

MAST THERAPEUTICS, INC.

CORPORATE GOVERNANCE GUIDELINES

The Board of Directors (the “Board”) of Mast Therapeutics, Inc. (the “Company”) has adopted the following Corporate Governance Guidelines (these “Guidelines”) to assist the Board in exercising its responsibilities. These Guidelines are intended to provide a framework for effective governance of the Company, with the objective of enhancing long-term stockholder value. While these Guidelines should be interpreted in the context of all applicable laws, regulations and listing requirements of the NYSE MKT, or such other securities exchange on which the Company’s securities may be listed, as well as in the context of the Company’s certificate of incorporation and bylaws, as the same may be amended or restated from time to time, they are not, subject to any contractual or other commitments of the Company, intended to establish by their own force any legally binding obligations on the Company. These Guidelines are subject to modification by the Board from time to time as it deems necessary or advisable.

BOARD COMPOSITION

1. Selection of Chair of the Board and Chief Executive Officer

The Board is free to choose its Chair in any manner that is in the best interests of the Company at the time. The roles of the Company’s Chief Executive Officer and the Chair of the Board may, but are not required to, be separate. If the Chair of the Board also serves as the Chief Executive Officer, if the Chair is otherwise not an independent director, or if the Board has not designated a Chair, the Board may designate an independent director to serve as the “Lead Independent Director,” with the specific responsibilities described in Section 9 of these Guidelines.

2. Size of the Board

The Company’s bylaws currently provide that the number of directors shall be not less than three nor more than nine, with the exact number of directors to be fixed by resolution of the Board. The Board, with the assistance of its Nominating & Governance Committee, will review its size from time to time and determine whether a larger or smaller board would be preferable to support the Company.

3. Director Selection Process

The Nominating & Governance Committee is responsible for identifying, screening and recommending to the Board qualified candidates to be nominated for election as directors at annual or special meetings of stockholders or to be appointed by the Board to fill vacancies or newly created directorships occurring between such meetings. When considering its recommendations, the Nominating & Governance Committee will take into account the advice and recommendations of other members of the Board, the Company’s Chief Executive Officer and other members of the Company’s management team. The Nominating & Governance

Committee may, at its discretion, seek third-party resources to assist in the selection and/or evaluation process.

Before nominating a sitting director for reelection at an annual meeting, the Nominating & Governance Committee will consider the director's performance on the Board and whether the director's re-election would be consistent with these Guidelines (including Section 12).

The Nominating & Governance Committee will also consider qualified candidates for director suggested by the stockholders of the Company applying the "Board Membership Criteria" set forth in Section 4 of these Guidelines and considering the additional information referred to below. Stockholders of the Company wishing to suggest a qualified candidate for review and consideration by the Nominating & Governance Committee must write to the Company's corporate secretary and include, with respect to each person whom the stockholder proposes to nominate, the following information:

- A statement that the proposing stockholder is recommending a candidate for consideration by the Nominating & Governance Committee;
- The name, age, business address and residence address of such proposed nominee;
- A statement of such proposed nominee's business experience and educational background;
- The principal occupation or employment of such proposed nominee;
- The class and number of shares of the Company that are beneficially owned by such proposed nominee;
- A detailed description of all relationships, arrangements or understandings between the proposing stockholder and each proposed nominee and any other person or persons (naming such person or persons) pursuant to which the proposed nomination is being made by proposing stockholder;
- A detailed description of all relationships, arrangements or understandings between each proposed nominee and any service-provider, supplier or competitor of the Company;
- Information regarding each of the criteria under "Board Membership Criteria" in sufficient detail to allow the Nominating & Governance Committee to evaluate such proposed nominee; and
- A statement from such proposed nominee that he or she is willing to be considered and willing to serve as a director if nominated and elected.

In addition, the proposing stockholder must include the following information with respect to such stockholder:

- Documentation supporting that the proposing stockholder is a stockholder of the Company;
- The proposing stockholder's name and address, as they appear on the Company's books; and
- The class and number of shares of the Company that are beneficially owned by the proposing stockholder.

