Prospectus Supplement No. 47 (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. 47 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, the prospectus supplement No. 41 dated February 12, 2018, the prospectus supplement No. 42 dated February 23, 2018, the prospectus supplement No. 43 dated April 2, 2018, the prospectus supplement No. 44 dated April 2, 2018, the prospectus supplement No. 45 dated May 11, 2018, and the prospectus supplement No. 46 dated May 21, 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 amendment to our Annual Report on Form 10-K, which was filed with the Securities and Exchange Commission on May 25, 2018.

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 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

The date of this prospectus supplement is May 25, 2018

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Amendment No. 1)

(Mark One)

■ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
 ACT OF 1934

For the fiscal year ended December 31, 2017

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File No. 001-37590

Cerecor Inc.

(Exact name of registrant as specified in its charter)

Delaware

45-0705648

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

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

(Address of principal executive offices)

Telephone: (410) 522-8707

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class
Common Stock, \$0.001, par value

Name of each exchange on which registered

Class A Warrants, consisting of the right to purchase one share of common stock at an exercise price of \$4.55 per share

Class B Warrants, consisting of the right to purchase one-half share of

NASDAQ Stock Market

common stock at an exercise price of \$3.90 per share

Securities registered pursuant to section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes \square No \boxtimes

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes \square No \boxtimes

Indicate by check mark whether the registrant (1) has filed reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes \boxtimes No \square

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T ($\S232.405$ of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes \boxtimes No \square

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (\S 299.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. \square

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

smaller reporting 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.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes \square No \boxtimes

The aggregate market value of the registrant's shares of common stock held by non-affiliates of the registrant as of June 30, 2017 (based on the closing price of \$0.573 on that date) was \$5,882,756. Shares of common stock held by each officer and directors and by each person known to be the registrant who owned 10% or more of the outstanding common stock have been excluded in that such person may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 16, 2018, there were 31,379,778 outstanding shares of the registrant's common stock, par value \$0.001 per share.

Documents Incorporated by Reference: Portions of the registrant's Definitive Proxy Statement to be filed with the Securities and Exchange Commission no later than 120 days after the end of the registrant's fiscal year ended December 31, 2017, are incorporated by reference in Part III of this Annual Report on Form 10-K.

EXPLANATORY NOTE

Cerecor Inc. (the "Company") is filing this Amendment No. 1 ("Amendment No. 1") to its Annual Report on Form 10-K for the year ended December 31, 2017, originally filed with the Securities and Exchange Commission ("SEC") on April 2, 2018 (the "Original Filing") for the sole purpose of amending and restating the disclosures in Part II, Item 9A of the Original Filing to add additional disclosure with respect to management's assessment of the Company's disclosure controls and procedures.

In accordance with applicable SEC rules, Amendment No. 1 includes new certifications from the Company's principal executive officer and principal financial officer dated as of the date of filing of this Amendment No. 1.

This Amendment No. 1 consists solely of the preceding cover page, this explanatory note, Part II, Item 9A, "Controls and Procedures," in its entirety, Part IV, Item 15, "Exhibits and Financial Statement Schedules," in its entirety, the signature page, and the new certifications from the Company's Principal Executive Officer and Principal Financial Officer.

Except as set forth above, the Original Filing has not been amended, updated or otherwise modified, and does not reflect events occurring after April 2, 2018, the date of the Original Filing, or modify or update those disclosures that may have been affected by subsequent events. Accordingly, this Amendment No. 1 should be read in conjunction with the Original Filing and the Company's filings made with the SEC subsequent to the filing of the Original Filing.

2

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this report.

In designing and evaluating our disclosure controls and procedures, management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on their evaluation, our principal executive officer and principal financial officer concluded that as of December 31, 2017 our disclosure controls and procedures are designed to, and are effective to, provide assurance at a reasonable level that the information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosures as of December 31, 2017.

Notwithstanding the identified material weakness described below, management does not believe that these deficiencies had an adverse effect on the company's reported operating results or financial condition and management has determined that the financial statements and other information included in this report and other periodic filings present fairly in all material respects the company's financial condition, results of operations and cash flows at and for the periods presented in accordance with accounting principles generally accepted in the United States ("GAAP").

Our assessment of the effectiveness of our internal control over financial reporting as of December 31, 2017 did not include an assessment of the effectiveness of internal control over financial reporting of TRx Pharmaceuticals, which was acquired on November 17, 2017. The operating results of TRx are included in our consolidated financial statements from the period subsequent to the acquisition date and,

excluding goodwill and intangible assets, include \$3.5 million of assets as of December 31, 2017, and \$2.2 million in net sales for the year then ended. We will include TRx in our 2018 annual assessment of internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

Our management, including our principal executive officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

3

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2017, based on the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 Framework). Based on this evaluation under the 2013 Framework, our principal executive officer and principal financial officer have concluded that the company had the following material weakness in its internal control over financial reporting. Management determined that the company's internal controls were not adequately designed to prevent or timely detect unauthorized cash disbursements. Specifically, certain member's of the finance organization failed to exercise appropriate skepticism and oversight for disbursement of company-owned funds. Management has taken immediate action to begin remediating the material weakness. Management expects to complete the remediation during the first quarter of 2018.

