

December 9, 2015

BVF Partners L.P.  
One Sansome Street, 39<sup>th</sup> Floor  
San Francisco, CA 94104

Ladies and Gentlemen:

In exchange for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each of CTI BioPharma Corp., a Washington corporation (the "Company"), and BVF Partners L.P. ("BVF" and, together with its affiliates, the "Shareholder") agree as follows:

1. Board Nomination Rights.

a. Upon the consummation of the closing of the underwritten public offering (the "Offering") of an aggregate of 55,000 shares of the Company's Series N-2 Preferred Stock, no par value per share, pursuant to that certain Underwriting Agreement, dated December 4, 2015, by and among the Company and Piper Jaffray & Co., as representative of the several underwriters named therein, BVF shall have the one-time right (the "Nomination Right") to confidentially nominate not more than two (2) individuals in the aggregate to serve as directors of the Company's Board of Directors (the "Board"), subject to the consent of the Board which is not to be unreasonably withheld, and which consent shall be deemed automatically given with respect to a nominee if that nominee is either Matthew Perry or Mark Lampert unless such individual is or subsequently becomes a "bad actor" within the meaning of Rule 506 of Regulation D under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (it being understood that if the Board does not approve a given BVF nominee, then BVF shall be entitled to confidentially nominate one or more additional candidates until such time as when two (2) nominees in the aggregate have actually been appointed to the Board). Each individual nominated confidentially by BVF to serve as a director of the Board pursuant to the Nomination Right and who is appointed to the Board is referred to herein as a "Nominee". For the avoidance of doubt: (i) other than the Nominees appointed to the Board pursuant to the Nomination Right, the nomination of any other individual to the Board remains at the sole discretion of the Board and the Nominating and Governance Committee of the Board, but shall be limited to one (1) more individual and shall be nominated confidentially, and (ii) the Nomination Right may be initially exercised partially (i.e., with respect to a single Nominee), and then later with respect to the second Nominee.

b. One Nominee (the "Independent Nominee") shall (i) qualify to serve as an "independent director" as such term is defined under the applicable rules and regulations of the U.S. Securities and Exchange Commission and The NASDAQ Stock Market LLC ("NASDAQ"), and (ii) not be considered an "affiliate" of the Shareholder as such term is defined under Rule 12b-2 of the Exchange Act. Neither of these conditions shall be required to apply to the other Nominee (the "BVF Nominee").

c. Unless such individual is or subsequently becomes a "bad actor" within the meaning of Rule 506 of Regulation D under the Exchange Act, the Company shall: (i) include each Nominee in its slate of nominees for election to the Board at each annual or special meeting at which directors are to be elected to serve on the Company's Board, (ii) recommend that shareholders vote in favor of the election of each such Nominee, and (iii) support each such Nominee for election to the Company's Board in a manner no less favorable than how the Company supports other Board-nominated nominees for election to the Board.

d. Notwithstanding anything in this Letter Agreement to the contrary, the Nomination Right shall terminate with respect to (i) the Independent Nominee, and such Independent Nominee shall tender his or her resignation to the Board, if requested by the Board, promptly upon the Shareholder ceasing to beneficially own at least 11% of the Company's issued and outstanding common stock, no par value per

share (the “Common Stock”) (determined on an as-converted basis that gives effect to conversion of all outstanding preferred stock), and (ii) each Nominee, and such Nominee(s) shall tender his or their resignation to the Board, if requested by the Board, promptly upon the earlier to occur of: (a) the Shareholder ceasing to beneficially own at least 5% of the Company’s issued and outstanding Common Stock (determined on an as-converted basis that gives effect to the conversion of all outstanding preferred stock), (b) the Shareholder ceasing to beneficially own at least 50% of the shares of Common Stock beneficially owned by the Shareholder immediately after consummation of the Offering, (c) the continuation of the Nomination Right would cause any violation of the applicable listing rules of NASDAQ, in which case the Nomination Right shall be amended solely as necessary to ensure compliance with such listing rules and the parties shall work in good faith to document and approve such modification(s), (d) such time as when BVF informs the Company in writing that it wishes to terminate the Nomination Right, or (e) any breach of this Letter Agreement by the Shareholder. In each case, beneficial ownership shall be determined (solely for purposes of determining the applicability of the Nomination Right) on an as-converted to Common Stock basis, without regard to any blockers, and in accordance with Rule 13d-3 promulgated under the Exchange Act.

