or alteration, or Executive's removal from such position, duties or responsibilities; (ii) without Executive's express written consent, a material reduction by the Company of Executive's base salary as in effect immediately prior to such reduction (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); and (iii) without Executive's express written consent, the relocation of Executive's principal place of employment with the Company by more than fifty (50) miles. Notwithstanding the foregoing, "Good Reason" shall not be deemed to occur until the Company has received written notice from Executive of the occurrence of an event triggering Good Reason and

had thirty (30) days after the Company's receipt of such notice to cure or remedy such Good Reason (the "**Remedy Period**"). Any such notice provided by Executive shall indicate the specific termination provision relied upon, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination under the provision so indicated, and shall specify the effective date of Executive's "separation from service" within the meaning of Section 409A of the Code. In order to be effective, a resignation for Good Reason must occur within ten (10) business days after the end of the Remedy Period in which the Company failed to cure or remedy the Good Reason and Executive must have provided the foregoing written notice of the occurrence of a Good Reason event to the Company within ninety (90) days of Executive's awareness of the initial existence of the applicable Good Reason event.

3.6 "**Termination Date**" shall mean the effective date of a Covered Termination that constitutes a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Executive Severance Agreement on the Effective Date first written above.

MAST THERAPEUTICS, INC.

By: /s/ Brian M. Culley

Name: Brian M. Culley

Title: CEO

R. MARTIN EMANUELE

By: /s/ R. Martin Emanuele

Exhibit A

ARBITRATION

Any dispute or controversy arising out of, relating to, or in connection with this Agreement, or the interpretation, validity, construction, performance, breach, or termination thereof, shall be settled by binding arbitration to be held in the County of San Diego, State of California in accordance with the Employment Arbitration Rules and Mediation Procedures (or its successor rules) then in effect of the American Arbitration Association (the "Rules"). The arbitrator may grant injunctions or other relief in such dispute or controversy. The decision of the arbitrator shall be final, conclusive and binding on the Parties to the arbitration, and judgment may be entered on the arbitrator's decision in any court having jurisdiction.

The arbitrator(s) shall apply California law to the merits of any dispute or claim, without reference to conflicts of law rules. The arbitration proceedings shall be governed by federal arbitration law and by the Rules, without reference to state arbitration law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Executive and the Company consent to the personal jurisdiction of the state and federal courts located in California for such action or for any action or proceeding relating to any arbitration in which the Parties are participants.

Nothing in this Exhibit A modifies Executive's at-will employment status. Either Executive or the Company can terminate the employment relationship at any time, with or without Cause.

SUBMISSION OF ANY CLAIMS ARISING OUT OF, RELATING TO, OR IN CONNECTION WITH THIS AGREEMENT, OR THE INTERPRETATION, VALIDITY, CONSTRUCTION, PERFORMANCE, BREACH OR TERMINATION THEREOF TO BINDING ARBITRATION, CONSTITUTES A WAIVER OF THE PARTY'S RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF THE EMPLOYER-EMPLOYEE RELATIONSHIP, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

ANY AND ALL CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT; BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED; BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED; NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS; NEGLIGENT OR INTENTIONAL MISREPRESENTATION; NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE; AND DEFAMATION;

ANY AND ALL CLAIMS FOR VIOLATION OF ANY FEDERAL STATE OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, THE CALIFORNIA FAIR EMPLOYMENT AND HOUSING ACT, AND LABOR CODE SECTION 201, *et seq.*; and

ANY AND ALL CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.