

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

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934

(Amendment No. 4)\*

SOLID BIOSCIENCES INC.

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

83422E105

(CUSIP Number)

RA Capital Management, L.P.

200 Berkeley Street, 18<sup>th</sup> Floor

Boston, MA 02116

Telephone: 617.778.2500

Attn: Peter Kolchinsky

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

September 2, 2022

(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 Rule 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).

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1 Names of Reporting Persons.

**RA Capital Management, L.P.**

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

(a)

(b)

3 SEC Use Only

4 Source of Funds (See Instructions):

AF

5 Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e):

6 Citizenship or Place of Organization. **Delaware**

Number of Shares Beneficially Owned by Each Reporting Person With	7 Sole Voting Power <b>0 shares</b>
	8 Shared Voting Power <b>12,447,873 shares</b>
	9 Sole Dispositive Power <b>0 shares</b>
	10 Shared Dispositive Power <b>12,447,873 shares</b>

11 Aggregate Amount Beneficially Owned by Each Reporting Person  
**12,447,873 shares**

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13 Percent of Class Represented by Amount in Row (11)

**11.01%<sup>1</sup>**

14 Type of Reporting Person (See Instructions)

**IA, PN**

<sup>1</sup>The reporting person is the beneficial owner of 12,367,873 shares of the Issuer's Common Stock as well as conversion shares underlying 80,000 vested stock options (right to buy) held by Mr. Rajeev Shah for the benefit of RA Capital. The percentage calculation assumes that there are currently 112,989,773 outstanding shares of Common Stock of the Issuer based on the Issuer's Form 10-Q filed with the Securities and Exchange Commission ("SEC") on August 11, 2022 and giving effect to stock options referenced above.

1 Names of Reporting Persons.

**Peter Kolchinsky**

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

(a)

(b)

3 SEC Use Only

4 Source of Funds (See Instructions):

AF

5 Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e):

6 Citizenship or Place of Organization. **United States**

Number of Shares Beneficially Owned by Each Reporting Person With	7 Sole Voting Power <b>0 shares</b>
	8 Shared Voting Power <b>12,447,873 shares</b>
	9 Sole Dispositive Power <b>0 shares</b>
	10 Shared Dispositive Power <b>12,447,873 shares</b>

11 Aggregate Amount Beneficially Owned by Each Reporting Person

**12,447,873 shares**

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13 Percent of Class Represented by Amount in Row (11)

**11.01%<sup>2</sup>**

14 Type of Reporting Person (See Instructions)

**HC, IN**

<sup>2</sup> The reporting person is the beneficial owner of 12,367,873 shares of the Issuer's Common Stock as well as conversion shares underlying 80,000 vested stock options (right to buy) held by Mr. Rajeev Shah for the benefit of RA Capital. The percentage calculation assumes that there are currently 112,989,773 outstanding shares of Common Stock of the Issuer based on the Issuer's Form 10-Q filed with the Securities and Exchange Commission ("SEC") on August 11, 2022 and giving effect to stock options referenced above.

1 Names of Reporting Persons.

**Rajeev Shah**

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

(a)

(b)

3 SEC Use Only

4 Source of Funds (See Instructions):

AF

5 Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e):

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 **12,447,873 shares**

9 Sole Dispositive Power **0 shares**

10 Shared Dispositive Power **12,447,873 shares**

11 Aggregate Amount Beneficially Owned by Each Reporting Person

**12,447,873 shares**

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13 Percent of Class Represented by Amount in Row (11)

**11.01%<sup>3</sup>**

14 Type of Reporting Person (See Instructions)

**HC, IN**

<sup>3</sup> The reporting person is the beneficial owner of 12,367,873 shares of the Issuer's Common Stock as well as conversion shares underlying 80,000 vested stock options (right to buy) held by Mr. Rajeev Shah for the benefit of RA Capital. The percentage calculation assumes that there are currently 112,989,773 outstanding shares of Common Stock of the Issuer based on the Issuer's Form 10-Q filed with the Securities and Exchange Commission ("SEC") on August 11, 2022 and giving effect to stock options referenced above.

1 Names of Reporting Persons.

**RA Capital Healthcare Fund, L.P.**

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

(a)

(b)

3 SEC Use Only

4 Source of Funds (See Instructions):

WC

5 Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e):

6 Citizenship or Place of Organization. **United States**

Number of Shares Beneficially Owned by Each Reporting Person With	7 Sole Voting Power <b>0 shares</b>
	8 Shared Voting Power <b>12,447,873 shares</b>
	9 Sole Dispositive Power <b>0 shares</b>
	10 Shared Dispositive Power <b>12,447,873 shares</b>

11 Aggregate Amount Beneficially Owned by Each Reporting Person  
**12,447,873 shares**

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13 Percent of Class Represented by Amount in Row (11)

**11.01%<sup>4</sup>**

14 Type of Reporting Person (See Instructions)

**PN**

<sup>4</sup> The reporting person is the beneficial owner of 12,367,873 shares of the Issuer's Common Stock as well as conversion shares underlying 80,000 vested stock options (right to buy) held by Mr. Rajeev Shah for the benefit of RA Capital. The percentage calculation assumes that there are currently 112,989,773 outstanding shares of Common Stock of the Issuer based on the Issuer's Form 10-Q filed with the Securities and Exchange Commission ("SEC") on August 11, 2022 and giving effect to stock options referenced above.

