Prospectus Supplement No. 8 (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. 8 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 and the prospectus supplement No. 7 dated January 5, 2016, 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 and 2,000,000 shares of our common stock underlying Class B 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. Each Class B warrant became exercisable on the date the units detached and the components began to trade separately and will expire on April 20, 2017.

This prospectus supplement incorporates into our Prospectus the information contained in Item 5.02 of our attached Current Report on Form 8-K, which was filed with the Securities and Exchange Commission on January 12, 2016.

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 and the Class B warrants are traded on The NASDAQ Capital Market under the symbols "CERC," "CERCW," and "CERCZ," respectively.

AN INVESTMENT IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. SEE THE SECTION ENTITLED "RISK FACTORS" BEGINNING ON PAGE 16 OF THE PROSPECTUS 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.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

| FORM 8-K | |
|----------|--|
| | |

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

CURRENT REPORT

Date of Report (Date of earliest event reported): January 10, 2016

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
(Address of Principal Executive Offices)

21202

(Zip Code)

Registrant's Telephone Number, Including Area Code: (410) 522-8707

Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

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 Instructions 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-4(c)) |
| |

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(d) Appointment of Thomas Aasen as Director

Board. Mr. Aasen will serve as a Class III director and will also serve as a member of the audit committee of the Board.

Mr. Aasen, age 55, served in various roles at Acadia Pharmaceuticals Inc. from 1998 to 2014, most recently as the Executive Vice President, Chief Financial Officer and Chief Business Officer. Previously, Mr. Aasen held financial management positions at three other life sciences companies, including Axys Pharmaceuticals, formerly Sequana Therapeutics, Genta, Inc., and Gen-Probe, Inc. Earlier in his career, Mr. Aasen held various positions at KPMG Peat Marwick, including Audit Manager. Mr. Aasen received his B.S. in Business Administration (Accounting) from San Diego State University. Our Board believes that Mr. Aasen's extensive financial management experience in biopharmaceutical companies will make him a valuable member of the Board.

There are no arrangements or understandings between Mr. Aasen and any other person pursuant to which he was selected as a director of the Company, and there is no family relationship between Mr. Aasen and any of the Company's other directors or executive officers.

Item 7.01. Regulation FD Disclosure.

On January 12, 2016, the Company issued a press release announcing Mr. Aasen's appointment to the Board. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report.

The information in this Item 7.01 of this Current Report on Form 8-K (including Exhibit 99.1) is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section. The information in this Current Report shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

| Exhibit No. | Description |
|----------------|--|
| 99.1 | Press Release, dated January 12, 2016 entitled "Cerecor Inc. Appoints Thomas Aasen to Board of Directors." |
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SIGNATURES

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 thereunto duly authorized.

Cerecor Inc.

By: /s/ Mariam Morris

Mariam Morris Chief Financial Officer

Date: January 12, 2016

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EXHIBIT INDEX

| Exhibit No. | Description |
|----------------|---|
| 99.1 | Press Release, dated January 12, 2016, entitled "Cerecor Inc. Appoints Thomas Aasen to Board of Directors." |
| | 4 |



Cerecor Inc. Appoints Thomas Aasen to Board of Directors

Baltimore, MD—January 12, 2016 — Cerecor Inc. (NASDAQ: CERC), a biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders, today announced Thomas H. Aasen has joined its Board of Directors and will serve on its Audit Committee. Mr. Aasen is a financial executive with over thirty years of professional experience, including financial management positions in four publicly held life science companies.

"Tom brings extensive financial experience and leadership to our Board," said Dr. Uli Hacksell, Chief Executive Officer, President and Chairman. "Over the course of his career, Tom has successfully proven his financial expertise through his role of managing ACADIA Pharmaceutical's initial public offering and multiple follow-on offerings raising net proceeds of over \$700 million. His deep knowledge and expertise are welcome as we deliver on our vision of providing sound financial guidance while building a leading CNS company dedicated to improving the lives of patients through innovative medicines."

Mr. Aasen served as the Executive Vice President, Chief Financial Officer, Chief Business Officer, and Treasurer of ACADIA prior to his retirement in 2014. Mr. Aasen has held financial management positions at several publically traded life sciences companies, including Axys Pharmaceuticals, formerly called Sequana Therapeutics, Genta, Inc., and Gen-Probe, Inc. Earlier in his career, Mr. Aasen held various positions in public accounting at KPMG Peat Marwick, including Audit Manager. He has 30 years of professional finance and accounting experience focused primarily on the life sciences industry. Mr. Aasen received a B.S. degree with honors from San Diego State University and is a licensed certified public accountant (inactive status) in the State of California.

About Cerecor

Cerecor Inc. is a Baltimore-based biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric diseases by addressing the unmet medical needs of underserved patient segments. We are committed to the development of drugs that improve lives by applying our extensive knowledge and experience in central nervous system disorders. For more information about the Company and its products, please visit: www.cerecor.com or contact Mariam E. Morris, Chief Financial Officer, at (443) 304-8002.

Media Contact:

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