MATINAS BIOPHARMA HOLDINGS, INC.

AUDIT COMMITTEE CHARTER

February 2014

I. Purpose

The purpose of the Audit Committee (the "Committee") is to assist the Board of Directors (the "Board") of Matinas BioPharma Holdings, Inc. (the "Company") in fulfilling its responsibility to oversee (a) the integrity of the Company's financial statements, the Company's accounting and financial reporting processes and financial statement audits, (b) the Company's compliance with legal and regulatory requirements, (c) the Company's systems of internal control over financial reporting and disclosure controls and procedures, (d) the independent auditor's engagement, qualifications, performance, compensation and independence, (e) review and approval of related party transactions in accordance with the Policy and Procedures for Related Party Transactions and (f) compliance with the Company's Code of Business Conduct and Ethics and the Audit Committee Procedures for Reporting Potential Wrongdoing.

II. Composition

The Committee shall be composed of three (3) or more non-employee directors, as determined by the Board. Upon listing of the Company's securities on a national securities exchange, each member shall satisfy the independence standards set forth in the NASDAQ listing rules or the applicable listing rules of the Company's principal exchange or quotation service on which the Company's securities are then listed (the "Principal Exchange") and the independence required set forth in the applicable rules of the Securities and Exchange Commission (the "SEC").

The Committee shall endeavor to include at least one member who qualifies as an "audit committee financial expert" for purposes of Item 401(d)(5) of Regulation S-K. At a minimum, at least one member of the Committee will have accounting or related financial management expertise, as the Board interprets such qualification in its business judgment.

III. Responsibilities

Within the scope of the role of the Committee described above, the Committee is charged by the Board with the responsibility to:

• Appoint, (and recommend that the Board submit for shareholder ratification, if applicable), compensate, retain and oversee the work performed by the independent auditor retained for the purpose of preparing or issuing an audit report or performing other audit or audit-related services. The Committee will review the performance and independence of the independent auditor and remove the independent auditor, if circumstances warrant. The independent auditor shall report directly to the Committee and the Committee will oversee the resolution of any disagreements between management and the independent auditor, if any disagreements arise.

- The Committee must pre-approve all audit, review, and non-audit services (including any internal control-related services) to be provided to the Company or its subsidiaries by the independent auditor. The Committee may establish pre-approval policies and procedures in compliance with applicable SEC rules.
- Obtain and review at least annually a formal written report from the independent auditor delineating: (a) the auditor's internal quality-control procedures; (b) any material issues raised by the most recent internal quality-control review, or peer review, of the auditor, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the auditor, and any steps taken to deal with any such issues; and (c) all relationships between the independent auditor and the Company, in order to assess the auditor's independence. After reviewing the foregoing report and the independent auditor's work throughout the year, the Committee shall evaluate the independent auditor's qualifications, performance and independence. This evaluation shall include the review and evaluation of the lead partner of the independent auditor. In making its evaluation, the audit committee shall take into account the opinions of management and, if applicable, the Company's internal auditors (or other personnel responsible for the internal audit function). In addition to assuring the regular rotation of the audit partners on the engagement team as required by law, the Committee shall consider whether, in order to assure continuing auditor independence, there should be regular rotation of the audit firm itself. The Committee shall present its conclusions with respect to the independent auditor to the Board. Upon receipt of such written report, the Committee shall discuss with the independent auditor any such disclosed relationships and their impact on the independent auditor's objectivity and independence, and take appropriate actions to oversee the independence of the independent auditor.
- Discuss with the independent auditors the matters required to be discussed by Statement on Auditing Standards No. 61, including such matters as: the quality and acceptability of the accounting principles applied in the financial statements; new or changed accounting policies, the effect of regulatory and accounting initiatives, and significant estimates, judgments, uncertainties or unusual transactions; the selection, application and effects of critical accounting policies and estimates applied by management; issues raised by any "management" or "internal control" letter from the auditors, problems or difficulties encountered in the audit and management's response to such problems or difficulties, significant disagreements with management or other significant aspects of the audit; and any off-balance sheet transactions, and relationships with any unconsolidated entities or any other persons, which may have a material current or future effect on the financial condition or results of operations of the Company and are required to be reported under SEC rules.
- Set policies for the hiring of employees or former employees of the Company's independent auditor.
- Review management's report on internal controls and the independent auditor's attestation of management's report, when and as required by Section 404 of the Sarbanes-Oxley Act of 2002, and discuss with management and the independent auditors (a) any significant deficiencies or material weaknesses in the design or operation of internal control over

financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information and (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

