

Q32 BIO INC. COMPENSATION COMMITTEE CHARTER

A. PURPOSE

The purpose of the Compensation Committee of the Board of Directors (the “*Board*”) of Q32 Bio Inc. (the “*Company*”) is to, among other things, oversee the discharge of the responsibilities of the Board relating to compensation of the Company’s executive officers.

B. STRUCTURE AND MEMBERSHIP

1. Number. The Compensation Committee shall consist of at least two members of the Board.

2. Independence. Except as otherwise permitted by the applicable Nasdaq rules, each member of the Compensation Committee shall be an “independent director” as defined by Nasdaq Rule 5605(a)(2) and otherwise meet the applicable criteria for independence set forth in Rule 5605(d)(2) of the Nasdaq rules.

3. Chair. Unless the Board elects a Chair of the Compensation Committee, the Compensation Committee shall elect a Chair by majority vote.

4. Compensation. The compensation of Compensation Committee members shall be as determined by the Board.

5. Selection and Removal. Members of the Compensation Committee shall be appointed by the Board. The Board may remove members of the Compensation Committee from such committee, with or without cause.

C. AUTHORITY AND RESPONSIBILITIES

General

The Compensation Committee shall discharge its responsibilities, and shall assess the information provided to it by the Company’s management and others, in accordance with its business judgment.

Compensation Matters

1. Executive Officer Compensation. The Compensation Committee shall review and approve, or recommend for approval by the Board, the compensation of the Company’s Chief Executive Officer (the “*CEO*”) and the Company’s other executive officers, including salary, bonus and incentive compensation levels; deferred compensation; executive perquisites; equity compensation (including awards to induce employment); severance arrangements; change-in-control benefits, and other forms of executive officer compensation. The Compensation Committee shall meet without the presence of executive officers when approving or deliberating

on CEO compensation but may, in its discretion, invite the CEO to be present during the approval of, or deliberations with respect to, other executive officer compensation.

2. Plan Recommendations and Approvals. The Compensation Committee shall periodically review and approve new compensation and employee benefit plans that are not subject to stockholder approval or approval by the Board, review and approve changes to existing compensation and employee benefit plans to the extent stockholder or Board approval of such changes is not required, make recommendations to the Board with respect to the Company's incentive compensation plans and equity-based plans subject to stockholder or Board approval, oversee the activities of the individuals and committees responsible for overseeing the Company's compensation and employee benefit plans and discharge any responsibilities imposed on the Compensation Committee by any of these plans.

3. Administration of Equity-Based Plans. The Compensation Committee shall exercise all rights, authority and functions of the Board under all of the Company's stock option, stock incentive, employee stock purchase and other equity-based plans, including without limitation, the authority to interpret the terms thereof and to grant options and make stock and other equity-based awards thereunder, except to the extent the terms of any such plan require administration by the full Board. To the extent permitted by and consistent with applicable law and the provisions of a given equity-based plan, the Compensation Committee may delegate to one or more executive officers of the Company the power to grant options or other stock or other equity-based awards pursuant to such equity-based plan to employees of the Company or any subsidiary of the Company who are not officers (as defined in Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended (the "*Exchange Act*")) or directors of the Company. The Compensation Committee shall approve, or recommend for approval by the Board, any inducement awards to be granted in reliance on the exemption from stockholder approval contained in Nasdaq Rule 5635(c)(4).

4. Director Compensation. The Compensation Committee shall periodically review and make recommendations to the Board with respect to director compensation.

5. Review and Discussion of Compensation Discussion and Analysis; Recommendation to Board. To the extent that the Company is required to include the "Compensation Discussion and Analysis" required by Item 402(b) of Regulation S-K ("*CD&A*") in the Company's Annual Report on Form 10-K, proxy statement on Schedule 14A or information statement on Schedule 14C (collectively, the "*Proxy Documents*"), the Compensation Committee shall review and discuss with management the Company's CD&A and shall consider whether it will recommend to the Board that the Company's CD&A be included in the Proxy Documents.

6. Compensation Committee Report. If required, the Compensation Committee shall prepare the annual Compensation Committee Report pursuant to Item 407(e)(5) of Regulation S-K.

7. Succession Planning. The Compensation Committee will periodically work with the Chief Executive Officer to evaluate the Company's succession plans for the Chief Executive Officer and other executive officers, including an emergency succession plan for the Chief Executive Officer.

8. Compensation Consultants, Counsel and Other Advisors. The Compensation Committee shall have the authority, in its sole discretion, to retain or obtain the advice of such compensation consultants, legal counsel and other advisors as the Compensation Committee deems necessary or appropriate to carry out its responsibilities. In connection with retaining or obtaining the advice of such consultants, counsel and advisors, other than in-house legal counsel, the Compensation Committee shall take into consideration the factors affecting independence required by applicable laws, Securities and Exchange Commission rules and Nasdaq rules. The Compensation Committee shall be directly responsible for the appointment, compensation and oversight of the work of any consultants, counsel and advisors that it retains. The Compensation Committee is empowered, without further action by the Board, to cause the Company to pay the compensation of such consultants, counsel and advisors as established by the Compensation Committee.

9. Human Capital Management. The Compensation Committee will oversee and periodically review matters relating to the Company's human capital management, including the attraction, engagement, development and retention of employees, as well as the Company's key human capital policies and practices, including with respect to diversity, equity, and inclusion, workplace culture, and equitable pay practices.

10. Additional Duties. In addition to the duties and responsibilities expressly delegated to the Compensation Committee in this Charter, the Compensation Committee may exercise any other powers and carry out any other responsibilities consistent with this Charter, the purposes of the Compensation Committee, the Company's bylaws and applicable Nasdaq rules.

D. PROCEDURES AND ADMINISTRATION

1. Meetings. The Compensation Committee shall meet as often as it deems necessary in order to perform its responsibilities. The Compensation Committee may also act by unanimous written consent in lieu of a meeting. The Compensation Committee shall keep such records of its meetings as it shall deem appropriate.

2. Subcommittees. The Compensation Committee may form and delegate authority to one or more subcommittees as it deems appropriate from time to time under the circumstances (including (a) a subcommittee consisting of a single member and (b) a subcommittee consisting of at least two members, each of whom qualifies as a "non-employee director," as such term is defined from time to time in Rule 16b-3 promulgated under the Exchange Act , and the rules and regulations thereunder.

3. Reports to Board. The Compensation Committee shall report regularly to the Board.

4. Charter. The Compensation Committee shall annually review and reassess the adequacy of this Charter and recommend any proposed changes to the Board for approval.

5. Investigations. The Compensation Committee shall have the authority to conduct or authorize investigations into any matters within the scope of its responsibilities as it shall deem appropriate, including the authority to request any officer, employee or advisor of the Company to meet with the Compensation Committee or any advisors engaged by the Compensation Committee.

6. Self-Evaluation. The Compensation Committee shall periodically evaluate its own performance.

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