Because of the material weakness, the company's Chief Executive Officer and Chief Financial Officer concluded that the company did not maintain effective internal control over financial reporting as of December 31, 2017. The material weakness did not result in a material misstatement of the company's consolidated financial statements.

Changes in Internal Control Over Financial Reporting

The Company has increased its cash disbursement controls to prevent and timely detect unauthorized cash disbursements beginning in the fourth quarter of 2017. The company believes these changes will improve its financial reporting with respect to our operations, which has materially affected, or is reasonably likely to materially affect, on our internal control over financial reporting.

Attestation Report of Registered Public Accounting Firm

This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm due to an exemption established by the JOBS Act for emerging growth companies.

4

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(b) Exhibits.

The following is a list of exhibits filed as part of this Annual Report on Form 10-K. Where so indicated by footnote, exhibits that were previously filed are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated.

5

Exhibit Number

Description of Exhibit

- 2.1* Asset Purchase Agreement, dated as of August 14, 2017, by and among Cerecor, Inc. and Janssen Pharmaceuticals (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on August 14, 2017).
- 2.2* Equity Interest Purchase Agreement, dated as of November 17, 2017, by and among Cerecor, Inc., TRx

 Pharmaceuticals, LLC, Fremantle Corporation, LRS International LLC, the selling members of TRx Pharmaceuticals,

 LLC, and solely for limited purposes stated therein, Randal O. Jones and Robert C. Moscato, Jr. (incorporated by

- reference to Exhibit 2.1 to the Current Report on Form 8-K filed on November 17, 2017).
- 2.3* Agreement and Plan of Merger and Reorganization, dated as of November 17, 2017, by and among Cerecor, Inc., ZPC Merger Corp., a direct wholly owned subsidiary of Cerecor, Inc., Zylera Pharma Corp., Zylera Pharmaceuticals, LLC, Fremantle Corporation and LRS International LLC (incorporated by reference to Exhibit 2.2 to the Current Report on Form 8-K filed on November 17, 2017).
- 3.1 Amended and Restated Certificate of Incorporation of Cerecor Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 20, 2015).
- 3.1.1 Form of Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock of Cerecor Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on April 28, 2017).
 - 3.2 Amended and Restated Bylaws of Cerecor Inc. (incorporated by reference to Exhibit 3.2 to Amendment No. 1 to the Current Report on Form 8-K filed on October 20, 2015).
 - 4.1 Second Amended and Restated Investors' Rights Agreement, dated as of July 11, 2014 (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.2 Form of Warrant to Purchase Shares of Common Stock issued in connection with the sale of Series A Convertible Preferred Stock (incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.3 Form of Warrant to Purchase Shares of Common Stock issued in connection with the sale of Series A-1 Convertible Preferred Stock, as amended by the Amendment to Common Stock Warrants, dated as of July 11, 2014 (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.4 Form of Warrant to Purchase Shares of Common Stock, issued to CIFCO International Group and its affiliate (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.5 Form of Warrant to Purchase Shares of Common Stock issued in connection with the issuance of convertible promissory notes from April 2014 through June 2014 (incorporated by reference to Exhibit 4.6 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.6 Warrant Agreement, dated as of August 19, 2014, issued to Hercules Technology Growth Capital, Inc. (incorporated by reference to Exhibit 4.7 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 4.7 Form of Unit Purchase Option (incorporated by reference to Annex IV of Exhibit 1.1 to the Registration Statement on Form S-1 filed on October 13, 2015).
 - 4.9 Form of Class A Warrant Agreement (incorporated by reference to Exhibit 4.9 to the Registration Statement on Form S-1 filed on October 13, 2015).
- 4.10 Specimen Class A Warrant Certificate (incorporated by reference to Exhibit 4.10 to the Registration Statement on Form S-1 filed on October 13, 2015).
- 4.11 Form of Class B Warrant Agreement (incorporated by reference to Exhibit 4.11 to the Registration Statement on Form S-1 filed on October 13, 2015).
- 4.12 Specimen Class B Warrant Certificate (incorporated by reference to Exhibit 4.12 to the Registration Statement on Form S-1 filed on October 13, 2015).