If a stockholder of the Company submits a director recommendation in compliance with the procedure described above, the Nominating & Governance Committee will conduct an initial evaluation of the proposed nominee and, if it determines the proposed nominee may be a qualified candidate, the Nominating & Governance Committee, along with one or more members of the Company's management team, will interview the proposed nominee to determine whether he or she might be suitable to be a director. If, based on the "Board Membership Criteria" set forth in Section 4 of these Guidelines and the Board's specific needs at the time, the Nominating & Governance Committee determines the proposed nominee would be a valuable addition to the Board, it will recommend to the Board such proposed nominee's nomination. In connection with its evaluation, the Nominating & Governance Committee may request additional information from the proposed nominee and/or the proposing stockholder.

A stockholder wishing to formally nominate an individual for election to the Board or to propose other business to be conducted at an annual or special meeting of the Company's stockholders must comply with the requirements set forth in the Bylaws of the Company.

4. Board Membership Criteria

The Nominating & Governance Committee is responsible for assessing the appropriate balance of experience, skills and characteristics required of the Board.

Nominees for director shall be selected on the basis of depth and breadth of experience, wisdom, integrity, ability to make independent analytical inquiries, understanding of the Company's business environment, the willingness of the candidate to devote adequate time to Board duties, the interplay of the candidate's experience and skills with those of other Board members, and the extent to which the candidate would be a desirable addition to the Board and any Committees of the Board.

Directors are encouraged to periodically attend seminars or conferences regarding directors' legal duties, responsibilities and continuing education topics.

5. Limits on Other Board Service

No director may serve on more than a total of four boards of directors of public companies (including service on the Company's Board). Directors are also expected to limit the number of other boards, including non-profits, on which they serve in order to devote adequate time and effort to their Board responsibilities.

A director who has received an invitation to join another company's board of directors shall notify the Chair of the Board (or the Chair of the Nominating & Governance Committee if such director is the Chair of the Board) in advance of accepting such offer. The director considering such offer shall provide the Chair of the Board (or the Chair of the Nominating & Governance Committee, if applicable) such information about the company making the offer as the Chair shall request. The Chair of the Board shall consult with the Chair of the Nominating & Governance Committee and the Company's legal counsel to determine whether, in their view, it

is appropriate for the director to accept such an offer. If the director disagrees with the determination of the Chair of the Board and the Chair of the Nominating & Governance Committee that acceptance of such an offer is inappropriate, he or she may request that the full Board review their finding. Factors the Chair of the Board and the Chair of the Nominating & Governance Committee, and, if applicable, the full Board will consider in determining the appropriateness of the director accepting such an offer include the following:

- Whether the new directorship will or may lead to conflicts of interest or the appearance thereof;
- Issues related to actual or potential competition between the Company and the other company;
- Whether having the Board member accept such an offer may reflect unfavorably on the Company; and
- The total number of boards on which such director serves.

6. Election of Directors and Director Resignation Policy

In accordance with the Company's bylaws, at any meeting of stockholders at which a quorum is present and directors are to be elected, directors shall be elected by the affirmative vote of the holders of a majority of the stock having voting power present in person or represented by proxy.

To address the "holdover rule" under Delaware law, each director nominee shall submit an irrevocable, contingent resignation in writing to the Chair of the Board. Other than with respect to a contractual obligation existing prior to December 8, 2010 that may require otherwise, the Board shall nominate for re-election only those directors who tender or have previously tendered such a resignation. The resignation shall become effective only if (a) the director fails to receive a sufficient number of votes for re-election at a meeting of stockholders at which directors are to be elected and (b) the Board accepts the resignation. If a director fails to receive the required vote for re-election, the Nominating & Governance Committee, or such other committee designated by the Board pursuant to Section 4.1 of the Company's bylaws (such committee referred to herein as the "Reviewing Committee"), will act promptly to consider the director's resignation and recommend to the full Board whether to accept or reject the resignation, or whether other action should be taken. The Board expects the director whose resignation is under consideration to abstain from participating in any decision regarding that resignation. Within 90 days after the date of the certification of the election results, the Board will act on the resignation, taking into account the Reviewing Committee's recommendation, and publicly disclose its decision. The Reviewing Committee and the Board may consider any factors each deems relevant in deciding whether to accept a director's resignation.

