UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

Under
The Securities Act of 1933

CTI BIOPHARMA CORP.

(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 91-1533912 (I.R.S. Employer Identification Number)

3101 Western Avenue, Suite 800 Seattle, Washington 98121 (Address of principal executive offices, including zip code)

CTI BioPharma Corp. Amended and Restated 2017 Equity Incentive Plan (Full title of the plan)

Adam Craig, M.D., Ph.D.
President and Chief Executive Officer
CTI BioPharma Corp.
3101 Western Avenue, Suite 600
Seattle, Washington 98121
(206) 282-7100
(Name, address and telephone number, including area code, of agent for service)

Copies to:
Michael Nordtvedt
Bryan D. King
Wilson Sonsini Goodrich & Rosati, P.C.
701 Fifth Avenue, Suite 5100
Seattle, WA 98104
(206) 883-2500

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.:

	Large accelerated filer		Accelerated filer	×		
	Non-accelerated filer	\square (Do not check if a smaller reporting company)	Smaller reporting company Emerging growth company			
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section $7(a)(2)(B)$ of the Securities Act. \Box						

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)(2)(3)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common stock, \$0.001 par value per share:				
-Outstanding option awards under the Amended and Restated 2017 Equity Incentive Plan	l 1,499,604	\$4.25(4)	\$6,373,317	\$794
-Reserved for issuance under the Amended and Restated 2017 Equity Incentive Plan	7 1,800,396	\$4.16(5)	\$7,489,648	\$933
TOTAL:	3,300,000		\$13,862,965	\$1,727

- 1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable under the Registrant's Amended and Restated 2017 Equity Incentive Plan ("2017 Plan") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of common stock.
- 2) For the sole purpose of calculating the registration fee, the number of shares to be registered under this Registration Statement has been broken down into two subtotals.
- 3) Each share of common stock is accompanied by a preferred stock purchase right pursuant to the Shareholder Rights Agreement, dated as of December 28, 2009, between the Company and Computershare Trust Company, N.A., as Rights Agent, and as subsequently amended.
- 4) Estimated in accordance with Rule 457(h) of the Securities Act solely for the purpose of calculating the registration fee on the basis of the weighted average exercise price of \$4.25 per share.
- 5) Estimated in accordance with Rule 457(c) and (h) of the Securities Act solely for the purpose of calculating the registration fee on the basis of \$4.16 per share, which is the average of the high and low prices of common stock, as reported on The Nasdaq Capital Market, on May 16, 2018.

PART I

INFORMATION REQUIRED IN THE PROSPECTUS

The information specified in Item 1 and Item 2 of Part I of Form S-8 is omitted from this Registration Statement on Form S-8 (this "Registration Statement") in accordance with the provisions of Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"), and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I of Form S-8 will be delivered to the participants in the equity benefit plans covered by this Registration Statement as specified by Rule 428(b)(1) under the Securities Act.

PART II

INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

CTI BioPharma Corp. (the "Registrant") hereby incorporates by reference into this Registration Statement the following documents previously filed with the Securities and Exchange Commission (the "Commission"):

- (1) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the Commission on March 7, 2018 (the "Annual Report");
 - (2) The Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, filed with the Commission on May 3, 2018;
- (3) All other reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), since the end of the fiscal year covered by the Annual Report (other than the portions of these documents not deemed to be filed);
- (4) The description of the Registrant's common stock contained in its Registration Statement on Form 10 filed with the Commission on June 27, 1996, as amended (Commission File No. 000-28386), and any other amendment or report filed for the purpose of updating such description; and
- (5) The description of the Registrant's Preferred Stock Purchase Rights contained in its Registration Statement on Form 8-A filed with the Commission on December 28, 2009 (Commission File No. 001-12465), as amended by Amendment No 1. to Form 8-A filed with the Commission on May 17, 2011 (Commission File No. 001-12465), and Registration Statement on Form 8-A filed with the Commission on September 6, 2012 (Commission File No. 000-28386), as amended by Amendment No. 1 to Form 8-A filed with the Commission on December 7, 2012 (Commission File No. 000-28386), Amendment No. 2 to Form 8-A filed with the Commission on December 1, 2015 (Commission File No. 000-28386), Amendment No. 3 to Form 8-A filed with the Commission on January 3, 2017 (Commission File No. 000-28386), and Amendment No. 4 to Form 8-A filed with the Commission on September 26, 2017 (Commission File No. 000-28386), and any other amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents; provided, however, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify its directors and officers and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers, provided that the person acted in good faith and in a manner the person reasonably believed to be in its best interests, and, with respect to any criminal action, had no reasonable cause to believe the person's actions were unlawful. The Delaware General Corporation Law further provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The certificate of incorporation of the registrant provides for the indemnification of the Registrant's directors and officers to the fullest extent permitted under the Delaware General Corporation Law. In addition, the bylaws of the Registrant require the Registrant to fully indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (whether civil, criminal, administrative or investigative) by reason of the fact that such person is or was a director, or officer of the Registrant's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, to the fullest extent permitted by applicable law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for payments of unlawful dividends or unlawful stock repurchases or redemptions or (4) for any transaction from which the director derived an improper personal benefit. The Registrant's certificate of incorporation provides that the Registrant's directors shall not be personally liable to it or its stockholders for monetary damages for breach of fiduciary duty as a director and that if the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the Registrant's directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the Registrant has entered into separate indemnification agreements with each of the Registrant's directors and certain of the Registrant's officers which require the Registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status as directors, officers or certain other employees.

