

**Prospectus Supplement No. 42
(To Prospectus dated October 14, 2015)**



**4,000,000 shares of common stock issuable
upon the exercise of the 4,000,000
outstanding Class A warrants**

and

**2,000,000 shares of common stock issuable
upon the exercise of the 4,000,000
outstanding Class B warrants**

This prospectus supplement No. 42 supplements the prospectus dated October 14, 2015 filed pursuant to Rule 424(b)(4) by Cerecor Inc. (the “Company” or “we”), as supplemented by the prospectus supplement No. 1 dated October 20, 2015, the prospectus supplement No. 2 dated November 13, 2015, the prospectus supplement No. 3 dated November 23, 2015, the prospectus supplement No. 4 dated December 17, 2015, the prospectus supplement No. 5 dated December 21, 2015, the prospectus supplement No. 6 dated December 29, 2015, the prospectus supplement No. 7 dated January 5, 2016, the prospectus supplement No. 8 dated January 12, 2016, the prospectus supplement No. 9 dated January 19, 2016, the prospectus supplement No. 10 dated February 2, 2016, the prospectus supplement No. 11 dated April 11, 2016, the prospectus supplement No. 12 dated May 25, 2016, the prospectus supplement No. 13 dated May 26, 2016, the prospectus supplement No. 14 dated May 26, 2016, the prospectus supplement No. 15 dated July 20, 2016, the prospectus supplement No. 16 dated August 15, 2016, the prospectus supplement No. 17 dated August 29, 2016, the prospectus supplement No. 18 dated September 6, 2016, the prospectus supplement No. 19 dated September 12, 2016, the prospectus supplement No. 20 dated September 21, 2016, the prospectus supplement No. 21 dated September 26, 2016, the prospectus supplement No. 22 dated November 8, 2016, the prospectus supplement No. 23 dated November 29, 2016, the prospectus supplement No. 24 dated December 5, 2016, the prospectus supplement No. 25 dated January 20, 2017, the prospectus supplement No. 26 dated January 27, 2017, the prospectus supplement No. 27 dated January 30, 2017, the prospectus supplement No. 28 dated March 2, 2017, the prospectus supplement No. 29 dated March 13, 2017, the prospectus supplement No. 30 dated March 15, 2017, the prospectus supplement No. 31 dated May 9, 2017, the prospectus supplement No. 32 dated July 7, 2017, the prospectus supplement No. 33 dated July 7, 2017, the prospectus supplement No. 34 dated August 14, 2017, the prospectus supplement No. 35 dated August 14, 2017, the prospectus supplement No. 36 dated August 25, 2017, the prospectus supplement No. 37 dated October 17, 2017, the prospectus supplement No. 38 dated October 20, 2017, the prospectus supplement No. 39 dated November 6, 2017, the prospectus supplement No. 40 dated November 17, 2017, and the prospectus supplement No. 41 dated February 12, 2018, each filed pursuant to Rule 424(b)(3) by the Company (collectively, the “Prospectus”). Pursuant to the Prospectus, this prospectus supplement relates to the continuous offering of 4,000,000 shares of common stock underlying our Class A warrants. Each warrant was a component of a unit that we issued in our initial public offering, which closed on October 20, 2015. The components of the units began to trade separately on November 13, 2015. Each Class A warrant became exercisable on the date when the units detached and the components began to trade separately and will expire on October 20, 2018, or earlier upon redemption.

This prospectus supplement incorporates into our Prospectus the information contained in our attached Current Report on Form 8-K, which was filed with the Securities and Exchange Commission on February 23, 2017.

You should read this prospectus supplement in conjunction with the Prospectus, including any supplements and amendments thereto. This prospectus supplement is qualified by reference to the Prospectus except to the extent that the information in this prospectus supplement supersedes the information contained in the Prospectus.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any supplements and amendments thereto.

Our common stock, the Class A warrants are traded on The NASDAQ Capital Market under the symbols “CERC,” and “CERCW,” respectively.

AN INVESTMENT IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. SEE THE SECTION ENTITLED “RISK

FOR A DISCUSSION OF INFORMATION THAT SHOULD BE CAREFULLY CONSIDERED IN CONNECTION WITH AN INVESTMENT IN OUR SECURITIES

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is February 23, 2018

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 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) **February 16, 2018**

CERECOR INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

001-37590

(Commission File Number)

45-0705648

(IRS Employer Identification No.)

400 E. Pratt Street, Suite 606, Baltimore, Maryland 21202

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code **(410) 522-8707**

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:

- 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-4(c))

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.

As previously disclosed in the Current Report on Form 8-K filed by Cerecor Inc. (the “*Company*”) on February 12, 2018, the Company entered into a licensing and development agreement with Flamel Ireland Limited (“Avadel Ireland”), a subsidiary of Avadel US Holdings, Inc., dated February 16, 2018 (the “Development Agreement”).

A description of the Development Agreement is included in Item 1.01 of the Current Report on Form 8-K filed by the Company on February 12, 2018, and such description is incorporated into this Item 1.01 by reference.

Item 2.01. Completion of Acquisition or Disposition of Assets.

On February 16, 2018, the Company closed its previously disclosed acquisition (the “Transaction”) of certain pediatric products of Avadel US Holdings, Inc., Avadel Pharmaceuticals (USA), Inc., Avadel Pediatrics, Inc., Avadel Therapeutics, LLC and Avadel Pharmaceuticals PLC. For more information on the Transaction and the Asset Purchase Agreement associated with the Transaction, see the Form 8-K the Company filed on February 12, 2018, which is incorporated into this Item 2.01 by reference.

Item 9.01. Financial Statements and Exhibits.

a) Financial Statements of Businesses Acquired.

To the extent required, the Company intends to file the financial statements required by Item 9.01(a) as part of an amendment to this Current Report on Form 8-K no later than 71 calendar days after the required filing date for this Current Report on Form 8-K.

(b) Pro Forma Financial Information.

To the extent required, the Company intends to file the pro forma financial information required by Item 9.01(b) as an amendment to this Current Report on Form 8-K no later than 71 days after the required filing date for this Current Report on Form 8-K.

SIGNATURE

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

CERECOR INC.

Date: February 23, 2018

/s/ Mariam Morris

Mariam Morris
Chief Financial Officer