**SCHEDULE 13D**

**Item 1. Security and Issuer**

Item 1 of the Statement is hereby amended and restated as follows:

This Amendment No. 4 amends and supplements the statement on Schedule 13D/A originally filed with the Securities and Exchange Commission (the "SEC") on March 23, 2021 by RA Capital Management, L.P. ("RA Capital"), Dr. Kolchinsky, Mr. Shah and RA Capital Healthcare Fund, L.P. (the "Fund") with respect to the common stock, par value \$0.001 per share (the "Common Stock"), of Solid Biosciences Inc., a Delaware corporation (the "Issuer"). Unless otherwise defined herein, capitalized terms used in this Amendment No. 4 shall have the meanings ascribed to them in the Statement.

**Item 4. Purpose of Transaction**

Item 4 of the Statement is hereby amended and supplemented as follows:

The Reporting Persons hold the securities of the Issuer for general investment purposes. The Reporting Persons reserve the right, based on all relevant factors and subject to applicable law or other restrictions, at any time and from time to time, to acquire additional Common Stock or other securities of the Issuer, dispose of some or all of the Common Stock or other securities of the Issuer that it may own from time to time, in each case in open market or private transactions, block sales or otherwise or pursuant to ordinary stock exchange transactions effected through one or more broker-dealers whether individually or utilizing specific pricing or other instructions (including by means of 10b5-1 programs), and review or reconsider their position, change their purpose, take other actions or formulate and implement plans or proposals with respect to any of the foregoing.

The Reporting Persons intend to review their investment in the Issuer from time to time on the basis of various factors, including the Issuer's business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer's stock in particular, as well as other developments.

Mr. Rajeev Shah, who is a Managing Partner of RA Capital, is a director of the Issuer. The Reporting Persons, either directly or indirectly through Mr. Shah, may engage in discussions from time to time with the Issuer's board of directors, the Issuer's management, the Issuer's other stockholders or other parties. These discussions may be with respect to (i) acquiring or disposing shares of Common Stock or other securities of the Issuer; (ii) maintaining or changing the Issuer's business, operations, governance, management, strategy or capitalization; or (iii) implementing transactions that may relate to or may result in any matter set forth in paragraphs (a) through (j) of Item 4 of Schedule 13, including but not limited to strategic or financial transactions that have been or may be proposed. The Fund has a material interest in a company that is currently having preliminary discussions with the Issuer about a potential transaction and RA Capital may engage with the company on the terms of a potential transaction. RA Capital may also consult with the Issuer in connection with the potential transaction, although Mr. Shah will not take part in any consideration of the potential transaction by the Issuer's board of directors.

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**Item 7. Material to Be Filed as Exhibits**

Item 7 of the Statement is hereby amended and supplemented as follows:

Exhibit 1 Joint Filing Agreement

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**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: September 6, 2022

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 Fund GP, LLC  
Its: General Partner

By: /s/ Peter Kolchinsky  
Name: Peter Kolchinsky  
Title: Manager

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AGREEMENT

This Joint Filing Agreement, dated as of September 6, 2022, is by and among RA Capital Management, L.P., Peter Kolchinsky, Rajeev Shah, and RA Capital Healthcare Fund, L.P. (the foregoing are collectively referred to herein as the "Filers").

Each of the Filers may be required to file with the United States Securities and Exchange Commission a statement on Schedule 13G and/or 13D with respect to Common Stock, par value \$0.001 per share of Solid Biosciences Inc. beneficially owned by them from time to time.

Pursuant to and in accordance with Rule 13(d)(1)(k) promulgated under the Securities Exchange Act of 1934, as amended, the Filers hereby agree to file a single statement on Schedule 13G and/or 13D (and any amendments thereto) on behalf of each of such parties, and hereby further agree to file this Joint Filing Agreement as an exhibit to such statement, as required by such rule.

This Joint Filing Agreement may be terminated by any of the Filers upon one week's prior written notice or such lesser period of notice as the Filers may mutually agree.

Executed and delivered as of the date first above written.

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 Fund GP, LLC  
Its: General Partner

By: /s/ Peter Kolchinsky  
Name: Peter Kolchinsky  
Title: Manager

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