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

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 2)*

Fate Therapeutics, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value

(Title of Class of Securities)

31189P102

(CUSIP Number)

**Mark McDonnell
ARCH Venture Corporation
8755 W. Higgins Road Suite 1025
Chicago, IL 60631**

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

August 9, 2016

(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.

*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).

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) ARCH Venture Fund VI, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 Shares
	8	SHARED VOTING POWER 2,473,188 Shares
	9	SOLE DISPOSITIVE POWER 0 Shares
	10	SHARED DISPOSITIVE POWER 2,473,188 Shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,473,188 Shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) ARCH Venture Partners VI, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 Shares
	8	SHARED VOTING POWER 2,473,188 Shares
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12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) ARCH Venture Partners VI, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 Shares
	8	SHARED VOTING POWER 2,473,188 Shares
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13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) OO	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Clinton Bybee	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 Shares
	8	SHARED VOTING POWER 2,473,188 Shares
	9	SOLE DISPOSITIVE POWER 0 Shares
	10	SHARED DISPOSITIVE POWER 2,473,188 Shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,473,188 Shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Keith Crandell	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 Shares
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,473,188 Shares	
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13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Robert Nelsen	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 Shares
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12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 7.24%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

Item 1. Security and Issuer.

This Amendment No. 2 ("Amendment No. 2") amends the Schedule 13D filed on October 15, 2013 (the "Original 13D"), as amended by Amendment No. 1 to the Original 13D filed on June 24, 2015 (the "Amendment No. 1"), relating to the Common Stock, \$0.001 par value per share ("Common Stock"), of Fate Therapeutics, Inc. (the "Issuer") having its principal executive office at 3535 General Atomics Court, Suite 200, San Diego, California, 92121 (the "Original 13D", together with this Amendment No. 2 and Amendment No. 1, the "Schedule 13D") amends the Original 13D as set forth herein.

Certain terms used but not defined in this Amendment No. 2 shall have the meanings assigned thereto in the Original 13D (as amended by Amendment No. 1). Except as specifically provided herein, this Amendment No. 2 does not modify any of the information previously reported in the Original 13D (as amended by Amendment No. 1).

Item 2. Identity and Background.

- (a) This statement is being filed by: (1) ARCH Venture Fund VI, L.P. ("ARCH Venture Fund VI"), (2) ARCH Venture Partners VI, L.P. ("AVP VI LP"), which is the sole general partner of ARCH Venture Fund VI, (3) ARCH Venture Partners VI, LLC ("AVP VI LLC"), which is the sole general partner of AVP VI LP, (4) Clinton Bybee ("Bybee"), (5) Keith Crandell ("Crandell"), and (6) Robert Nelsen ("Nelsen" and, together with Bybee and Crandell, collectively, the "Managing Directors" and each individually, a "Managing Director"). Each of the individuals and entities above shall be referred to herein individually as a "Reporting Person" and collectively as the "Reporting Persons".
 - (b) The business address of each of the Reporting Persons is 8755 West Higgins Road, Suite 1025, Chicago, IL, 60631.
 - (c) The principal business of ARCH Venture Fund VI is to invest and assist in developmental and emerging businesses located principally in the United States. The principal business of AVP VI LP is to act as the general partner of ARCH Venture Fund VI. The principal business of AVP VI LLC is to act as the general partner of AVP VI LP. The principal business of each of the Managing Directors is to act as managing directors of AVP VI LLC and a number of affiliated partnerships with similar businesses.
 - (d) During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding.
 - (e) During the five years prior to the date hereof, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction ending in 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) Each of ARCH Venture Fund VI and AVP VI LP is a Delaware limited partnership. AVP VI LLC is a Delaware limited liability company. Each of the Managing Directors is a United States citizen.
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Item 5. Interest in Securities of the Issuer.

Item 5 of the Original 13D (as amended and restated by Amendment No. 1) is hereby amended and restated in its entirety as follows:

- (a) ARCH Venture Fund VI is the record owner of 2,473,188 shares of Common Stock (the "Record Shares").
- (b) AVP VI LP, as the sole general partner of ARCH Venture Fund VI, may be deemed to beneficially own the Record Shares. AVP VI LLC, as the sole general partner of AVP VI LP, may be deemed to beneficially own the Record Shares.

In addition, each of the Managing Directors may be deemed to share the power to direct the disposition and vote of the Record Shares. Each Reporting Person disclaims beneficial ownership of all securities except for the shares, if any, held of record by such Reporting Person.

The percentage of outstanding Common Stock of the Issuer which may be deemed to be beneficially owned by each Reporting Person is set forth on Line 13 of such Reporting Person's cover sheet. Such percentage was calculated based on the 34,144,815 shares of Common Stock reported by the Issuer to be outstanding as of August 5, 2016 as reported in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on August 8, 2016, plus 5,250,000 shares of Common Stock issued and sold in a private offering on August 9, 2016, as reported in the Issuer's Form 8-K filed with the Securities and Exchange Commission on August 8, 2016.

- (c) Regarding the number of shares as to which such person has:
 - (i) sole power to vote or to direct the vote: See line 7 of cover sheets.
 - (ii) shared power to vote or to direct the vote: See line 8 of cover sheets.
 - (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets.
 - (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets.
- (d) None of the Reporting Persons has effected any transaction in the Common Stock during the last 60 days.
- (e) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, shares beneficially owned by any of the Reporting Persons.
- (f) Not applicable

Item 7. Material to be Filed as Exhibits.

Exhibit 1 – Agreement regarding filing of joint Schedule 13D.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: August 15, 2016

ARCH VENTURE FUND VI, L.P.

By: ARCH Venture Partners VI, L.P.
its General Partner

By: ARCH Venture Partners VI, LLC
its General Partner

By: _____
*
Managing Director

ARCH VENTURE PARTNERS VI, L.P.

By: ARCH Venture Partners VI, LLC
its General Partner

By: _____
*
Managing Director

ARCH VENTURE PARTNERS VI, LLC

By: _____
*
Managing Director

*
Clinton Bybee

*
Keith Crandell

*
Robert Nelsen

* By: /s/ Mark McDonnell
Mark McDonnell as Attorney-in-Fact

* This Schedule 13D was executed by Mark McDonnell pursuant to a Power of Attorney filed as Exhibit 24 to the Form 3 relating to the beneficial ownership of shares of Fate Therapeutics, Inc. by the Reporting Persons filed with the Securities Exchange Commission on September 30, 2013 and incorporated herein in its entirety by reference.

Exhibit 1**AGREEMENT OF JOINT FILING**

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of Fate Therapeutics, Inc.

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original.

Date: August 15, 2016

ARCH VENTURE FUND VI, L.P.

By: ARCH Venture Partners VI, L.P.
its General Partner

By: ARCH Venture Partners VI, LLC
its General Partner

By: _____
*
Managing Director

ARCH VENTURE PARTNERS VI, L.P.

By: ARCH Venture Partners VI, LLC
its General Partner

By: _____
*
Managing Director

ARCH VENTURE PARTNERS VI, LLC

By: _____
*
Managing Director

*
Clinton Bybee

*
Keith Crandell

*
Robert Nelsen

* By: /s/ Mark McDonnell
Mark McDonnell as Attorney-in-Fact

* This Agreement was executed by Mark McDonnell pursuant to a Power of Attorney filed as Exhibit 24 to the Form 3 relating to the beneficial ownership of shares of Fate Therapeutics, Inc. by the Reporting Persons filed with the Securities Exchange Commission on September 30, 2013 and incorporated herein in its entirety by reference.