In addition, each candidate for director nominated for election, or appointed to the Board in the case of a vacancy, pursuant to a contractual obligation of the Company shall submit an irrevocable, contingent resignation in writing to the Chair of the Board immediately prior to his or her nomination or appointment, as applicable. The Board shall nominate for re-election only those directors who tender or have previously tendered such a resignation. The resignation shall become effective only (i) upon the expiration or termination of such contractual obligation (each,

an “Obligation Termination Date”) and (ii) if the Board accepts the resignation. In connection with an Obligation Termination Date, the Reviewing Committee will consider the applicable director’s resignation and recommend to the full Board whether to accept or reject the resignation, or whether other action should be taken. The Board expects the director whose resignation is under consideration to abstain from participating in any decision regarding that resignation. Within 90 days after such Obligation Termination Date, the Board will act on the resignation, taking into account the Reviewing Committee’s recommendation, and publicly disclose its decision. The Reviewing Committee and the Board may consider any factors each deems relevant in deciding whether to accept a director’s resignation.

7. Board Independence

At least a majority of the members of the Board shall be “independent directors” in accordance with the listing standards of the NYSE MKT, or such other national securities exchange or inter-dealer quotation system on which the Company’s common stock is principally listed. No more than two management executives may serve on the Board at the same time.

In addition, at least three members of the Board shall meet the standards of independence required for service on the Audit Committee in accordance with the listing standards of the NYSE MKT, or such other national securities exchange or inter-dealer quotation system on which the Company’s common stock is listed, and any other applicable rules and regulations; provided, that if the Company is a “smaller reporting company,” as defined in Item 10(f)(1) of Regulation S-K, only two members of the Board must meet such standards, rules and regulations.

Without specific approval from the Audit Committee, no non-employee director may also serve as a consultant or service provider to the Company. The Audit Committee is responsible for determining whether the provision of such services would be in the best interests of the Company and its stockholders.

The Board, with the assistance of its Nominating & Governance Committee, will review annually the relationships that each director has with the Company and affirmatively determine whether each director is an independent director.

If a director becomes aware of a change in circumstances that the director believes may affect his or her independent status with respect to general Board service or service on a particular committee of the Board, he or she shall promptly advise the Chair of the Nominating & Governance Committee.

8. Chair of the Board

If the Chair of the Board is not also the Chief Executive Officer, the Chair shall perform the following duties in addition to those specified in the Bylaws of the Company:

- Set the agenda for the Board meetings with input from the Chief Executive Officer, the Lead Independent Director if one is designated, the Committee Chairs and the other members of the Board;
- If appropriate, participate as an observer on any of the Board Committees on which he or she is not a member;
- Discuss the results of the Chief Executive Officer's performance evaluation with the Chair of the Compensation Committee and the Lead Independent Director if one is designated;
- Convey to the Chief Executive Officer, together with the Chair of the Compensation Committee and the Lead Independent Director if one is designated, the results of the Chief Executive Officer's performance evaluation; and
- Serve as point person for stockholder communications to the Board, which communications will be directed to the Chair of the Board pursuant to the process described in Section 19 of these Guidelines.

In performing the duties described above, the Chair of the Board is expected to consult with the Chairs of the appropriate Board Committees and solicit their participation in order to avoid diluting the authority and responsibilities of such Committee Chairs.

