

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D
(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
§ 240.13d-2(a)

(Amendment No. 5)¹

CTI BioPharma Corp.
(Name of Issuer)

Common Stock, \$0.001 par value
(Title of Class of Securities)

12648L601
(CUSIP Number)

JAMES KRATKY
BVF PARTNERS L.P.
44 Montgomery St., 40th Floor
San Francisco, California 94104
(415) 525-8890

ADAM W. FINERMAN, ESQ.
OLSHAN FROME WOLOSKY LLP
1325 Avenue of the Americas
New York, New York 10019
(212) 451-2300

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

January 31, 2020
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

¹ The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the *Notes*).

1	NAME OF REPORTING PERSON BIOTECHNOLOGY VALUE FUND, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 6,795,120 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 6,795,120 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 6,795,120 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 11.0% ⁽¹⁾	
14	TYPE OF REPORTING PERSON PN	

⁽¹⁾ Includes 3,754,000 shares of Common Stock underlying 5,631 shares of Series O Preferred Stock convertible within 60 days hereof, subject to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF I GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 6,795,120 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 6,795,120 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 6,795,120 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 11.0% ⁽¹⁾	
14	TYPE OF REPORTING PERSON OO	

⁽¹⁾ Includes 3,754,000 shares of Common Stock underlying 5,631 shares of Series O Preferred Stock convertible within 60 days hereof, subject to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BIOTECHNOLOGY VALUE FUND II, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 4,179,280 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 4,179,280 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,179,280 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.0% ⁽¹⁾	
14	TYPE OF REPORTING PERSON PN	

⁽¹⁾ Includes 2,070,000 shares of Common Stock underlying 3,105 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 356,667 shares of Common Stock underlying 535 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF II GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 4,179,280 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 4,179,280 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,179,280 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.0% ⁽¹⁾	
14	TYPE OF REPORTING PERSON OO	

⁽¹⁾ Includes 2,070,000 shares of Common Stock underlying 3,105 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 356,667 shares of Common Stock underlying 535 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BIOTECHNOLOGY VALUE TRADING FUND OS LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION CAYMAN ISLANDS	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 483,708 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 483,708 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 483,708 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% ⁽¹⁾	
14	TYPE OF REPORTING PERSON PN	

⁽¹⁾ Excludes 682,666 shares of Common Stock underlying 1,024 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF PARTNERS OS LTD.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION CAYMAN ISLANDS	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 483,708 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 483,708 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 483,708 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% ⁽¹⁾	
14	TYPE OF REPORTING PERSON CO	

⁽¹⁾ Excludes 682,666 shares of Common Stock underlying 1,024 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF GP HOLDINGS LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 10,974,400 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 10,974,400 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 10,974,400 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 17.2% ⁽¹⁾	
14	TYPE OF REPORTING PERSON OO	

⁽¹⁾ Includes 5,824,000 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 356,667 shares of Common Stock underlying 535 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF PARTNERS L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 12,753,690 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 12,753,690 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,690 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99% ⁽¹⁾	
14	TYPE OF REPORTING PERSON PN, IA	

⁽¹⁾ Includes 5,824,000 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,333 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON BVF INC.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 12,753,690 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 12,753,690 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,690 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99% ⁽¹⁾	
14	TYPE OF REPORTING PERSON CO	

⁽¹⁾ Includes 5,824,000 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,333 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON MARK N. LAMPERT	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 12,753,690 ⁽¹⁾
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 12,753,690 ⁽¹⁾
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,690 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99% ⁽¹⁾	
14	TYPE OF REPORTING PERSON IN	

⁽¹⁾ Includes 5,824,000 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,333 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

1	NAME OF REPORTING PERSON MATTHEW D. PERRY	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 153,139 ⁽¹⁾
	8	SHARED VOTING POWER - 0 -
	9	SOLE DISPOSITIVE POWER 153,139 ⁽¹⁾
	10	SHARED DISPOSITIVE POWER - 0 -
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 153,139 ⁽¹⁾	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% ⁽¹⁾	
14	TYPE OF REPORTING PERSON IN	

⁽¹⁾ Includes 110,000 shares of Common Stock issuable on the exercise of certain options that are currently exercisable.