e. The Shareholder agrees, and any Nominee that serves as a director will agree, to be bound by the Company’s insider trading policy and other applicable corporate governance policies governing the obligations of directors and executive officers of the Company. In addition, as a condition to being appointed to the Board, each Nominee will execute an agreement whereby the Nominee will automatically (and without the need for further action) resign from the Board as set forth in paragraph 1.d above.

## 2. Standstill.

a. For purposes of this Letter Agreement:

- i. “Representatives” shall mean the Shareholders’ officers, directors, employees, accountants, counsel, investment banks, consultants, general partners, managing members and other representatives;
- ii. “Acquisition Transaction” shall mean any transaction (whether merger, stock purchase, tender offer, asset purchase or otherwise) possible transaction involving the acquisition of debt of the Company or greater than 50% of the Company’s voting securities, or substantially all of the Company’s assets; and
- iii. “public” (and other similar terms, such as “publicly”) shall mean outside of the Board meeting.

b. The Shareholder hereby represents and warrants that except as expressly contemplated by this Letter Agreement, neither it nor any of its Representatives nor any of its or their affiliates have entered into, directly or indirectly, any agreements or understandings with any person (other than any Representatives) with respect to any Acquisition Transaction.

c. From the date of this Letter Agreement until the BVF Nominee is serving on the Board and this Letter Agreement is terminated, unless expressly invited in advance by the Board or any authorized committee thereof, the Shareholder shall not, and shall cause its Representatives and affiliates not to (and the Shareholder and Representatives and its and their affiliates will not assist or form a group within the meaning of Section 13(d)(3) of the Exchange Act, act in concert or participate with or encourage other persons to), directly or indirectly:

- i. initiate or support any proposal or indication of interest for, or offer with respect to, any Acquisition Transaction (an “Acquisition Proposal”),

- ii. seek or propose to influence, advise, change or control the management, the Board, governing instruments or policies or affairs of the Company, including by means of a solicitation of proxies not conducted by the Company, or by seeking to influence, advise or direct the vote of any third-party holder of debt or voting securities of the Company,
- iii. initiate or support any proposal through a public communication for any Acquisition Transaction, recapitalization, reorganization, joint venture, liquidation, dissolution, spin-off or split-off, business combination or other extraordinary transaction involving the Company or any of the Company's subsidiaries or any of their debt, securities or assets,
- iv. publicly seek election of or publicly seek to place a director on the Board, or publicly seek the removal of any director of the Company, or call or seek to have called any meeting of the shareholders of the Company or any "referendum" (whether or not precatory) of the shareholders of the Company, wage a consent solicitation, or execute any written consent in lieu of a meeting of the shareholders of the Company in connection with the foregoing matters,
- v. enter into any arrangements or understandings with or advise or assist any third party with respect to any of the foregoing prohibited actions listed in clauses (i) through (iv), including through the formation, joining of or participation in a "group" with the meaning of Section 13(d)(3) of the Exchange Act (or act as a co-bidder under Rule 14e-3 of the Exchange Act), in furtherance of any of the foregoing,
- vi. advise, assist, encourage or knowingly finance any person in connection with any of the foregoing prohibited actions listed in clauses (i) through (v),
- vii. publicly disclose any plan, intention or proposal to do any of the prohibited actions listed in clauses (i) through (vi),
- viii. make any public disclosure or take any action that could require the Company to make any public disclosure, with respect to any of the prohibited actions listed in clauses (i) through (vii).

