

BIOSTAGE, INC.

COMPENSATION COMMITTEE CHARTER

I. General Statement of Purpose

The Compensation Committee of the Board of Directors (the “Compensation Committee”) of Biostage, Inc. (the “Company”), on behalf of the Board of Directors (the “Board”), discharges the Board’s responsibilities relating to compensation of the Company’s directors and executives, oversees the Company’s overall compensation structure, policies and programs, reviews the Company’s processes and procedures for the consideration and determination of director and executive compensation, and is responsible for producing the Compensation Committee report required by the Securities and Exchange Commission (the “SEC”) for inclusion in the Company’s proxy statement relating to its annual meeting of stockholders or annual report on Form 10-K, in accordance with applicable rules and regulations. The primary objective of the Compensation Committee is to develop and implement compensation policies and plans that are appropriate for the Company in light of all relevant circumstances and which provide incentives that further the Company’s long-term strategic plan and are consistent with the culture of the Company and the overall goal of enhancing enduring stockholder value.

II. Compensation Committee Composition

Except as otherwise permitted by the applicable rules of the NASDAQ Listing Rules, the number of individuals serving on the Compensation Committee shall be fixed by the Board from time to time but shall consist of no fewer than two members, each of whom shall satisfy the independence standards established pursuant to Rule 5605(a)(2) of the NASDAQ Listing Rules; provided, however, that an individual who does not meet such independence standards may serve on the Compensation Committee if (i) there are at least three members of the Compensation Committee, (ii) the Board, under exceptional and limited circumstances, determines that such individual’s membership on the committee is required by the best interests of the Company and its stockholders, and (iii) the Board discloses in the next annual meeting proxy statement (or, if no proxy statement is filed, in the Company’s Form 10-K) following such determination, the nature of the relationship, and the reasons for the determination. A member appointed under this exception may not serve longer than 2 years. In determining the members of the Compensation Committee, the Board will consider whether the members qualify as, and are expected to continue to qualify as, “non-employee directors” as defined in Rule 16b-3 under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), and “outside directors” as defined in Section 162(m) of Internal Revenue Code of 1986, as amended. The Board must also consider whether a member is affiliated with the Company, a subsidiary of the Company or an affiliate of a subsidiary of the Company to determine whether such affiliation would impair the member’s judgment as a member of the Compensation Committee.

The members of the Compensation Committee shall be appointed annually by the Board and may be replaced or removed by the Board at any time with or without cause. Resignation or removal of a Director from the Board, for whatever reason, shall automatically constitute resignation or removal, as applicable, from this committee. Vacancies occurring, for whatever reason, may be filled by the Board. The Board shall designate one member of the Compensation Committee to serve as Chairman of the Compensation Committee.

III. Meetings

The Compensation Committee generally is to meet at least one time per year in person or by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, with any additional meetings as deemed necessary by the Compensation Committee. A majority of the members of the Compensation Committee shall constitute a quorum for purposes of holding a meeting and the Compensation Committee may act by a vote of a majority of members present at such meeting. In lieu of a meeting, the Compensation Committee may act by unanimous written consent.

IV. Compensation Committee Activities

The Compensation Committee's purpose and responsibilities shall be to:

A. Review of Charter and Self-Evaluation

- Review and reassess the adequacy of this Charter as deemed necessary or appropriate and submit any proposed changes to the Board for approval.
- Conduct an annual self-evaluation of its performance, including its effectiveness and compliance with this Charter.

B. Processes and Procedures for Considering and Determining Executive Compensation

- Review and reassess periodically (and where appropriate, make such recommendations to the Board as the Compensation Committee deems advisable with regard to) the Company's processes and procedures for the consideration and determination of executive compensation, and review and discuss with management any description of such processes and procedures to be included in the Company's proxy statement.

C. Compensation Committee Report and Compensation Discussion and Analysis

- Review and discuss with management the Compensation Discussion and Analysis to be included in the Company's proxy statement or annual report on Form 10-K (the "CD&A").
- Based on the Compensation Committee's review and discussions with management of the CD&A, make a recommendation to the Board as to whether the CD&A should be included in the Company's proxy statement or annual report on Form 10-K.
- The Compensation Committee shall prepare the Compensation Committee report required by Item 407(e)(5) of Regulation S-K (or any successor provision) promulgated by the SEC to be included in the Company's proxy statement relating to its annual meeting of stockholders or annual report on Form 10-K filed with the SEC.

