Filed Pursuant to Rule 424(b)(3)
Registration No. 333-204905

Prospectus Supplement No. 18
(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

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This prospectus supplement No. 18 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 and the prospectus supplement No. 17 dated August 29, 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 8.01 of our attached Current Report on Form 8-K, which was filed with the Securities and Exchange Commission on September 6, 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.

The date of this prospectus supplement is September 6, 2016

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): **September 6, 2016**

Cerecor Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-37590**	**45-0705648**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(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**

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 7.01. Regulation FD Disclosure.

On September 6, 2016, Cerecor Inc. (the "***Company***") issued a press release, further described in Item 8.01 below, in connection with the completion of patient enrollment of its Phase 2 clinical trial with CERC-501 for smoking cessation. A copy of the press release is attached hereto as Exhibit 99.1 and incorporated herein by reference.

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 8.01. Other Events.

Completion of Patient Enrollment of Phase 2 Clinical Trial with CERC-501 for Smoking Cessation

On September 6, 2016, the Company announced the completion of patient enrollment in its Phase 2 clinical trial with CERC-501, "*A Randomized, Double-Blind, Placebo-Controlled, Cross-over Design Study of CERC-501 in a Human Laboratory Model of Smoking Behavior."* The Company expects to report top-line data from this trial in December 2016. The primary objective of the study is to evaluate the effect of CERC-501 compared to placebo on symptoms of tobacco withdrawal and smoking behaviors.

Item 9.01. Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Press Release, dated September 6, 2016, entitled "Cerecor Announces Last Patient Enrolled in Phase 2 Clinical Trial with CERC-501 for Smoking Cessation."

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: September 6, 2016

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release, dated September 6, 2016, entitled "Cerecor Announces Last Patient Enrolled in Phase 2 Clinical Trial with CERC-501 for Smoking Cessation."

Cerecor Announces Last Patient Enrolled in Phase 2 Clinical Trial with CERC-501 for Smoking Cessation

Top-Line Phase 2 Data Expected in December 2016

BALTIMORE--(BUSINESS WIRE)-- **September 6, 2016** -- Cerecor Inc. (NASDAQ: CERC), a clinical-stage biopharmaceutical company developing treatments to make a difference in the lives of patients with neurological and psychiatric disorders, today announced that it has completed patient enrollment in its Phase 2 clinical trial for CERC-501, *"A Randomized, Double-Blind, Placebo-Controlled, Cross-over Design Study of CERC-501 in a Human Laboratory Model of Smoking Behavior*." The Company expects to report top-line data from this trial in the beginning of December 2016.

Cerecor launched its Phase 2 clinical trial with CERC-501 for smoking cessation in February 2016. The double-blind, placebo-controlled, crossover study randomized 71 subjects who are heavy cigarette smokers and currently not seeking treatment for tobacco use disorder. In period one, half the subjects in each group received CERC-501 and the other half received placebo. Next, "crossover" occurred and subjects received the opposite treatment during period two, after a "wash-out period." The crossover design allows for subjects to be their own control. The primary objective of the study is to evaluate the effect of CERC-501 compared to placebo on symptoms of tobacco withdrawal and smoking behaviors.

About CERC-501
CERC-501 is a potent and selective oral kappa opioid receptor ("KOR") antagonist being developed to treat substance use disorders and as an adjunctive treatment of major depressive disorder ("MDD"). KORs have been shown to play an important role in stress, mood and addiction. CERC-501 has been observed to have positive activity in animal models of depression, nicotine withdrawal and alcohol dependence, and it has been generally well tolerated in three human clinical trials.

In addition to Cerecor's Phase 2 trial in smokers, three externally-funded clinical trials are being conducted to evaluate the use of CERC-501 in treating depressive symptoms, stress-related smoking relapse and cocaine addiction. One study is being conducted under the auspices of the National Institute of Mental Health, the second is a collaboration between Cerecor and Yale investigators with funding from the National Institutes of Health and the third is being conducted at Rockefeller University Hospital with funding from a private foundation. Cerecor is planning to initiate a Phase 2 study with CERC-501 as an adjunctive treatment of MDD in 2017.

About Cerecor
Cerecor is a clinical-stage biopharmaceutical company developing innovative drug candidates to make a difference in the lives of patients with neurological and psychiatric disorders. We are committed to the development of drugs that improve lives by applying our extensive knowledge and experience in central nervous system disorders. In addition to CERC-501, Cerecor is currently pursuing the development of CERC-301, which is also a clinical Phase 2-stage product candidate.

CERC-301 is an oral, NR2B specific N-methyl-D-aspartate receptor antagonist that is currently in a Phase 2 clinical trial as an oral, rapidly acting adjunctive treatment for patients with severe major MDD who are failing to achieve an adequate response to their current antidepressant treatment, with a rapid onset of effect. We expect top-line data from this trial in the first half of 2017. Cerecor received fast track designation by the United States Food and Drug Administration in November 2013 for CERC-301 for the treatment of MDD. We believe CERC-301 has the potential to be a first-in-class medication that may significantly reduce depressive symptoms in a matter of days.

Cerecor has one preclinical stage asset, CERC-406, a brain penetrant catechol-O-methyltransferase inhibitor with potential procognitive activity.

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.

Forward-Looking Statements
This press release may include forward-looking statements made pursuant to the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts. Such forward-looking statements are subject to significant risks and uncertainties that are subject to change based on various factors (many of which are beyond Cerecor's control), which could cause actual results to differ from the forward-looking statements. Such statements may include, without limitation, statements with respect to Cerecor's plans, objectives, projections, expectations and intentions and other statements identified by words such as "projects," "may," "will," "could," "would," "should," "continue," "seeks," "aims," "predicts," "believes," "expects," "anticipates," "estimates," "intends," "plans," "potential" or similar expressions (including their use in the negative), or by discussions of future matters such as the development of product candidates or products, technology enhancements, possible changes in legislation, and other statements that are not historical. These statements are based upon the current beliefs and expectations of Cerecor's management but are subject to significant risks and uncertainties, including those detailed in Cerecor's filings with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements. Except as required by applicable law, Cerecor expressly disclaims any obligations or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Cerecor's expectations with respect thereto or any change in events, conditions or circumstances on which any statement is based.

MacDougall Biomedical Communications
Doug MacDougall or Joe Rayne, 781-235-3060
ir@cerecor.com