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

Prospectus Supplement No. 10
(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. 10 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 and the prospectus supplement No. 9 dated January 19, 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 February 2, 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 February 2, 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): **February 2, 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 February 2, 2016, Cerecor Inc. (the "***Company***") issued a press release, further described in Item 8.01 below, in connection with its Phase 2 clinical trial for smoking cessation for CERC-501. 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.

CERC-501 Phase 2 Clinical Trial for Smoking Cessation

On February 2, 2016, the Company announced that it had enrolled its first subject in the 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 study is a thirty-day, double-blind, placebo-controlled, crossover study in subjects who are heavy cigarette smokers and currently not seeking treatment for tobacco use disorder, and the trial design assumes enrollment of 66 subjects.

Massachusetts General Hospital CERC-501 Phase 2 Clinical Trial for Treatment-Resistant Depression

The National Institutes of Health (NIH) discontinued the National Institute of Mental Health-funded Phase 2 clinical trial for CERC-501, "*Double-Blind, Placebo Controlled, Proof-of-Concept Trial of LY2456302, a Kappa Selective Opioid Receptor Antagonist, and Augmentation of Antidepressant Therapy in Treatment-Resistant Depression*," which was sponsored by Massachusetts General Hospital. The Company has been advised that the reason for the discontinuation is slow study progression.

Item 9.01. Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Press Release, dated February 2, 2016, entitled "Cerecor Announces Initiation of 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: February 2, 2016

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release, dated February 2, 2016, entitled "Cerecor Announces Initiation of Phase 2 Clinical Trial With CERC-501 for Smoking Cessation."

Exhibit 99.1

Cerecor Announces Initiation of Phase 2 Clinical Trial With CERC-501 for Smoking Cessation

Baltimore, MD —February 2, 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 the Company

has enrolled its first subject in the 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"*.

This is a thirty-day, double-blind, placebo-controlled, crossover study in subjects who are heavy cigarette smokers and currently not seeking treatment for tobacco use disorder. "We are enthusiastic about the potential use of CERC-501 for smoking cessation as well as other addictive disorders," said Ronald Marcus, M.D., Chief Medical Officer and Head of Regulatory Affairs at Cerecor. The trial design assumes enrollment of 66 subjects who are heavy smokers. In Period 1, half the subjects in each group will receive CERC-501 and the other half will receive placebo. Each subject will then "crossover" to the opposite treatment during Period 2 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 in subjects who are not seeking treatment for tobacco use disorder. The Company expects to have top-line data in the second half of 2016.

"CERC-501 is selective kappa opioid receptor antagonist that holds the promise to treat a broad range of mood and substance use disorders," said Uli Hacksell, Ph.D., Cerecor's CEO, President and Chairman. "For the millions of people who express a desire to reduce, or stop using nicotine, we hope CERC-501 proves to be a safe and effective therapy."

About CERC-501

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

About Cerecor

Cerecor is 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 diseases. We are committed to the development of drugs that improve lives by applying our extensive knowledge and experience in central nervous system disorders. Cerecor is currently pursuing the development of two clinical Phase II-stage product candidates: CERC-301: An oral, NR2B specific, NMDA receptor antagonist targeting the adjunctive treatment of

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patients with MDD who are failing to achieve adequate response, and CERC-501. In addition Cerecor is conducting preclinical testing of CERC-406, a brain penetrant COMT 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," "believes," "expects," "anticipates," "estimates," "intends," "plans," "potential" or similar expressions. 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.

Media Contact

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