UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): October 22, 2018

DICERNA PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	001-36281	20-5993609
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification Number)

87 Cambridgepark Drive
Cambridge, MA 02140
(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code: (617) 621-8097

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (See General Instruction A.2 below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item 1.01. Entry into a Material Definitive Agreement.

Alexion Collaborative Research and License Agreement

On October 22, 2018, Dicerna Pharmaceuticals, Inc. (the "Company") and Alexion Pharma Holding Unlimited Company ("Alexion Pharma Holding"), an affiliate of Alexion Pharmaceuticals, Inc. ("Alexion Pharmaceuticals" and together with Alexion Pharma Holding, "Alexion") entered into a Collaborative Research and License Agreement (the "Alexion Collaboration Agreement"). The Alexion Collaboration Agreement is for the joint discovery and development of RNA interference ("RNAi") therapies for complement-mediated diseases. Under the terms of the Alexion Collaboration Agreement, the Company and Alexion will collaborate on the discovery and development of subcutaneously delivered GalXC™ candidates, currently in pre-clinical development, for the treatment of complement-mediated diseases with potential global commercialization by Alexion.The Company will lead the joint discovery and research efforts through the pre-clinical stage, and Alexion will lead development efforts beginning with Phase 1 studies. The Company will be responsible for manufacturing of the GalXC™ candidates through the completion of Phase 1, the costs of which will be paid by Alexion. Alexion will be solely responsible for the manufacturing of any product candidate subsequent to the completion of Phase 1. The Alexion Collaboration Agreement provides Alexion with exclusive worldwide licenses as well as development and commercial rights for two of the Company's pre-clinical, subcutaneously delivered GalXC™ RNAi candidates and an exclusive option for the discovery and development of GalXC RNAi candidates against two additional complement pathway targets (the "Option").

Under the terms of the Alexion Collaboration Agreement, Alexion will pay the Company a non-refundable, non-reimbursable, and non-creditable upfront payment of $22.0 million, with Alexion Pharmaceuticals making a concurrent equity investment in the Company of approximately $15.0 million pursuant to a share issuance agreement between the Company and Alexion Pharmaceuticals (the "Alexion Share Issuance Agreement"). The Alexion Collaboration Agreement also provides for potential additional payments to the Company of up to $600.0 million, which is comprised of the Option exercise fees of up to $20.0 million, representing $10.0 million for each of the candidates selected; development milestones of up to $105.0 million for each product; and aggregate sales milestones of up to $160.0 million. Under the agreement, Alexion will also pay to the Company mid-single to low-double digit royalties on product sales on a country-by-country, product-by-product basis until the later of the expiration of patent rights in a country, the expiration of market or regulatory exclusivity in such country, or 10 years after the first product sale in such country.

The Alexion Collaboration Agreement includes various representations, warranties, covenants, indemnities, and other customary provisions. Alexion may terminate the Alexion Collaboration Agreement at any time without cause following a 90-day notice period. Either party may terminate the Alexion Collaboration Agreement in the event of an uncured material breach or insolvency of the other party.

Alexion Share Issuance Agreement

In connection with the Alexion Collaboration Agreement, the Company and Alexion entered into the Alexion Share Issuance Agreement on October 22, 2018, pursuant to which the Company agreed to issue to Alexion 835,834 shares (the "Alexion Shares") of the Company's common stock, par value $0.0001 per share ("Common Stock") at a purchase price of $17.95 per share for an aggregate purchase price of approximately $15.0 million. The Alexion Share Issuance Agreement contains customary representations and warranties of each party.

Pursuant to the terms of the Alexion Share Issuance Agreement, Alexion may not, without the prior approval of the Company, dispose of any of the Alexion Shares for a six-month period of time commencing on the closing date of the Alexion Share issuance.

The foregoing summaries are qualified in their entirety by reference to the Alexion Collaboration Agreement and Alexion Share Issuance Agreement (together, the "Agreements"). The Company will seek confidential treatment from the Securities and Exchange Commission for portions of the Alexion Collaboration Agreement. The Agreements, subject to such confidential treatment with respect to the Alexion Collaboration Agreement, which will be filed as exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2018.

Item 3.02. Unregistered Sale of Equity Securities.

As described in the section titled "*Alexion Share Issuance Agreement*" in Item 1.01 of this Current Report on Form 8-K, which is incorporated in this Item 3.02 by reference, the Company agreed to sell the Alexion Shares to Alexion on October 22, 2018 pursuant to the Alexion Share Issuance Agreement. The Alexion Shares were offered and will be issued in a private placement exempt from registration pursuant to Section 4(a)(2) of the Securities Act, or Regulation D promulgated thereunder, as transactions by an issuer not involving a public offering. Alexion has represented it will acquire the Alexion Shares for investment only and not with the intent to sell in connection with any distribution thereof, and an appropriate legend will be applied to the Alexion Shares.

Cautionary Note on Forward-Looking Statements

This Current Report on Form 8-K includes forward-looking statements. Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. Examples of forward-looking statements include, among others, statements we make regarding: (i) potential option payments, research, development, or sales milestone payments, or royalty payments, or (ii) therapeutic and commercial potential of GalXC™ inferred from the statements regarding such payments. The process by which an early stage platform such as GalXC could potentially lead to an approved product is long and subject to highly significant risks, particularly with respect to a pre-clinical research collaboration. Applicable risks and uncertainties include those relating to our pre-clinical research and other risks identified under the heading "Risk Factors" included in the Company's most recent Form 10-Q filing and in other future filings with the SEC. The forward-looking statements contained in this Current Report on Form 8-K reflect the Company's current views with respect to future events, and the Company does not undertake and specifically disclaims any obligation to update any forward-looking statements.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: October 24, 2018

DICERNA PHARMACEUTICALS, INC.

By: /s/ Douglas M. Fambrough, III
Douglas M. Fambrough, III., Ph.D.
Chief Executive Officer