The Registrant expects to obtain and maintain insurance policies under which its directors and officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities which might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not the Registrant would have the power to indemnify such person against such liability under the provisions of the Delaware General Corporation Law.

These indemnification provisions and the indemnification agreements entered into between the Registrant and the Registrant's officers and directors may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act of 1933.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit		Incorporated by Reference			
Number	Exhibit Description	Form	File No.	Exhibit	Filing Date
4.1	Specimen Certificate of Common Stock	8-K	000-28386	4.1	February 12, 2018
4.2	CTI BioPharma Corp. Amended and Restated 2017 Equity Incentive Plan	8-K	000-28386	10.1	May 21, 2018
4.3	Form of Stock Option Award Agreement under the Amended and Restated 2017 Equity Incentive Plan	8-K	000-28386	10.2	May 21, 2018
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, P.C.				
23.1	Consent of Marcum LLP (Consent of Independent Registered Public Accounting Firm)				
23.2	Consent of Wilson Sonsini Goodrich & Rosati, P.C. (included in Exhibit 5.1 hereto)				
24.1	Power of Attorney (included on the signature page hereto)				

Item 9. Undertakings.

- A. The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement. *Provided, however*, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this Registration Statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on this 22nd day of May, 2018.

CTI BIOPHARMA CORP.

By: /s/ Adam R. Craig

Adam R. Craig, M.D., Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Adam R. Craig and David H. Kirske, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities (including his capacity as a director and/or officer of CTI BioPharma Corp.) to sign any or all amendments (including post-effective amendments) to this registration statement and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as they, he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Laurent Fischer Laurent Fischer, M.D.	Chairman of the Board and Director	May 22, 2018
/s/ Adam R. Craig Adam R. Craig, M.D. Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	May 22, 2018
/s/ David H. Kirske David H. Kirske	Chief Financial Officer (Principal Accounting and Financial Officer)	May 22, 2018
/s/ David Parkinson David Parkinson, M.D.	Director	May 22, 2018
/s/ Michael A. Metzger Michael A. Metzger	Director	May 22, 2018
/s/ Matthew D. Perry Matthew D. Perry	Director	May 22, 2018
/s/ Frederick W. Telling Frederick W. Telling, Ph.D.	Director	May 22, 2018
/s/ Reed V. Tuckson Reed V. Tuckson, M.D.	Director	May 22, 2018

May 22, 2018

CTI BioPharma Corp. 3101 Western Avenue, Suite 800 Seattle, WA 98121

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 (the "Registration Statement") to be filed by CTI BioPharma Corp., a Delaware corporation (the "Company"), with the Securities and Exchange Commission on or about the date hereof, in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 3,300,000 shares of your common stock, par value \$0.001 per share (the "Shares") to be issued under the Company's Amended and Restated 2017 Equity Incentive Plan (the "Plan"). As your legal counsel, we have reviewed the actions proposed to be taken by you in connection with the issuance and sale of the Shares to be issued under the Plan.

It is our opinion that the Shares, when issued and sold in the manner referred to in the Plan and pursuant to the agreements that accompany the Plan, will be legally and validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement, and further consent to the use of our name wherever appearing in the Registration Statement and any amendments thereto.

Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati, P.C. WILSON SONSINI GOODRICH & ROSATI Professional Corporation

Independent Registered Public Accounting Firm's Consent

We consent to the incorporation by reference in this Registration Statement of CTI BioPharma Corp. on Form S-8 of our report dated March 7, 2018, with respect to our audits of the consolidated financial statements and related consolidated financial statement schedule of CTI BioPharma Corp. as of December 31, 2017 and 2016 and for the years ended December 31, 2017, 2016 and 2015 and our report dated March 7, 2018 with respect to our audit of the effectiveness of internal control over financial reporting of CTI BioPharma Corp. as of December 31, 2017 appearing in the Annual Report on Form 10-K of CTI BioPharma Corp. for the year ended December 31, 2017.

/s/ Marcum LLP

Marcum LLP San Francisco, CA May 22, 2018