Amended and Restated Corporate Governance Guidelines of the Board of Directors of CTI BioPharma Corp.

OVERVIEW — THE ROLE OF THE BOARD OF DIRECTORS

The primary duty of the Board of Directors (the "Board") of CTI BioPharma Corp. (the "Company") is to oversee the chief executive officer of the Company (the "CEO") and other senior officers in providing competent, productive and ethical management of the Company. To satisfy this duty, the Board has set these standards to foster the Company's financial and product success for shareholders and other stakeholders.

Directors bring to the Company a wide range of experience, knowledge and judgment. Accordingly, good governance depends on the directors utilizing their diverse skills and expertise in their approach to establishing standards or procedures. The Company's governance structure is designed to be a working structure for principled actions, effective decision-making and appropriate monitoring of both compliance and performance.

Effective directors approach their review of the Company's operations with constructive skepticism. Directors know that their responsibilities require them to ask probing questions of management and to take actions designed to get accurate and honest answers. Directors also rely on the advice, reports and opinions of management, counsel and our other expert advisors. In doing so, directors constantly evaluate the qualifications of those whom they rely upon for information and advice, and also look to the process used by managers and advisors in reaching their recommendations.

The Board prides itself on keeping up to date on best governance practices. Working together with management and advisors, directors look broadly for the knowledge and information of experts, stakeholders and others in how to manage the Company's affairs. This includes the efforts by the various exchanges as well as the Securities and Exchange Commission (the "SEC") and other leadership organizations to promote better governance. Responsible directors will continually monitor internal governance and explore alternatives and new ideas which would strengthen the governance structure. Accordingly, the Nominating and Governance Committee will review these Amended and Restated Corporate Governance Guidelines at least on an annual basis and recommend any proposed changes to the Board for approval.

DIRECTOR QUALIFICATIONS

The Board shall have a majority of directors who, in the business judgment of the Board, qualify under the listing standards of the NASDAQ Stock Market LLC ("NASDAQ") as "independent directors" and meets the director independence requirements as set forth in the Company's bylaws (each, an "Independent Director"). Directors will be nominated by the Nominating and Governance Committee of the Board, in accordance with the charter and principles of that committee, and approved by the Board. Nominees for director should satisfy the following qualifications:

- Have a background that demonstrates an understanding of the business, financial affairs and complexities of a multi-faceted, global pharmaceutical drug development business with commercialized operations, as well as general health care, science and technology matters;
- Possess fundamental qualities of intelligence, honesty, perceptiveness, good judgment, maturity, high ethics and standards, integrity, fairness and responsibility;
- Have a genuine interest in Company's business and recognition that, as a member of the

Board, each director is accountable to all shareholders, not to any particular interest group;

- Be willing to invest significant time reviewing detailed/technical background information in preparation for Board meetings;
- Be or have been in a senior position in a complex organization such as a corporation, university or major unit of government or a large not-for-profit institution;
- Have no legal impediment that would interfere with the duty of loyalty owed to the Company and its shareholders;
- Have the ability and be willing to spend the time required to function effectively as a director in a fast-paced industry, which requires ad-hoc Board and committee meetings necessary to respond to fast-moving developments;
- Be compatible and able to work well with other directors, the CEO, other executives and legal counsel as a team; and
- Have independent opinions and be willing to state them in a constructive matter.

In evaluating director nominees, the nominee's experience in the following areas will also be considered:

- Service in the life sciences / biotech industries;
- Ability to assess in-licensing, out-licensing or other strategic opportunities involving drug compounds;
- Oversight of a company's compliance with key regulatory regimes, including, in particular, those pertaining to the U.S. Food and Drug Administration and the European Medicines Agency; and
- Service as a board member of another publicly held company.

The Board, the Nominating and Governance Committee, the Chairman of the Board or the President should extend the actual invitation to a new member to join the Board.

When a director's principal occupation or business affiliation changes substantially during his or her tenure as a director, other than as a result of normal retirement, the Nominating and Governance Committee should evaluate the appropriateness of the director's continued service and, as applicable, (i) whether to recommend to the Board that the Board recommend such director offer to resign and/or (ii) whether to recommend the nomination of such director to stand for re-election at the next annual meeting of shareholders.

The Nominating and Governance Committee is responsible for reviewing with the Board, on an annual basis, the desired Board qualifications, expertise, characteristics and other factors for potential consideration, which review shall include consideration of diversity, skills and experience. The Nominating and Governance Committee is also responsible for reviewing each Board member's qualification as an Independent Director and the independence of the members of each committee and the Board as a whole.

The Board is currently authorized to have between five and twelve directors, but may have a fewer number of directors serving at any given time. The Board reviews from time to time the appropriateness

of its size, considering the needs of the Board and the scope of the Company's business.

The Board believes that annual elections for all directors supports the Board's ongoing effort to adopt "best practices" that are in-line with evolving corporate governance practices. In accordance with the articles and bylaws, commencing in 2014, directors are elected annually for terms of one year, and until their successors are elected and qualified, subject to their earlier death, resignation or removal from the Board.