9. Lead Independent Director

If the Chief Executive Officer is also the Chair of the Board, if the Chair of the Board is otherwise not an independent director, or if the Board has not designated a Chair, the Lead Independent Director is responsible for coordinating the activities of the independent directors. The specific responsibilities of the Lead Independent Director are as follows:

- Consult with the Chair or, if no Chair has been designated, with the Chief Executive Officer as to an appropriate schedule of Board meetings, seeking to ensure that the independent directors can perform their duties responsibly while not interfering with the flow of Company operations;
- Provide the Chair or, if no Chair has been designated, the Chief Executive Officer with input with respect to the agendas for Board meetings;
- Consult with the Chair or, if no Chair has been designated, the Chief Executive Officer as to the quality, quantity and timeliness of the flow of information from Company management that is necessary for the independent directors to effectively and responsibly perform their duties;
- Consult with the Chair or, if no Chair has been designated, the Chief Executive Officer regarding the retention of consultants who report directly to the Board;
- Serve as the point person regarding the retention of any consultants who report directly to the Board's independent directors;

- Coordinate and develop the agenda for and moderate executive sessions of the Board's independent directors;
- Act as principal liaison between the independent directors and the Chair or, if no Chair has been designated, the Chief Executive Officer on sensitive issues; and
- Perform such other duties as may be established or delegated by the Board.

10. Retirement from the Board

The Board believes that 75 is an appropriate retirement age for directors. Directors generally will not be nominated for re-election to the Board at any annual or special meeting of stockholders held after their 75th birthday.

11. Directors Who Change Their Present Job Responsibility

Each executive officer of the Company, who serves on the Board, will submit his or her resignation to the Board at the time such officer ceases to be an executive officer of the Company, which resignation will be subject to acceptance. The Nominating & Governance Committee will consider the offer of resignation and all relevant circumstances and will recommend to the Board the action to be taken. The Board shall then act promptly with respect to any such letter of resignation and shall promptly notify the executive officer concerning its decision regarding whether or not to accept such resignation.

Non-employee directors who cease to be actively employed in his or her principal business or profession or experience other changed circumstances that could diminish his or her effectiveness as a Board member, pose a conflict of interest or otherwise be detrimental to the Company do not necessarily have to leave the Board, but must notify the Nominating & Governance Committee of such changes. Upon being notified of any such changes in position, the Nominating & Governance Committee will review the appropriateness of continued Board membership under the circumstances and the affected director will be expected to act in accordance with the Nominating & Governance Committee's recommendation.

12. Term Limits

The Board has not established term limits for Board members. In connection with each director nomination recommendation, the Nominating & Governance Committee will consider the issue of continuing director tenure and take appropriate steps to ensure that the Board maintains an openness to new ideas and a willingness to critically re-examine the status quo. An individual director's re-nomination is dependent upon such director's performance as evaluated by the Nominating & Governance Committee. The Nominating & Governance Committee will conduct a suitability review near the end of each director's term.

13. Board Compensation

A director who is also an employee of the Company shall not receive additional compensation for service as a director.

Compensation for non-employee directors should allow the Company to recruit and retain qualified directors with the background and skills necessary for membership on the Board. The Compensation Committee will periodically review and evaluate the compensation of all non-employee directors for their service on the Board and its committees and make recommendations to the Board regarding the amount, form and terms of such compensation. Director fees are the only form of compensation that an Audit Committee member may receive from the Company.

FUNCTIONING OF THE BOARD

14. Frequency of Meetings

There will be at least quarterly regularly scheduled meetings of the Board each year. At least one of these meetings will include budgeting, intermediate and long-term goals and objectives of the Company and management succession.

Each director is expected to attend no fewer than 75 percent of all Board meetings and 75% of all meetings of committees on which he or she serves.

Unless required by illness or other extenuating circumstances, each director is expected to participate at regular, in-person Board and committee meetings in person.

Each newly-elected director is expected to attend an orientation program and/or review orientation materials designed to inform them, among other things, about the Company, the duties and responsibilities of a director and the functions and operations of the Board and its committees.

15. Regularly Scheduled Executive Sessions

The independent directors will meet on a regular basis as often as necessary to fulfill their responsibilities, including at least annually in executive session without the presence of non-independent directors and management.