- Review and discuss with management and the independent auditor, prior to release to the general public and legal and regulatory agencies, the annual audited financial statements and quarterly financial statements, including disclosures contained in "Management's Discussion and Analysis of Financial Condition and Results of Operations," and matters required to be reviewed under applicable legal, regulatory or Principal Exchange requirements, including without limitation critical accounting policies and practices.
- Discuss with management and the independent auditor, as appropriate, prior to release to the general public and legal and regulatory agencies, earnings press releases and financial information and, if applicable, earnings guidance.
- Discuss with management and the independent auditors all critical accounting policies and practices to be used all alternative treatments within generally accepted accounting principles for policies and practices relating to material items, including the ramifications of the use of such alternative disclosures and treatments and the treatment preferred by the independent auditors; and other material written communications between independent auditor and management, such as any management letter or schedule of unadjusted differences.
- Recommend to the Board whether the financial statements should be included in the Annual Report on Form 10-K.
- Discuss guidelines and policies developed by Company management and the Board with respect to risk assessment and risk management and the steps that the Company's management has taken to monitor and control financial risk exposure, including anti-fraud programs and controls.
- Conduct any activities relating to the Company's Code of Business Conduct and Ethics as may be delegated from time to time to the Committee by the Board.
- Review and investigate any matters pertaining to the integrity of management, including
 conflicts of interest, or adherence to standards of business conduct as required in the
 policies of the Company.
- Review and approve related party transactions according to such policies as may be adopted by the Board or a committee thereof from time to time.
- Meet, as frequently as it deems appropriate, separately with (a) the Chief Executive Officer, Principal Financial Officer and other members of senior management, (b) internal auditors (or other personnel responsible for the internal audit function), if applicable, and (c) the independent auditors, in each case to discuss any matters that the Committee or such persons believe should be discussed privately.

- Establish procedures for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls or auditing matters, including procedures for the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting, auditing matters or violations of the Company's code of conduct.
- Prepare an audit committee report in accordance with SEC regulations to be included in the Company's annual proxy statement.
- At least annually, evaluate the performance of the Committee, review and reassess this Charter and, if appropriate, recommend changes to the Board.
- Perform such other duties and responsibilities as may be assigned to the Committee by the Board.

IV. Authority

By adopting this Charter, the Board delegates to the Committee full authority to:

- Investigate any matter brought to its attention with full access to all books, records, facilities and personnel of the Company.
- Delegate such of its authority and responsibilities as the Committee deems proper to subcommittees thereof, subject to all applicable laws and regulations (including without limitation the Principal Exchange listing standards).
- Appoint a chair of the Committee, unless a chair is designated by the Board.
- Select, retain and obtain, in the Committee's sole discretion, the advice of outside counsel, accounting experts or other advisors as the Committee may deem appropriate in its sole discretion. The Committee shall have sole authority to approve related fees and retention terms. The Committee shall have available appropriate funding from the Company as determined by the Committee for payment of:
 - compensation to any accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Company;
 - o compensation to any advisors employed by the Committee; and
 - o ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

V. Committee Structure and Operations

• The Committee shall meet in person or telephonically at such times and places as shall be determined by the Committee chairperson. The chairperson, with input from the other members of the Committee, shall set the agendas for Committee meetings. A majority of the members of the Committee shall constitute a quorum for purposes of holding a meeting

and the Committee may act by a vote of a majority of members present at such meeting. In lieu of a meeting, the Committee may act by unanimous written consent.

• The Committee shall maintain minutes containing a summary of the actions taken at each Committee meeting and shall make regular reports to the Board with respect to actions taken by the Committee and areas of the Committee's responsibilities. These reports shall include a review of any issues that arise with respect to the quality and integrity of the Company's financial statements, the Company's compliance with legal or regulatory requirements or the performance of the Company's independent auditors.

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