

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

SCHEDULE 13G/A

Under the Securities Exchange Act of 1934
(Amendment No. 1)*

FATE THERAPEUTICS, INC.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

31189P102

(CUSIP Number)

December 31, 2017

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

*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 the disclosures provided in a prior cover page.

The information required in 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 Persons Venrock Associates V, L.P.
<hr/>	
2.	Check the Appropriate Box if a Member of a Group (See Instructions)
(a)	<input checked="" type="checkbox"/> (1)
(b)	<input type="checkbox"/>
<hr/>	
3.	SEC Use Only
<hr/>	
4.	Citizenship or Place of Organization Delaware
<hr/>	
5.	Sole Voting Power 0
<hr/>	
Number of Shares Beneficially Owned by Each Reporting Person With:	6. Shared Voting Power 2,473,187(2)
<hr/>	
7.	Sole Dispositive Power 0
<hr/>	
8.	Shared Dispositive Power 2,473,187(2)
<hr/>	
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 2,473,187(2)
<hr/>	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>
<hr/>	
11.	Percent of Class Represented by Amount in Row (9) 4.7%(3)
<hr/>	
12.	Type of Reporting Person (See Instructions) PN
<hr/>	

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the "Venrock Entities") and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the "Venrock GPs") are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the "Reporting Persons."
- (2) Consists of 2,231,558 shares of common stock owned by Venrock Associates V, L.P., 189,198 shares of common stock owned by Venrock Partners V, L.P. and 52,431 shares of common stock owned by Venrock Entrepreneurs Fund V, L.P.
- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer's common stock outstanding as of October 31, 2017 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

1. Name of Reporting Persons
 Venrock Partners V, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a) (1)
 (b)

3. SEC Use Only

4. Citizenship or Place of Organization
 Delaware

5. Sole Voting Power
 0

Number of Shares Beneficially Owned by Each Reporting Person With:
 6. Shared Voting Power
 2,473,187(2)

7. Sole Dispositive Power
 0

8. Shared Dispositive Power
 2,473,187(2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
 2,473,187(2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)
 4.7%(3)

12. Type of Reporting Person (See Instructions)
 PN

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the “Venrock Entities”) and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the “Venrock GPs”) are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the “Reporting Persons.”
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- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer’s common stock outstanding as of October 31, 2017 as reported in the Issuer’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

1. Name of Reporting Persons
 Venrock Entrepreneurs Fund V, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a) (1)
 (b)

3. SEC Use Only

4. Citizenship or Place of Organization
 Delaware

5. Sole Voting Power
 0

Number of Shares Beneficially Owned by Each Reporting Person With:
 6. Shared Voting Power
 2,473,187(2)

7. Sole Dispositive Power
 0

8. Shared Dispositive Power
 2,473,187(2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
 2,473,187(2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)
 4.7%(3)

12. Type of Reporting Person (See Instructions)
 PN

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the “Venrock Entities”) and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the “Venrock GPs”) are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the “Reporting Persons.”
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- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer’s common stock outstanding as of October 31, 2017 as reported in the Issuer’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

1. Name of Reporting Persons
 Venrock Management V, LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (1)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization
 Delaware

5. Sole Voting Power
 0

Number of Shares Beneficially Owned by Each Reporting Person With:

6. Shared Voting Power
 2,473,187(2)

7. Sole Dispositive Power
 0

8. Shared Dispositive Power
 2,473,187(2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
 2,473,187(2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)
 4.7%(3)

12. Type of Reporting Person (See Instructions)
 OO

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the “Venrock Entities”) and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the “Venrock GPs”) are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the “Reporting Persons.”
- (2) Consists of 2,231,558 shares of common stock owned by Venrock Associates V, L.P., 189,198 shares of common stock owned by Venrock Partners V, L.P. and 52,431 shares of common stock owned by Venrock Entrepreneurs Fund V, L.P.
- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer’s common stock outstanding as of October 31, 2017 as reported in the Issuer’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

1. Name of Reporting Persons
 Venrock Partners Management V, LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a) (1)
 (b)

3. SEC Use Only

4. Citizenship or Place of Organization
 Delaware

5. Sole Voting Power
 0

Number of Shares Beneficially Owned by Each Reporting Person With:
 6. Shared Voting Power
 2,473,187(2)

7. Sole Dispositive Power
 0

8. Shared Dispositive Power
 2,473,187(2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
 2,473,187(2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)
 4.7%(3)

12. Type of Reporting Person (See Instructions)
 OO

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the “Venrock Entities”) and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the “Venrock GPs”) are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the “Reporting Persons.”
- (2) Consists of 2,231,558 shares of common stock owned by Venrock Associates V, L.P., 189,198 shares of common stock owned by Venrock Partners V, L.P. and 52,431 shares of common stock owned by Venrock Entrepreneurs Fund V, L.P.
- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer’s common stock outstanding as of October 31, 2017 as reported in the Issuer’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

1. Name of Reporting Persons
VEF Management V, LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (1)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware

5. Sole Voting Power
0

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
2,473,187(2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
2,473,187(2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
2,473,187(2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)
4.7%(3)

12. Type of Reporting Person (See Instructions)
OO

- (1) Venrock Associates V, L.P., Venrock Partners V, L.P. and Venrock Entrepreneurs Fund V, L.P. (collectively, the "Venrock Entities") and the general partner of each Venrock Entity respectively, Venrock Management V, LLC, Venrock Partners Management V, LLC and VEF Management V, LLC (collectively, the "Venrock GPs") are members of a group for purposes of this Schedule 13G/A. The Venrock Entities and the Venrock GPs are collectively referred to herein as the "Reporting Persons."
- (2) Consists of 2,231,558 shares of common stock owned by Venrock Associates V, L.P., 189,198 shares of common stock owned by Venrock Partners V, L.P. and 52,431 shares of common stock owned by Venrock Entrepreneurs Fund V, L.P.
- (3) This percentage is calculated based (a) 41,685,695 shares of the Issuer's common stock outstanding as of October 31, 2017 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 1, 2017 and (b) 10,953,750 shares of common stock issued pursuant to an underwritten public offering that closed on December 15, 2017.

