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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 1)*

LYRA THERAPEUTICS, INC.

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

55234L105

(CUSIP Number)

May 17, 2021

(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	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) RA Capital Management, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) <div style="text-align: right;"> (a) <input type="checkbox"/> (b) <input type="checkbox"/> </div>	
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 0
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 0
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 0	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 0%	
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IA, PN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Peter Kolchinsky	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) <div style="text-align: right;"> (a) <input type="checkbox"/> (b) <input type="checkbox"/> </div>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 0
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 0
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 0	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 0%	
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) HC, IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Rajeev Shah	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) <div style="text-align: right;"> (a) <input type="checkbox"/> (b) <input type="checkbox"/> </div>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 0
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 0
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 0	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 0%	
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) HC, IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) RA Capital Healthcare Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) <div style="text-align: right;"> (a) <input type="checkbox"/> (b) <input type="checkbox"/> </div>	
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 0
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 0
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 0	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 0%	
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

Item 1(a). Name of Issuer:

Lyra Therapeutics, Inc. (the “Issuer”)

Item 1(b). Address of Issuer’s Principal Executive Offices:

480 Arsenal Way, Watertown, MA 02472

Item 2(a). Names of Persons Filing:

The names of the persons filing this report (collectively, the “Reporting Persons”) are:

RA Capital Management, L.P. (“RA Capital”)

Peter Kolchinsky

Rajeev Shah

RA Capital Healthcare Fund, L.P. (the “Fund”)

Item 2(b). Address of Principal Business Office or, if None, Residence:

The address of the principal business office of each of the Reporting Persons is:

c/o RA Capital Management, L.P., 200 Berkeley Street, 18th Floor, Boston MA 02116

Item 2(c). Citizenship:

RA Capital and the Fund are Delaware limited partnerships. Dr. Kolchinsky and Mr. Shah are United States citizens.

Item 2(d). Title of Class of Securities:

Common stock, par value \$0.001 per share (“Common Stock”)

Item 2(e). CUSIP Number:

55234L105

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:

(e) RA Capital Management, L.P. is a registered investment adviser and is filing this statement in accordance with §240.13d-1(b)(1)(ii)(E);

(g) Peter Kolchinsky and Rajeev Shah are control persons and are filing this statement in accordance with §240.13d-1(b)(1)(ii)(G).

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount Beneficially Owned:
See the response(s) to Item 9 on the attached cover page(s).
- (b) Percent of Class:
See the response(s) to Item 11 on the attached cover page(s).
- (c) Number of shares as to which such person has:
 - (i) sole power to vote or to direct the vote:
See the response(s) to Item 5 on the attached cover page(s).
 - (ii) shared power to vote or to direct the vote
See the response(s) to Item 6 on the attached cover page(s).
 - (iii) sole power to dispose or to direct the disposition of
See the response(s) to Item 7 on the attached cover page(s).
 - (iv) shared power to dispose or to direct the disposition of
See the response(s) to Item 8 on the attached cover page(s).

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 Persons have 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 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 acquired and are held in the ordinary course of business and 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, other than activities solely in connection with a nomination under § 240.14a-11.

Exhibits

- 1 Joint Filing Agreement by and among the Reporting Persons is incorporated herein by reference to Exhibit 1 to the Schedule 13G filed by the Reporting Persons with the Securities and Exchange Commission on February 16, 2021.
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SIGNATURE

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

Date: May 17, 2021

RA CAPITAL MANAGEMENT, L.P.

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky

Title: Authorized Signatory

PETER KOLCHINSKY

/s/ Peter Kolchinsky

RAJEEV SHAH

/s/ Rajeev Shah

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare GP, LLC

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky

Title: Manager