The following constitutes Amendment No. 5 to the Schedule 13D filed by the undersigned (“Amendment No. 5”). This Amendment No. 5 amends the Schedule 13D as specifically set forth herein.

Item 2. Identity and Background.

Item 2 is hereby amended and restated to read as follows:

- (a) This statement is filed by:
- (i) Biotechnology Value Fund, L.P., a Delaware limited partnership (“BVF”);
 - (ii) BVF I GP LLC, a Delaware limited liability company (“BVF GP”), which serves as general partner of BVF;
 - (iii) Biotechnology Value Fund II, L.P., a Delaware limited partnership (“BVF2”);
 - (iv) BVF II GP LLC, a Delaware limited liability company (“BVF2 GP”), which serves as general partner of BVF2;
 - (v) Biotechnology Value Trading Fund OS LP, a Cayman Islands limited partnership (“Trading Fund OS”);
 - (vi) BVF Partners OS Ltd., a Cayman Islands limited liability company (“Partners OS”), which serves as general partner of Trading Fund OS;
 - (vii) BVF GP Holdings LLC, a Delaware limited liability company (“BVF GPH”), which is the sole member of each of BVF GP and BVF2 GP;
 - (viii) BVF Partners L.P., a Delaware limited partnership (“Partners”), which serves as the investment manager of each of BVF, BVF2, Trading Fund OS and certain managed accounts (the “Partners Managed Accounts”), and as the sole member of Partners OS;
 - (ix) BVF Inc., a Delaware corporation, which serves as the general partner of Partners and the managing member of BVF GPH;
 - (x) Mark N. Lampert, who serves as the sole officer and director of BVF Inc.; and
 - (xi) Matthew D. Perry, the President of Partners and member of the Issuer’s Board of Directors.

Each of the foregoing is referred to as a “Reporting Person” and collectively as the “Reporting Persons.” Each of the Reporting Persons is party to that certain Joint Filing Agreement, as further described in Item 6. Accordingly, the Reporting Persons are hereby filing a joint Schedule 13D.

(b) The business address of BVF, BVF GP, BVF2, BVF2 GP, BVF GPH, Partners, BVF Inc., Mr. Lampert and Mr. Perry is 44 Montgomery St., 40th Floor, San Francisco, California 94104. The business address of Trading Fund OS and Partners OS is PO Box 309 Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

(c) The principal business of each of BVF, BVF2, and Trading Fund OS is investing in securities. The principal business of BVF GP, BVF2 GP, and Partners OS is serving as the general partner of BVF, BVF2, and Trading Fund OS, respectively. The principal business of BVF GPH is serving as the sole member of each of BVF GP and BVF2 GP. The principal business of Partners is serving as the investment manager of each of BVF, BVF2, Trading Fund OS and the Partners Managed Accounts, and the sole member of Partners OS. The principal business of BVF Inc. is serving as the general partner of Partners and the managing member of BVF GPH. Mr. Lampert is the sole officer and director of BVF Inc. Mr. Perry is the President of Partners.

(d) No Reporting Person has, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) No Reporting Person has, during the last five years, been party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Messrs. Lampert and Perry are citizens of the United States of America.

Item 4. Purpose of Transaction.

Item 4 is hereby amended to add the following:

On January 31, 2020, the Issuer entered into an Investment Agreement (the "Investment Agreement") by and among certain existing stockholders of the Issuer, including Partners (collectively, the "Investors"). Pursuant to the Investment Agreement, the Investors have agreed to, severally and not jointly, purchase shares of the Common Stock, and/or series X convertible preferred stock, par value \$0.001("Series X Preferred"), having an aggregate value equal to the value of all shares of Common Stock and/or Series X Preferred (if any) offered but not purchased pursuant to the exercise of rights in the Issuer's rights offering, including any exercise of rights by the Investors, up to a total value of \$60,000,000. The Investment Agreement contains customary representations, warranties and covenants by the parties.

The above description of the Investment Agreement does not purport to be complete and is qualified in its entirety by reference to the Investment Agreement filed as Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed with the Securities and Exchange Commission (the "SEC") on February 3, 2020, which is incorporated by reference herein.