Introductory Note: This Statement on Schedule 13G/A is filed on behalf of Venrock Associates V, L.P., a limited partnership organized under the laws of the State of Delaware, Venrock Partners V, L.P., a limited partnership organized under the laws of the State of Delaware, Venrock Entrepreneurs Fund V, L.P., a limited partnership organized under the laws of the State of Delaware (collectively, the “Venrock Entities”), as well as Venrock Management V, LLC, a limited liability company organized under the laws of the State of Delaware, Venrock Partners Management V, LLC, a limited liability company organized under the laws of the State of Delaware and VEF Management V, LLC, a limited liability company organized under the laws of the State of Delaware (collectively, the “Venrock GPs”) in respect of shares of common stock of Fate Therapeutics, Inc.

Item 1.

- (a) Name of Issuer
Fate Therapeutics, Inc.
- (b) Address of Issuer’s Principal Executive Offices
3535 General Atomics Court, Suite 200
San Diego, California 92121

Item 2.

- (a) Name of Person Filing
Venrock Associates V, L.P.
Venrock Partners V, L.P.
Venrock Entrepreneurs Fund V, L.P.
Venrock Management V, LLC
Venrock Partners Management V, LLC
VEF Management V, LLC
- (b) Address of Principal Business Office or, if none, Residence

New York Office:

530 Fifth Avenue
22nd Floor
New York, NY 10036

Palo Alto Office:

3340 Hillview Avenue
Palo Alto, CA 94304

Boston Office:

34 Farnsworth Street
3rd Floor
Boston, MA 02210

- (c) Citizenship
Each of the Venrock Entities are limited partnerships organized in the State of Delaware. Each of the Venrock GPs are limited liability companies organized in the State of Delaware.
- (d) Title of Class of Securities
Common Stock
- (e) CUSIP Number
31189P102

Item 3. If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:

Not applicable

Item 4. Ownership

(a) Amount beneficially owned as of December 31, 2017:

Venrock Associates V, L.P.	2,473,187(1)
Venrock Partners V, L.P.	2,473,187(1)
Venrock Entrepreneurs Fund V, L.P.	2,473,187(1)
Venrock Management V, LLC	2,473,187(1)
Venrock Partners Management V, LLC	2,473,187(1)
VEF Management V, LLC	2,473,187(1)

(b) Percent of class aS of December 31, 2017:

Venrock Associates V, L.P.	4.7%
Venrock Partners V, L.P.	4.7%
Venrock Entrepreneurs Fund V, L.P.	4.7%
Venrock Management V, LLC	4.7%
Venrock Partners Management V, LLC	4.7%
VEF Management V, LLC	4.7%

(c) Number of shares as to which the person has, as of December 31, 2017:

(i) Sole power to vote or to direct the vote

Venrock Associates V, L.P.	0
Venrock Partners V, L.P.	0
Venrock Entrepreneurs Fund V, L.P.	0
Venrock Management V, LLC	0
Venrock Partners Management V, LLC	0
VEF Management V, LLC	0

(ii) Shared power to vote or to direct the vote

Venrock Associates V, L.P.	2,473,187(1)
Venrock Partners V, L.P.	2,473,187(1)
Venrock Entrepreneurs Fund V, L.P.	2,473,187(1)
Venrock Management V, LLC	2,473,187(1)
Venrock Partners Management V, LLC	2,473,187(1)
VEF Management V, LLC	2,473,187(1)

(iii) Sole power to dispose or to direct the disposition of

Venrock Associates V, L.P.	0
Venrock Partners V, L.P.	0
Venrock Entrepreneurs Fund V, L.P.	0
Venrock Management V, LLC	0
Venrock Partners Management V, LLC	0
VEF Management V, LLC	0

(iv) Shared power to dispose or to direct the disposition of

Venrock Associates V, L.P.	2,473,187(1)
Venrock Partners V, L.P.	2,473,187(1)
Venrock Entrepreneurs Fund V, L.P.	2,473,187(1)
Venrock Management V, LLC	2,473,187(1)
Venrock Partners Management V, LLC	2,473,187(1)
VEF Management V, LLC	2,473,187(1)

-
- (1) These shares are owned directly as follows: 2,231,558 shares of common stock are owned by Venrock Associates V, L.P., 189,198 shares of common stock are owned by Venrock Partners V, L.P. and 52,431 shares of common stock are owned by Venrock Entrepreneurs Fund V, L.P. Venrock Management V, LLC is the general partner of Venrock Associates V, L.P.; Venrock Partners Management V, LLC is the general partner of Venrock Partners V, L.P.; and VEF Management V, LLC is the general partner of Venrock Entrepreneurs Fund V, L.P.

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of a Group

Not Applicable

Item 10. Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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.

Dated: February 13, 2018

Venrock Associates V, L.P.

By: Venrock Management V, LLC,
its General Partner

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

Venrock Management V, LLC

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

Venrock Partners V, L.P.

By: Venrock Partners Management V, LLC,
its General Partner

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

Venrock Partners Management V, LLC

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

Venrock Entrepreneurs Fund V, L.P.

By: VEF Management V, LLC,
its General Partner

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

VEF Management V, LLC

By: /s/ David L. Stepp
Name: David L. Stepp
Title: Authorized Signatory

EXHIBITS

A: Joint Filing Agreement (Incorporated by reference to Exhibit A to Schedule 13G filed October 11, 2013).