

DICERNA PHARMACEUTICALS INC

Filed by
RA CAPITAL MANAGEMENT, LLC

FORM SC 13D/A (Amended Statement of Beneficial Ownership)

Filed 01/19/18

Address	87 CAMBRIDGEPARK DRIVE CAMBRIDGE, MA, 02140
Telephone	617 621 8097
CIK	0001399529
Symbol	DRNA
Fiscal Year	12/31

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 4)*

Dicerna Pharmaceuticals, Inc.
(Name of Issuer)

Common Stock, par value \$0.0001 per share
(Title of Class of Securities)

253031108
(CUSIP Number)

RA Capital Management, LLC
20 Park Plaza, Suite 1200
Boston, MA 02116
Telephone: 617.778.2512
Attn: Peter Kolchinsky
(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

January 17, 2018
(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).

1	Names of Reporting Persons. RA Capital Management, LLC
2	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>
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): <input type="checkbox"/>
6	Citizenship or Place of Organization. Massachusetts
	7 Sole Voting Power 0
Number of Shares Beneficially Owned by Each Reporting Person With	8 Shared Voting Power 4,462,313
	9 Sole Dispositive Power 0
	10 Shared Dispositive Power 4,462,313
11	Aggregate Amount Beneficially Owned by Each Reporting Person 4,462,313
12	Check 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) 8.6%¹
14	Type of Reporting Person (See Instructions) IA, OO (Limited Liability Company)

¹ Represents 4,462,313 shares of the common stock (the "Common Stock") of Dicerna Pharmaceuticals, Inc. (the "Issuer") which constitutes approximately 8.64% of the class outstanding. The percentage calculation assumes that there are currently 51,641,738 outstanding shares of the Common Stock of the Issuer, based on the Issuer's Form 8-K as filed with the Securities and Exchange Commission ("SEC") on December 29, 2017.

1	Names of Reporting Persons. Peter Kolchinsky
2	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>
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): <input type="checkbox"/>
6	Citizenship or Place of Organization. United States
	7 Sole Voting Power 0
Number of Shares Beneficially Owned by Each Reporting Person With	8 Shared Voting Power 4,462,313
	9 Sole Dispositive Power 0
	10 Shared Dispositive Power 4,462,313
11	Aggregate Amount Beneficially Owned by Each Reporting Person 4,462,313
12	Check 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) 8.6% ²
14	Type of Reporting Person (See Instructions) HC, IN

² Represents 4,462,313 shares of the Common Stock of the Issuer which constitutes approximately 8.64% of the class outstanding. The percentage calculation assumes that there are currently 51,641,738 outstanding shares of the Common Stock of the Issuer, based on the Issuer's Form 8-K as filed with the SEC on December 29, 2017.

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) <input type="checkbox"/> (b) <input type="checkbox"/>
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): <input type="checkbox"/>
6	Citizenship or Place of Organization. Delaware
	7 Sole Voting Power 0
Number of Shares Beneficially Owned by Each Reporting Person With	8 Shared Voting Power 3,908,570
	9 Sole Dispositive Power 0
	10 Shared Dispositive Power 3,908,570
11	Aggregate Amount Beneficially Owned by Each Reporting Person 3,908,570
12	Check 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) 7.6% ³
14	Type of Reporting Person (See Instructions) PN (Limited Partnership)

³ Represents 3,908,570 shares of the Common Stock of the Issuer which constitutes approximately 7.57% of the class outstanding. The percentage calculation assumes that there are currently 51,641,738 outstanding shares of the Common Stock of the Issuer, based on the Issuer's Form 8-K as filed with the SEC on December 29, 2017.

Explanatory Note

This Amendment No. 4 to Schedule 13D (this “Amendment No. 4”) amends and supplements the Statement on Schedule 13D filed with the United States Securities and Exchange Commission on February 5, 2014, as amended to date (the “Statement”) by (i) RA Capital Management, LLC (the “RA Capital”), (ii) Peter Kolchinsky and (iii) RA Capital Healthcare Fund, L.P. (“Fund” and together with each of the foregoing, the “Reporting Persons”), relating to the Common Stock (the “Common Stock”) of Dicerna Pharmaceuticals, Inc. (the “Issuer”). Capitalized terms used herein without definition shall have the meaning set forth in the Statement.

Item 5. Interest in Securities of the Issuer

Item 5(a)-(b) of the Statement is hereby amended and restated in its entirety as follows:

(a)-(b) See Items 7-11 of the cover pages and Item 2 of this Statement.

Item 5(c) of the Statement is hereby amended and supplemented by adding the following:

(c) From the date of the most recent amendment to this Schedule 13D through January 18, 2018, the Reporting Persons disposed of 611,700 shares of Common Stock in a series of open market transactions on the Nasdaq Global Market. Details by date of the transactions are as follows:

Transaction	Date	No. Shares	Price
Sell	29-Dec-2017	85,400	\$9.1026
Sell	29-Dec-2017	23,100	\$9.1288
Sell	02-Jan-2018	68,000	\$9.4655
Sell	03-Jan-2018	59,100	\$9.2533
Sell	04-Jan-2018	77,400	\$9.1978
Sell	05-Jan-2018	18,100	\$9.1461
Sell	17-Jan-2018	220,900	\$9.3254
Sell	18-Jan-2018	59,700	\$9.2271

(d) None.

(e) 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: January 19, 2018

RA CAPITAL MANAGEMENT, LLC

By: /s/ Rajeev Shah

Rajeev Shah
Authorized Signatory

PETER KOLCHINSKY

/s/ Peter Kolchinsky

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Management, LLC
Its: General Partner

By: /s/ Rajeev Shah

Rajeev Shah
Authorized Signatory