16. Selection of Agenda Items for Board Meetings; Meeting Materials

The Chair of the Board, the Lead Independent Director if one is designated, and the Chief Executive Officer shall annually prepare a "Board of Directors Master Agenda." This Master Agenda shall set forth a general agenda of items to be considered by the Board at each of its regularly scheduled meetings during the year. A copy of the Master Agenda shall be provided to the entire Board before the first meeting of each calendar year. Thereafter, the Chair of the Board and the Chief Executive Officer, in consultation with the Lead Independent Director if one is designated, may adjust the Master Agenda and/or individual meeting agendas from time to time, as deemed necessary or advisable.

In advance of each Board meeting, an agenda for such meeting will be sent to each director together with written materials pertaining to the matters to be presented for Board

discussion at such meeting. In addition, before each regularly scheduled Board meeting, draft minutes of the most recent Board meeting and of any committee meetings held since the distribution of materials for the most recent Board meeting will be sent to each director. Also, at such regularly scheduled Board or audit committee meetings where quarterly financial performance of the Company is to be discussed, summary financial information needed to understand the performance of the Company will be sent to each director or member of the audit committee, as applicable. Written materials should be designed to provide a foundation for discussion of key issues at the meeting and allow the Board to make the most efficient use of its meeting time. Each director is expected to review and understand the materials provided in advance of meetings and any other materials provided to the Board from time to time. Each Board member shall be free to suggest additional agenda items for a Board meeting or to raise at any Board meeting subjects that are not specifically on the agenda for consideration at subsequent meetings.

17. Board Evaluation

The Board, each of its standing committees and each individual Board member shall conduct an annual self-evaluation of their respective performance. The Nominating & Governance Committee is responsible for establishing the evaluation criteria and overseeing the evaluation process with periodic input from the Board regarding the scope and goals of such evaluations.

18. Board Contact with Senior Management

Board members shall have direct access to management. Board members shall use sound business judgment to ensure that such contact does not distract management from performing its duties.

Furthermore, the Board encourages the Chief Executive Officer, from time to time, to bring managers into Board meetings who: (a) can provide additional insight concerning the items being discussed because of personal involvement in these areas, and/or (b) represent managers with future potential that the Chief Executive Officer believes should be given exposure to the Board.

19. Board Interaction with Stockholders, Press and Customers

Management speaks for the Company. Directors shall refer all inquiries from institutional investors or other stockholders, the press or customers to the Chief Executive Officer. If any stockholder of the Company wishes to address questions regarding the business affairs of the Company directly to the Board, or any individual director, the stockholder will submit the inquiry in writing to:

Mast Therapeutics, Inc.
Attn: Investor Relations
3611 Valley Centre Drive, Suite 500
San Diego, CA 92130

Stockholders of the Company should indicate they are a stockholder of the Company. Depending on the subject matter, investor relations will (alone or in concert with other personnel of the Company, as appropriate):

- Forward the inquiry to the Chair of the Board (or, in no Chair has been designated, the Lead Independent Director), who may forward the inquiry to a particular director if the inquiry is directed towards a particular director;
- Forward the inquiry to the appropriate personnel within the Company; for instance, if it is primarily commercial in nature;
- Attempt to handle the inquiry directly; for instance, if it is a request for information about the Company or a stock-related matter; or
- Not forward the inquiry, if it relates to an improper or inappropriate topic or is otherwise irrelevant.

20. Board Access to Independent Advisors

The Board has complete authority to retain and terminate such independent consultants, counselors or advisors to the Board as it shall deem necessary or appropriate, at the expense of the Company, including determining the fees and other terms of such retentions or terminations.

21. Confidentiality

Pursuant to their fiduciary duties of loyalty and care, directors shall protect and hold confidential all non-public information obtained due to their directorship position and use all such information solely for the benefit of the Company, absent authorization by the Board to disclose such information or use it in a contrary manner. Accordingly,

- no director shall disclose Confidential Information outside the Company, either during or after his or her service as a director of the Company, except with the authorization of the Board or as may be otherwise required by law; and
- no director shall use Confidential Information for his or her own personal benefit or to benefit persons or entities outside the Company, except with the authorization of the Board.