Item 5. Interest in Securities of the Issuer.

Items 5(a) – (c) are hereby amended and restated to read as follows:

(a) The aggregate percentage of shares of Common Stock reported owned by each person named herein is based on a denominator that is the sum of: (i) 57,978,725 shares of Common Stock outstanding, as of October 24, 2019, as disclosed in the Issuer's Quarterly Report on Form 10-Q filed with the SEC on November 4, 2019, and (ii) certain or all of the 5,824,000 shares of Common Stock that would be issued upon the conversion of certain shares of Series O Preferred Stock.

As of the date hereof, the Reporting Persons hold 12,575 shares of Series O Preferred Stock, convertible into an aggregate of 8,383,333 shares of Common Stock. The conversion ratio is 667 shares of Common Stock for 1 share of Series O Preferred Stock. The Series O Preferred Stock may not be converted if, after such conversion, the Reporting Persons would beneficially own, as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, more than 19.99% of the shares of Common Stock outstanding immediately after giving effect to such conversion (the "Beneficial Ownership Limitation"). The Reporting Persons, in the aggregate, will reach the Beneficial Ownership Limitation, upon the conversion of 8,736 shares of Series O Preferred Stock representing 5,824,000 shares of Common Stock. As such, 3,839 shares of Series O Preferred Stock representing 2,559,333 shares of Common Stock are blocked from being converted pursuant to the Beneficial Ownership Limitation.

As of the date hereof, (i) BVF beneficially owned 6,795,120 shares of Common Stock, including approximately 3,754,000 shares of Common Stock issuable upon the conversion of 5,631 shares of Series O Preferred Stock, representing percentage ownership of approximately 11.0% of the shares of Common Stock outstanding, (ii) BVF2 beneficially owned 4,179,280 shares of Common Stock, including approximately 2,070,000 shares of Common Stock issuable upon the conversion of 3,105 shares of Series O Preferred Stock and excluding approximately 356,667 shares of Common Stock issuable upon the conversion of 535 shares of Series O Preferred Stock, representing percentage ownership of approximately 7.0% of the shares of Common Stock outstanding, (iii) Trading Fund OS beneficially owned 483,708 shares of Common Stock, excluding approximately 682,666 shares of Common Stock issuable upon the conversion of 1,024 shares of Series O Preferred Stock, representing percentage ownership of less than 1% of the shares of Common Stock outstanding and (iv) 1,295,582 shares of Common Stock were held in the Partners Managed Accounts, excluding approximately 1,520,000 shares of Common Stock issuable upon the conversion of 2,280 shares Series O Preferred Stock, representing percentage ownership of approximately 2.2% of the shares of Common Stock outstanding.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 6,795,120 shares of Common Stock beneficially owned by BVF, representing percentage ownership of approximately 11.0% of the shares of Common Stock outstanding.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 4,179,280 shares of Common Stock beneficially owned by BVF2, representing percentage ownership of approximately 7.0% of the shares of Common Stock outstanding.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 483,708 shares of Common Stock beneficially owned by Trading Fund OS, representing percentage ownership of less than 1% of the shares of Common Stock outstanding.

BVF GPH, as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the 10,974,400 shares of Common Stock beneficially owned in the aggregate by BVF and BVF2, representing percentage ownership of approximately 17.2% of the shares of Common Stock outstanding.

Partners, as the investment manager of BVF, BVF2, Trading Fund OS and the Partners Managed Accounts and the sole member of Partners OS, may be deemed to beneficially own the 12,753,690 Shares of Common Stock beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS, and held in the Partners Managed Accounts, representing percentage ownership of approximately 19.99% of the shares of Common Stock outstanding.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 12,753,690 Shares beneficially owned by Partners, representing percentage ownership of approximately 19.99% of the Shares outstanding.

Mr. Lampert, as a director and officer of BVF Inc. may be deemed to beneficially own the 12,753,690 Shares beneficially owned by BVF Inc., representing percentage ownership of approximately 19.99% of the shares of Common Stock outstanding.