Each Board member should ensure that other existing and anticipated future commitments do not materially interfere with such member's service as director. Directors are encouraged to limit the number of other boards (excluding non-profit organizations) on which they serve, taking into account potential board attendance, participation and effectiveness on these boards In any event, no director who serves on the Audit Committee shall serve on the audit committee of more than two additional public company boards without prior consultation with the Chair of the Nominating and Governance Committee.

Directors should advise the Chairman of the Board and the Chair of the Nominating and Governance Committee in advance of accepting an invitation to serve on the board of any other public company.

Directors may stand for re-election at the end of their one-year term. The Board believes that it should not limit the number of terms for which an individual may serve as director since term limits are, on balance, not the best way to maximize the effectiveness of the Board. While term limits may have the benefit of introducing fresh perspectives and making new viewpoints available to the Board, term limits may also have the countervailing effect of losing the contributions of directors who have developed, over time, increasing insight into the Company. The Board, through the Nominating and Governance Committee, will annually review the appropriateness of each board member's continued service, and will additionally review such appropriateness upon any change in a director's positions or responsibilities from the positions or responsibilities he or she had when elected to the Board.

CONFLICTS OF INTEREST

A director's other relationships, including business, family or those with non-profit entities may occasionally give rise to the perception that the director has a material, personal interest in a particular issue involving the Company. If a director becomes involved in activities or interests that conflict or appear to conflict with the interest of the Company and these activities result in an actual or potential conflict of interest, then the director is required to disclose such conflict promptly to the Board. The Board will determine an appropriate resolution on a case-by-case basis.

DIRECTOR RESPONSIBILITIES

The fundamental role of the directors is to exercise their business judgment to act in what they reasonably believe to be the best interests of the Company and its shareholders. In fulfilling that responsibility the directors should be able to rely on the honesty and integrity of the Company's senior management and legal, accounting, financial and other advisors. The directors should have the benefit of directors' and officers' insurance, paid by the company, to indemnification to the fullest extent allowed under the Washington law and the Company's charter, and to exculpation as provided by Washington law and the Company's charter, bylaws and contractual arrangements.

Board members are expected to prepare for, attend and participate in all meetings of the Board and its committees of which they are a member, and are encouraged to attend the meetings of all other committees. Board members are also expected to spend the time needed and meet as often as necessary to properly discharge their obligations. Information and data that is important to the Board's understanding of the business to be conducted at a Board or committee meeting should generally be distributed in writing to the directors prior to the meeting, so that Board meeting time may be conserved and discussion time focused on questions that the Board has about the materials. Particularly sensitive subject matters may be

discussed at the meeting without advance distribution of written materials.

The Chairman of the Board, in consultation with the CEO, shall approve the agenda for each Board meeting, and the agenda, to the extent practicable, should be distributed in advance to the Board. Each Board member is free to suggest the inclusion of items on the agenda and to raise at any Board meeting subjects that are not on the agenda for that meeting. The Board will review the Company's long-term strategic plans during at least one Board meeting each year.

The Board's policy is to have a separate meeting time or "executive session" for the independent directors whenever called for by a majority of the independent directors, but in any event at least four times per year. Attendance at executive sessions shall be limited to Independent Directors, and may be held in person or by phone.

COMMUNICATIONS WITH CONSTITUENCIES

The Board believes that it is critical that the Company speak with one voice, and that, absent special circumstances, management speak for the Company. Individual Board members may occasionally meet or otherwise communicate with various constituencies that are involved with the Company, but Board members should do this with the knowledge and consent of the entire Board or as requested by the CEO or management, in each case absent unusual circumstances.

BOARD LEADERSHIP STRUCTURE

In accordance with the Company's amended and restated bylaws, the Board shall elect a Chairman (the "Chairman") from among its members. Such Chairman shall be an Independent Director.

This structure ensures a greater role for the Independent Directors in the oversight of the Company and active participation of the Independent Directors in setting agendas and establishing Board priorities and procedures and permits the CEO to focus on the management of the Company's day-to-day operations.

The Chairman of the Board shall have the following responsibilities:

- Preside at all meetings of the Board at which he is present;
- In consultation with the CEO, approve the agenda for each Board's meeting;
- Set a schedule of an annual agenda, to the extent foreseeable;
- Meet with any director who is not adequately performing his or her duties;
- Call and prepare the agenda for and preside over separate sessions of the Independent Directors;
- Act as a liaison between the Independent Directors and the Company's management;
- Consult with the CEO on Board performance;
- Take a lead role in succession planning and the annual board evaluation, including the development of associated policies and procedures and oversight of the Board performance evaluation process, and report the results to the Board;
- Determine and ensure the appropriate and prompt flow of information from management to the Board necessary for the Board to effectively and responsibly perform its functions in consultation

with other Board members, and to require management to provide information and materials to the Board at the Chairman's discretion:

- Coordinate the retention of appropriate consultants to the Board;
- Assist the Board and the Company's executive officers in ensuring compliance with all applicable corporate and securities laws, related rules and regulations, and oversee any necessary revisions to the Company's governance policies in this area.
- Lead the Board's oversight of the adoption, implementation, and compliance with the guidelines set forth herein:
- lead the Board's evaluation, along with the Compensation Committee and the Audit Committee, of the performance of the Company's CEO and Chief Financial Officer (the "CFO"), and to participate in the Board's communication of its evaluation and performance expectations; and
- Perform such other powers and duties as may from time to time be assigned to him by the Board or as may be prescribed by the Company's bylaws.