“Confidential Information” is all non-public information entrusted to or obtained by a director by reason of his or her position as a director of the Company. It includes, but is not limited to, non-public information that might be of use to competitors or harmful to the Company if disclosed, such as:

- non-public information about the Company’s financial condition, prospects or plans, stock splits and dividends, its research and development programs, its regulatory strategies and its marketing and sales strategies and programs;

- non-public information concerning possible transactions with other parties, including mergers, acquisitions, divestitures, licensing and partnering transactions;
- non-public information about the Company’s customers, suppliers or strategic partners that the Company is under an obligation to maintain as confidential; and
- non-public information about discussions and deliberations relating to business issues and decisions, including those between and among employees, officers and directors and including a directors’ opinions and comments made during Board discussions and deliberations.

COMMITTEE MATTERS

22. Number and Names of Board Committees

The Company shall have three standing committees: Audit, Compensation and Nominating & Governance. The duties of these committees shall be set forth in charters approved by the Board or in a resolution of the Board or the Bylaws of the Company. The Board may consider or form a new committee or disband a current committee depending on circumstances and good business practices.

23. Independence of Board Committees

Each of the Audit Committee, the Compensation Committee and the Nominating & Governance Committee shall be chaired by independent directors and composed entirely of independent directors, except in certain exceptional and limited circumstances as may be permitted under the listing standards of the NYSE MKT, or such other national securities exchange or inter-dealer quotation system on which the Company’s common stock is listed.

In addition, audit committee members (i) may not accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the Company and (ii) may not own or control 9.9% or more of the Company’s voting securities. In addition, at least one of the audit committee members will be an “audit committee financial expert.”

In addition, compensation committee members must (i) meet the requirements of a “non-employee director” as defined in Rule 16b-3 promulgated under the Securities Exchange Act of 1934 and (ii) to the extent the Board has members meeting such qualifications, at least two members of the Committee will be an “outside director” under the rules promulgated under Section 162(m) of the Internal Revenue Code of 1986.

24. Assignment and Rotation of Committee Members

The Nominating & Governance Committee shall be responsible, after consultation with the Chief Executive Officer and, if the Chief Executive Officer is not also the Chair of the Board, the Chair of the Board for making recommendations to the Board with respect to the assignment

of Board members to various committees. After reviewing the Nominating & Governance Committee's recommendations, the Board shall be responsible for appointing the Chairs and members to the committees.

The Nominating & Governance Committee shall review Committee assignments annually and shall consider the rotation of Chairs and members with a view toward balancing the benefits derived from the diversity of experience and viewpoints of the various directors.

25. Codes of Ethics and Conduct.

The Nominating & Governance Committee shall cause to be prepared and recommend to the Board the adoption of appropriate codes of ethics and/or conduct and review and recommend changes from time to time.

26. Evaluation of Chief Executive Officer and Other Officers

The Board shall review and approve corporate goals and objectives relevant to the Chief Executive Officer's compensation, evaluate the Chief Executive Officer's performance in light of these goals and objectives based upon recommendations from the Compensation Committee, and determine the Chief Executive Officer's compensation based on its evaluation and the Compensation Committee's recommendations. The Chief Executive Officer shall make a presentation to the Board or furnish a written report to the Board indicating his/her progress against any such established performance criteria. The results of the Board's review and evaluation shall be communicated to the Chief Executive Officer by the Chair of the Board or the Chair of the Compensation Committee. Compensation for all other officers shall be determined by the Board based upon recommendations from the Chief Executive Officer and the Compensation Committee.

27. Succession Planning

The Board, with the assistance of its Nominating & Governance Committee, will work on a periodic basis with the Chief Executive Officer to evaluate the Company's succession plans upon the Chief Executive Officer's retirement and in the event of unexpected occurrences.

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Last amended: June 11, 2015