As of the date hereof, Mr. Perry directly owns 153,139 shares of Common Stock, including 110,000 shares of Common Stock issuable on the exercise of certain options that are currently exercisable, representing percentage ownership of less than 1% of the shares of Common Stock outstanding.

(b) Each of BVF, BVF2 and Trading Fund OS shares with Partners voting and dispositive power over the shares of Common Stock each such entity beneficially owns. BVF shares with BVF GP voting and dispositive power over the shares of Common Stock beneficially owned by BVF. BVF2 shares with BVF2 GP voting and dispositive power over the shares of Common Stock beneficially owned by BVF2. Each of BVF GP and BVF2 GP shares with BVF GPH voting and dispositive power over the shares of Common Stock each such entity beneficially owns. Trading Fund OS shares with Partners OS voting and dispositive power over the shares of Common Stock beneficially owned by Trading Fund OS. Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the 12,753,690 shares of Common Stock they may be deemed to beneficially own with BVF, BVF GP, BVF2, BVF2 GP, Trading Fund OS, Partners OS, BVF GPH and the Partners Managed Accounts.

(c) The Reporting Persons have not entered into any transactions in the securities of the Issuer during the past sixty days

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer

Item 6 is hereby amended to add the following:

As described in Item 4 above, certain of the Reporting Persons and the Issuer entered into the Investment Agreement, a copy of which is filed as Exhibit 10.1 to the Issuer's Form 8-K filed with the SEC on February 3, 2020.

On February 4, 2020, the Reporting Persons entered into a Joint Filing Agreement in which the Reporting Persons agreed to the joint filing on behalf of each of them of statements on Schedule 13D, with respect to securities of the Issuer, to the extent required by applicable law. A copy of this agreement is attached hereto as Exhibit 99.2 and is incorporated herein by reference.

Item 7. Material to be Filed as Exhibits

Item 7 is hereby amended to add the following exhibits:

- 99.1 Investment Agreement, dated January 31, 2020 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed with the SEC on February 3, 2020).
- 99.2 Joint Filing Agreement by and among Biotechnology Value Fund, L.P., BVF I GP LLC, Biotechnology Value Fund II, L.P., BVF II GP, LLC, Biotechnology Value Trading Fund OS LP, BVF Partners OS Ltd., BVF GP Holdings LLC, BVF Partners L.P., BVF Inc., Mark N. Lampert, and Matthew D. Perry, dated February 4, 2020.

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 4, 2020

BIOTECHNOLOGY VALUE FUND, L.P.

By: BVF I GP LLC., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF I GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BIOTECHNOLOGY VALUE FUND II, L.P.

By: BVF II GP LLC its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF II GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF PARTNERS OS LTD.

By: BVF Partners L.P., its sole member
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BIOTECHNOLOGY VALUE TRADING FUND OS LP

By: BVF Partners L.P., its investment manager
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF GP HOLDINGS LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF PARTNERS L.P.

By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF INC.

By: /s/ Mark N. Lampert
Mark N. Lampert
President

/s/ Mark N. Lampert
MARK N. LAMPERT

/s/ Matthew D. Perry
MATTHEW D. PERRY

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1)(iii) under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them of a Statement on Schedule 13D dated February 4, 2020 (including amendments thereto) with respect to the shares of Common Stock, \$0.001 par value, of CTI BioPharma Corp. This Joint Filing Agreement shall be filed as an Exhibit to such Statement.

Dated: February 4, 2020

BIOTECHNOLOGY VALUE FUND, L.P.

By: BVF I GP LLC., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF I GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BIOTECHNOLOGY VALUE FUND II, L.P.

By: BVF II GP LLC its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF II GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF PARTNERS OS LTD.

By: BVF Partners L.P., its sole member
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BIOTECHNOLOGY VALUE TRADING FUND OS LP

By: BVF Partners L.P., its investment manager
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF GP HOLDINGS LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF PARTNERS L.P.

By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF INC.

By: /s/ Mark N. Lampert
Mark N. Lampert
President

/s/ Mark N. Lampert
MARK N. LAMPERT

/s/ Matthew D. Perry
MATTHEW D. PERRY