BOARD COMMITTEES

An Audit Committee, a Compensation Committee and a Nominating and Governance Committee of the Board shall exist at all times. At its discretion, the Board may, from time to time, form other Board committees. The members of the Audit Committee, Compensation Committee and Nominating and Governance Committee shall meet the criteria for independence established by NASDAQ and the members of the Audit Committee shall additionally meet the criteria for independence established by the rules and regulations of the SEC and the knowledge and experience requirements established by the SEC and NASDAQ (or any other exchange upon which the Company's stock becomes listed). The members of each committee shall also meet any other membership criteria specified in the respective charters for these committees.

Committee members are appointed by the Board, on the recommendation by the Nominating and Governance Committee of the Board, in accordance with the charter and principles of that committee.

Each committee shall have its own charter. Each charter shall set forth the purposes, responsibilities and authority of the committee in addition to the qualifications for committee membership and organization and how the committee will communicate with the Board. Each charter shall also provide that the committee will review its own charter and evaluate its performance at least once a year.

The Chair of each committee will, in consultation with the appropriate committee members and members of management, and in accordance with the applicable committee's charter, determine the frequency and length of committee meetings and develop the committee's agenda.

The Board and each committee shall have the authority to obtain advice, reports or opinions from internal and external counsel and advisors and shall have the power to hire independent legal, financial and other advisors as they may deem necessary, at the Company's expense, without consulting with, or obtaining approval from, any officer of the Company in advance.

The Board may, from time to time, establish or maintain additional committees, as it deems appropriate.

DIRECTOR ACCESS TO OFFICERS AND EMPLOYEES

The Board has complete access to all Company officers and employees. Any meetings or contacts that a director desires to initiate may be arranged directly by the director or through the CEO or other Company officer. The directors should use their judgment to ensure that any such contact or communication is not disruptive to the business operations of the Company, and will, to the extent not inappropriate, copy the CEO on any written communications between a director and an officer or employee of the Company.

The Board welcomes the attendance of senior officers at each Board meeting (other than executive sessions). The Board also encourages management to schedule managers to present at Board meetings who: (a) can provide additional insight into the items being discussed because of personal involvement in these areas, or (b) have potential that senior management believes should be given exposure to the Board.

DIRECTOR COMPENSATION

The Compensation Committee shall review the form and amount of director compensation and make recommendations to the Board in accordance with the policies, principles and criteria set forth in its charter. The Compensation Committee shall conduct an annual review of director compensation.

BOARD EVALUATION

The Nominating and Governance Committee shall oversee the annual Board evaluation process in accordance with the charter and principles of that committee. As part of this process, the Board and each committee of the Board will conduct a self-evaluation to determine whether it and its committees are functioning effectively and in accordance with these Amended and Restated Corporate Governance Guidelines and their respective charters.

BOARD SUCCESSION

On at least an annual basis, in consultation with the Nominating and Governance Committee, the Chairman of the Board will lead a review of the status of the Board and determine if there is reason to believe that one or more director slots shall become vacant within the next twelve months. Any findings shall be reported to the Board. If it is anticipated that a director position shall become vacant within the next twelve months (whether by reason of an announced intent to retire or otherwise), or if a director position shall suddenly become vacant (whether by death or otherwise), the Nominating and Governance Committee shall as soon as reasonably practicable recommend to the Board nominees for election as director.

MANAGEMENT SUCCESSION

The Chairman of the Board, in consultation with the Nominating and Governance Committee, shall periodically lead a review on succession planning, and report any recommendations to the Board. The entire Board, including the Nominating and Governance Committee, will evaluate and nominate potential successors to the CEO.

ATTENDANCE AT ANNUAL MEETINGS OF SHAREHOLDERS

Directors are encouraged to attend the annual meetings of shareholders to, among other things, hear and address any concerns of the Company's shareholders.

DIRECTOR ORIENTATION AND CONTINUING EDUCATION

The Company will have an orientation program for new directors. The orientation should include an

introduction to the Company's senior management, the Company's business strategies and financial processes, visits to its corporate headquarters and to the extent practicable its significant facilities. Incumbent directors are also invited to attend the orientation program.

All directors will annually attend five (5) hours of continuing education programs designed for directors of publicly traded companies, which may include, as appropriate, coverage of compliance with GAAP, the Sarbanes Oxley Act ("SOX"), FDA guidance, corporate governance, assessment of risk, compliance auditing, and reporting requirements for publicly traded corporations.

All directors will comply with any continuing education requirements mandated by the SEC or NASDAQ or such other exchange upon which the Company's common stock may be listed.

Approved effective April 1, 2018