

BICYCLE THERAPEUTICS PLC

Compensation Committee Charter

I. General Statement of Purpose

The Compensation Committee of the Board of Directors (the “**Compensation Committee**”) of Bicycle Therapeutics plc (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 a report for inclusion in the Company’s proxy statement relating to its annual meeting of shareholders or annual report on Form 10-K, in each case as applicable, in accordance with applicable rules and regulations. The primary objective of the Compensation Committee is to develop and implement compensation policies and plans that ensure the attraction and retention of key management personnel, the motivation of management to achieve the Company’s corporate goals and strategies, and the alignment of the interests of management with the long-term interests of the Company’s shareholders.

II. Compensation Committee Composition

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 three members, each of whom shall satisfy the independence standards established pursuant to Rule 5605(a)(2) and Rule 5605(d)(2) of the Nasdaq Stock Market Rules, subject to any applicable exceptions contained in the Nasdaq Stock Market Rules. In determining the members of the Compensation Committee, the Board will consider whether the members qualify as “non-employee directors” as defined in Rule 16b-3 under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

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 the Compensation 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 Chair of the Compensation Committee.

III. Meetings

The Compensation Committee shall meet as often as it determines is appropriate to carry out its responsibilities, which meetings may be in person or by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. 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. The Chair of the Compensation Committee, in consultation with the other members and management, may set meeting agendas

consistent with this Charter. Unless otherwise determined by the Compensation Committee, the Secretary of the Company may attend meetings of the Compensation Committee and take the minutes of the meeting.

IV. Compensation Committee Activities

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

A. Review of Charter

- Review and reassess the adequacy of this Charter annually and submit any proposed changes to the Board for approval.

B. Processes and Procedures for Considering and Determining Director and Executive Officer 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 director and executive officer 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 Reports

- Review and discuss with management any Compensation Discussion and Analysis to be included in the Company's proxy statement or annual report on Form 10-K ("CD&A"), if and when required, in accordance with the applicable rules and regulations of the Securities and Exchange Commission.
- Based on the Compensation Committee's review and discussions with management of the CD&A, make a recommendation to the Board that the CD&A, if and when required, be included in the Company's proxy statement or annual report on Form 10-K, in accordance with the applicable rules and regulations of the Securities and Exchange Commission.
- Prepare the Compensation Committee Report to be included in the Company's proxy statement or annual report on Form 10-K, if and when required, in accordance with the applicable rules and regulations of the Securities and Exchange Commission, any securities exchange on which the Company's securities are traded, and any other rules and regulations applicable to the Company.
- Prepare any report on compensation required under the laws of the UK, including the preparation of the directors' compensation report which report shall accompany the Company's UK annual report and accounts and contain such information as is required to comply with the UK Companies Act 2006.

The directors' compensation policy, as set out in the UK annual report and accounts shall be put to the shareholders for their approval at the Company's annual general meeting at least every three years, and in the event of a change to the policy, at the next possible annual general meeting.

D. Performance Evaluation of the Compensation Committee

- Perform periodic performance evaluations of the Compensation Committee and report to the Board on the results of such evaluation.

E. Incentive-Compensation and Equity-Based Plans

- Review and approve grants and awards under incentive-based compensation plans and equity-based plans, in each case consistent with the terms of such plans.
- Review and make such recommendations to the Board as the Compensation Committee deems advisable with regard to policies and procedures for the grant of equity-based awards by the Company.
- Administer the Company's incentive-based and equity-based compensation plans, including amending and interpreting such plans and the awards and agreements issued pursuant thereto. Review and approve or, where subject to shareholder approval as required by law or stock exchange requirements, make such recommendations to the Board as the Compensation Committee deems advisable, the adoption or amendment of any incentive, equity-based and other compensatory plans of the Company.

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

- Review and approve the corporate goals and 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 recommend to the Board the CEO's compensation based on such evaluation.
- The CEO may not be present during voting or deliberations concerning his or her compensation.

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

- Review and approve the proposed compensation for all Officers of the Company other than the CEO; for purposes hereof the term "Officer" shall mean any officer at C-level, any "officer" as defined in Section 16 of the Exchange Act and Rule 16a-1 promulgated thereunder or any "executive officer" as defined in Rule 3b-7 under the Exchange Act.

V. Additional Compensation Committee Authority

The Compensation Committee is authorized, on behalf of the Board, to do any of the following, as the Compensation Committee deems necessary or appropriate in its discretion:

A. Matters Related to Compensation of the Company's Directors and Members of Senior Management

- Review and make such recommendations to the Board as the Compensation Committee deems advisable with regard to the compensation of the directors of the Company, including with respect to any equity-based plans.
- Provide oversight of management's decisions regarding the compensation of all members of senior management of the Company (other than the CEO and other Officers described above), including with respect to any cash incentive-compensation plans.

B. Matters Related to Compensation Consulting Firms or Other Outside Advisors

- Retain or obtain the advice of compensation consultants, legal counsel and/or other advisers; provided that:
- The Compensation Committee is authorized to, and must, have direct responsibility for the appointment, compensation and oversight of the work of any compensation consultant, legal counsel or other adviser retained by the Compensation Committee and the Company must provide for appropriate funding, as determined by the Compensation Committee, for payment of reasonable compensation to any such compensation consultant, legal counsel or other adviser; and
- Before any compensation consultant, legal counsel or other adviser (other than (1) in-house legal counsel or (2) any compensation consultant, legal counsel or other adviser whose role is limited to the following activities for which no disclosure would be required under Item 407(e)(3)(iii) of Regulation S-K: (i) consulting on any broad-based plan that does not discriminate in scope, terms, or operation, in favor of executive officers or directors of the Company, and that is available generally to all salaried employees or (ii) providing information that either is not customized for a particular company or that is customized based on parameters that are not developed by the compensation consultant, legal counsel or other adviser and about which the compensation consultant, legal counsel or other adviser does not provide advice) is selected by, or provides advice to, the Compensation Committee, the Compensation Committee shall take into consideration the following factors:
 - The provision of other services to the Company by the person that employs the compensation consultant, legal counsel or other adviser;

- The amount of fees received from the Company 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;
- 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;
- Any business or personal relationship of the compensation consultant, legal counsel or other adviser with a member of the Compensation Committee;
- Any stock of the Company owned by the compensation consultant, legal counsel or other adviser; and • 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.
- Prohibit the Company from engaging a compensation consultant engaged by the Compensation Committee, or an affiliate of any such compensation consultant, to provide any other services to the Company without the approval of the Compensation Committee.

C. Succession Planning

- Review and discuss with the Board corporate succession plans for the CEO and other key officers of the Company.

VI. 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 Compensation Committee shall make regular reports to the Board concerning areas of the Compensation Committee's responsibility.
- 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 may perform such other functions as may be requested by the Board from time to time.
- The Compensation Committee shall perform all its duties on the basis of the considerations required to be taken into account by the rules of any stock exchange on which the Company's securities are then listed, all applicable codes of practice and laws and the Compensation Committee's view of good practice at the relevant time. In addition, while carrying out its duties, the Compensation Committee shall have due regard to their duties as directors under the Companies Act 2006 and, where appropriate, the UK Corporate Governance Code.

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Adopted April 25, 2019, subject to effectiveness of the Company's Registration Statement on Form S-1.