d. Notwithstanding anything herein to the contrary, nothing in this Section 2 shall be deemed to prevent the Nominees who are then serving as directors on the Board from faithfully discharging their fiduciary duties to the Company.

e. This Section 2 shall not limit or restrict any of the rights and privileges of BVF set forth in Section 1 hereof, including, without limitation, the Nomination Right, so long as BVF strictly complies in all respects with the terms and provisions of Section 1 hereof.

f. For the avoidance of doubt, nothing herein shall limit the ability of BVF or the Nominees from confidentially submitting to the Board one or more additional director nominees for consideration by the Board.

### 3. Exchange.

a. Subsequent to the consummation of the Offering and if subsequently deemed necessary by BVF to limit the Shareholder's beneficial ownership of the Company's Common Stock to 9.99% of the Company's issued and outstanding Common Stock, the Company agrees, subject to the approval of

the Board and the Audit Committee of the Board, that BVF may make a one-time election to exchange shares of its Common Stock underlying the Preferred Stock purchased by the Shareholder in the Offering into shares of a new series of convertible, non-voting preferred stock of the Company (the “Blocker Preferred”) with substantially similar terms as the Preferred Stock issued in the Offering, including a “blocker” on conversion into Common Stock initially set at 9.99% of the Company’s Common Stock, but without the automatic conversion provisions (the “Exchange”). The Company also agrees to use commercially reasonable efforts to cooperate with BVF to effectuate the Exchange, provided that such Exchange does not adversely affect the Company’s ability to effect a reverse stock split without the necessity for stockholder approval, and complies with applicable federal and state securities laws. The Exchange (and the subsequent conversion of the Blocker Preferred back into Common Stock) shall be effected pursuant to Section 3(a)(9) under the Securities Act of 1933, and shall be an exempt transaction pursuant to Section 16b-3 of the Exchange Act.

b. BVF’s right to effectuate the Exchange will terminate when BVF ceases to beneficially own at least 5% of the Company’s outstanding Common Stock on a fully-diluted basis.

c. For purposes of this Paragraph 3, “beneficial ownership” shall be determined in accordance with Rule 13d-3 promulgated under the Exchange Act on an as-converted to Common Stock basis, without regard to any blockers.

4. Reimbursement. The Company agrees to reimburse the Shareholder for up to a total of \$25,000 of the reasonably documented legal fees and expenses incurred by Shareholder in connection with the Offering and this Letter Agreement.

5. Miscellaneous.

a. This Letter Agreement may not be amended, supplemented or modified except in writing, duly executed by all of the parties.

b. This Letter Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof. Each of the parties represents that they has been advised by counsel in connection with their review, execution and delivery of this Letter Agreement.

c. This Letter Agreement shall be governed by and construed in accordance with the internal substantive laws of the State of New York.

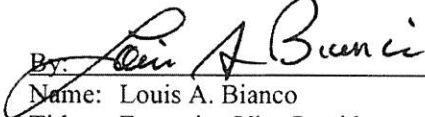
d. This Letter Agreement may be executed in more than one counterpart. Each such counterpart shall be deemed an original and all counterparts, taken together, shall constitute one and the same instrument.

e. Neither this Letter Agreement nor any rights or obligations hereunder shall be assigned or delegated by any party without the prior written consent of the other party.

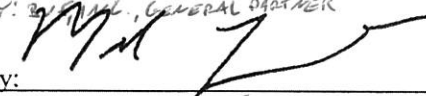
[Signature Page to Follow]

IN WITNESS WHEREOF, the parties have caused this Letter Agreement to be executed in multiple originals by their authorized officers, all as of the date and year first written above.

**CTI BIOPHARMA CORP.**

By:   
Name: Louis A. Bianco  
Title: Executive Vice President,  
Finance and Administration

**BVF PARTNERS L.P.**

BY: GENERAL PARTNER  
  
By:  
Name: MARK LAMERT  
Title: PRESIDENT