D. Recommendations Regarding Incentive-Compensation Plans and Equity-Based Plans

- Review as deemed necessary or appropriate and make such recommendations to the Board as the Compensation Committee deems advisable with regard to all equity-based plans. Review and approve, as deemed necessary or appropriate, any incentive-based compensation plans. Incentive-based compensation plans are defined as Company bonus plans. It does not include sales commission or similar compensation plans.
- Review and approve grants and awards under all incentive-based compensation plans and equity-based plans (other than to non-employee directors) and ensure that incentive compensation arrangements do not encourage unnecessary risk-taking unless the Compensation Committee deems it advisable for the Board to approve any such grants or awards. The Compensation Committee shall make recommendations to the Board with respect to grants and awards to non-employee directors or other grants and awards that it deems advisable for the Board to approve.

E. Matters Related to Compensation of the Company's Chief Executive Officer

- Review and approve the corporate, individual and organizational objectives that may be relevant to the compensation of the Company's Chief Executive Officer ("CEO").
- Evaluate the CEO's performance in light of the goals and objectives that were set for the CEO and determine the CEO's compensation based on such

evaluation. In connection with determining the long-term incentive component of the CEO's compensation, the Compensation Committee should consider the Company's performance and relative stockholder return, the value of similar incentive awards to CEOs at comparable companies and the awards given to the Company's CEO in past years.

- The Company's Chief Executive Officer may not be present during voting or deliberation concerning his or her compensation.

F. Matters Related to Compensation of the Officers Other Than the Chief Executive Officer

- Review the recommendations of the Company's Chief Executive Officer and determine the compensation of the other officers of the Company for the purposes hereof the term "officer" has the meaning defined in Section 16 of the Exchange Act and Rule 16a-1 promulgated thereunder.

G. Matters Related to Compensation of the Company's Non-Employee Directors

- Annually review the recommendations of the Company's Chief Executive Officer and make recommendations to the Board with respect to the compensation of all non-employee directors, including with respect to awards under all incentive-based compensation plans and equity-based plans.

H. Matters Related to Committee Advisers and Compensation Adviser Independence Evaluation

- The Compensation Committee will have sole authority to retain at the Company's expense and terminate any compensation consulting firm, legal counsel or other advisers to the Compensation Committee and to approve the related fees and other retention terms. The Compensation Committee will have sole authority to approve the engagement of any such consultant or its affiliates for additional services to the Company, including the purchase of any products from such consultant or its affiliates.
- The Compensation Committee may select a compensation consultant, legal counsel or other adviser only after taking into consideration the following six factors, as well as any other factors required by applicable exchanges and/or the Exchange Act and corresponding rules that may be amended from time to time: (i) the provision of other services to the Company by the person that employs the compensation consultant, legal counsel or other adviser; (ii) the amount of fees received from the legal issuer by the person that employs the compensation consultant, legal counsel or other adviser, as a percentage of the

total revenue of the person that employs the compensation consultant, legal counsel or other adviser; (iii) the policies and procedures of the person that employs the compensation consultant, legal counsel or other adviser that are designed to prevent conflicts of interest; (iv) any business or personal relationship of the compensation consultant, legal counsel or other adviser with a member of the Compensation Committee; (v) any stock of the Company owned by the compensation consultant, legal counsel or other adviser; and (vi) any business or personal relationship of the compensation consultant, legal counsel, other adviser or the person employing the adviser with an executive officer of the Company.

V. General

- The Compensation Committee may establish and delegate authority to one or more subcommittees consisting of one or more of its members, when the Compensation Committee deems it appropriate to do so in order to carry out its responsibilities.
- The members of the Compensation Committee may not accept directly or indirectly any consulting, advisory or other compensatory fee, other than for Board service, from the Company or any subsidiary thereof.
- In carrying out its responsibilities, the Compensation Committee shall be entitled to rely upon advice and information that it receives in its discussions and communications with management and such experts, advisors and professionals with whom the Compensation Committee may consult. The Compensation Committee shall have the authority to request that any officer or employee of the Company, the Company's outside legal counsel, the Company's independent auditor or any other professional retained by the Company to render advice to the Company attend a meeting of the Compensation Committee or meet with any members of or advisors to the Compensation Committee. The Compensation Committee shall also have the authority to engage legal, accounting or other advisors to provide it with advice and information in connection with carrying out its responsibilities and shall have sole authority to approve any such advisor's fees and other retention terms.
- The Compensation Committee may perform such other functions as may be requested by the Board from time to time.

ADOPTED BY THE BOARD OF DIRECTORS: March 15, 2016

EFFECTIVE DATE: March 15, 2016

AMENDMENT APPROVED BY THE BOARD OF DIRECTORS ON MARCH 28, 2016