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

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**SCHEDULE 13G**

**UNDER THE SECURITIES EXCHANGE ACT OF 1934  
(Amendment No. )\***

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**Magenta Therapeutics, Inc.**  
(Name of Issuer)

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**COMMON STOCK, \$0.0001 PAR VALUE PER SHARE**  
(Title of Class of Securities)

**55910K108**  
(CUSIP Number)

**December 31, 2018**  
(Date of Event Which Requires Filing of this Statement)

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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).

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1.	NAMES OF REPORTING PERSONS <b>Third Rock Ventures IV, L.P.</b>	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER  0
	6.	SHARED VOTING POWER  8,008,204
	7.	SOLE DISPOSITIVE POWER  0
	8.	SHARED DISPOSITIVE POWER  8,008,204
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  8,008,204	
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  24.2% (1)	
12.	TYPE OF REPORTING PERSON  PN	

- (1) The percent of class was calculated based on 33,151,539 shares of common stock issued and outstanding as of October 31, 2018, as disclosed in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on November 8, 2018.

1.	NAMES OF REPORTING PERSONS <b>Third Rock Ventures GP IV, L.P.</b>	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER  0
	6.	SHARED VOTING POWER  8,008,204
	7.	SOLE DISPOSITIVE POWER  0
	8.	SHARED DISPOSITIVE POWER  8,008,204
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  8,008,204	
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  24.2% (1)	
12.	TYPE OF REPORTING PERSON  PN	

1.	NAMES OF REPORTING PERSONS <b>TRV GP IV, LLC</b>	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER  0
	6.	SHARED VOTING POWER  8,008,204
	7.	SOLE DISPOSITIVE POWER  0
	8.	SHARED DISPOSITIVE POWER  8,008,204
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  8,008,204	
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  24.2% (1)	
12.	TYPE OF REPORTING PERSON  OO	

**Item 1. Issuer**

- (a) Name of Issuer:  
Magenta Therapeutics, Inc. (the “**Issuer**”)
- (b) Address of Issuer’s Principal Executive Offices:  
100 Technology Square  
Cambridge, Massachusetts

**Item 2. Filing Person**

- (a) – Name of Persons Filing; Address; Citizenship:  
(c)
- (i) Third Rock Ventures IV, L.P. (“**TRV IV**”);
- (ii) Third Rock Ventures GP IV, L.P. (“**TRV GP IV**”), which is the sole general partner of TRV IV; and
- (iii) TRV GP IV, LLC (“**TRV GP IV LLC**”), which is the sole general partner of TRV GP IV.

The address of the principal business office of each of the Reporting Persons is Third Rock Ventures, LLC, 29 Newbury Street, 3rd Floor, Boston, MA 02116.

Each of TRV IV and TRV GP IV is a Delaware limited partnership. TRV GP IV LLC is a Delaware limited liability company.

- (d) Title of Class of Securities:  
Common stock, \$0.001 par value per share, (the “**Common Stock**”)
- (e) CUSIP Number:  
55910K108

**Item 3. If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b) or (c), check whether the person filing is a:**

- (a)  Broker or dealer registered under Section 15 of the Act;
- (b)  Bank as defined in Section 3(a)(6) of the Act;
- (c)  Insurance company as defined in Section 3(a)(19) of the Act;
- (d)  Investment company registered under Section 8 of the Investment Company Act of 1940;
- (e)  An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f)  An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);
- (h)  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940;
- (j)  A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J);
- (k)  Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution:

If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

**Item 4. Ownership.**

(a) and (b) Amount beneficially owned:

- (i) TRV IV directly owns 8,008,204 shares of Common Stock (the “Shares”), which represents approximately 24.2% of the outstanding shares of Common Stock.
- (ii) TRV GP IV is the general partner of TRV IV and may be deemed to beneficially own the Shares.
- (iii) TRV GP IV LLC is the general partner of TRV GP IV and may be deemed to beneficially own the Shares.

(c) Number of shares as to which such person has:

Reporting Person	Number of Shares of Common Stock			
	(i)	(ii)	(iii)	(iv)
TRV IV	0	8,008,204	0	8,008,204
TRV GP IV	0	8,008,204	0	8,008,204
TRV GP IV LLC	0	8,008,204	0	8,008,204

- (i) Sole power to vote or direct the vote
- (ii) Shared power to vote or to direct the vote
- (iii) Sole power to dispose or to direct the disposition of
- (iv) Shared power to dispose or to direct the disposition of

The percent of class was calculated based on 33,151,539 shares of common stock issued and outstanding as of October 31, 2018, as disclosed in the Issuer’s Form 10-Q filed with the Securities and Exchange Commission on November 8, 2018.

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

Not applicable.

**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 Group.**

Not applicable.

**Item 10. Certification.**

Not applicable.

**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: February 13, 2019

**THIRD ROCK VENTURES IV, L.P.**

By: THIRD ROCK VENTURES GP IV, L.P.,  
General Partner

By: TRV GP IV, LLC,  
General Partner

By: /s/ Kevin Gillis  
\_\_\_\_\_  
Kevin Gillis  
Chief Financial Officer

**THIRD ROCK VENTURES GP IV, L.P.**

By: TRV GP IV, LLC,  
General Partner

By: /s/ Kevin Gillis  
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Kevin Gillis  
Chief Financial Officer

**TRV GP IV, LLC**

By: /s/ Kevin Gillis  
\_\_\_\_\_  
Kevin Gillis  
Chief Financial Officer

**Joint Filing Agreement**

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing statements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him, her or it contained herein, but shall not be responsible for the completeness and accuracy of the information concerning the other entities or persons, except to the extent that he, she or it knows or has reason to believe that such information is inaccurate.

Dated: February 13, 2019

**THIRD ROCK VENTURES IV, L.P.**

By: THIRD ROCK VENTURES GP IV, L.P.,  
General Partner

By: TRV GP IV, LLC,  
General Partner

By: /s/ Kevin Gillis  
Kevin Gillis  
Chief Financial Officer

**THIRD ROCK VENTURES GP IV, L.P.**

By: TRV GP IV, LLC,  
General Partner

By: /s/ Kevin Gillis  
Kevin Gillis  
Chief Financial Officer

**TRV GP IV, LLC**

By: /s/ Kevin Gillis  
Kevin Gillis  
Chief Financial Officer