6

- 4.13 Specimen Unit Certificate (incorporated by reference to Exhibit 4.13 to the Registration Statement on Form S-1 filed on October 13, 2015).
- 4.14 Registration Rights Agreement, dated as of September 8, 2016, by and between Aspire Capital Fund, LLC and Cerecor Inc. (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on September 12, 2016).
- 4.15 Form of Warrant to Purchase Common Stock of Cerecor Inc. issued to Armistice Capital Master Fund Ltd. (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on April 28, 2017).
- 10.1 # Exclusive Patent and Know-How License Agreement, effective as of March 19, 2013, by and between Essex Chemie AG and Cerecor Inc. (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.2 # Exclusive Patent and Know-How License Agreement, effective as of March 19, 2013, by and between Essex Chemie AG and Cerecor Inc. (incorporated by reference to Exhibit 10.2 to the Registration Statement on Form S-1 filed on June 12, 2015).

- 10.3 # Exclusive Patent and Know-How License Agreement, effective as of February 18, 2015, by and between Eli Lilly and Company and Cerecor Inc. (incorporated by reference to Exhibit 10.3 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.4 + Cerecor Inc. 2011 Stock Incentive Plan, as amended, including forms of Incentive Stock Option Agreements and Nonqualified Stock Option Agreements thereunder (incorporated by reference to Exhibit 10.4 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.5 + Cerecor Inc. 2015 Omnibus Incentive Plan, including form of Nonqualified Stock Option Agreements thereunder (incorporated by reference to Exhibit 10.5 to the Registration Statement on Form S-1 filed on September 8, 2015).
- 10.6 + Offer Letter Agreement by and between Cerecor Inc. and John Kaiser, dated as of September 12, 2012 (incorporated by reference to Exhibit 10.7 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.7 + Offer Letter Agreement by and between Cerecor Inc. and James Vornov, dated as of September 18, 2012 (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.8 + Offer Letter Agreement by and between Cerecor Inc. and Ronald Marcus, dated as of May 5, 2015 (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.8.1+ Amendment to Offer Letter Agreement by and between Cerecor Inc. and Ronald Marcus, effective as of March 9, 2017.
- 10.9 + Offer Letter Agreement by and between Cerecor Inc. and Uli Hacksell, dated as of May 20, 2015 (incorporated by reference to Exhibit 10.11 to the Registration Statement on Form S-1 filed on June 12, 2015).
- 10.10 + Offer Letter Agreement by and between Cerecor Inc. and Mariam Morris, effective as of August 24, 2015 (incorporated by reference to Exhibit 10.11 to the Registration Statement on Form S-1 filed on September 8, 2015).
- 10.10 .1+ Amendment to Offer Letter Agreement by and between Cerecor Inc. and Mariam Morris, effective as of March 9, 2017.

7

- 10.11 + Employment Agreement by and between Cerecor Inc. and Uli Hacksell, effective January 1, 2016 (incorporated by reference to Exhibit 10.11 to the Annual Report on Form 10-K filed on March 23, 2016).
- 10.12 + Separation Agreement by and between Cerecor Inc. and Blake Paterson, effective January 9, 2016 (incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K filed on March 23, 2016).
- 10.13 + Form of Director Indemnification Agreement (incorporated by reference to Exhibit 10.12 to the Registration Statement on Form S-1 filed on September 8, 2015).
 - 10.14 <u>List of current directors with a Director Indemnification Agreement in the form provided as Exhibit 10.12 (incorporated by reference to Exhibit 10.13 to the Registration Statement on Form S-1 filed on September 8, 2015).</u>
 - 10.15 <u>Lease Agreement by and between Cerecor Inc. and PDL Pratt Associates, LLC, dated as of August 8, 2013</u> (incorporated by reference to Exhibit 10.14 to the Registration Statement on Form S-1 filed on June 12, 2015).
 - 10.16 <u>Loan and Security Agreement, dated as of August 19, 2014, by and between Cerecor Inc. and Hercules Technology Growth Capital, Inc. (incorporated by reference to Exhibit 10.15 to the Registration Statement on Form S-1 filed on June 12, 2015).</u>
 - 10.17 Non-Employee Director Compensation Plan (incorporated by reference to Exhibit 10.17 to the Annual Report on Form 10-K filed on March 23, 2016).
- 10.18 + Cerecor Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 20, 2016).
- 10.19 + Cerecor Inc. 2016 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on May 20, 2016).
 - 10.20 Common Stock Purchase Agreement, dated as of September 8, 2016, by and between Aspire Capital Fund, LLC and Cerecor Inc. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on September 12, 2016).
- 10.21 # Exclusive License Agreement, dated as of September 8, 2016, by and between Cerecor Inc. and Eli Lilly and Company (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on November 8, 2016).
- 10.21.1 Addendum to Exclusive License Agreement, dated as of October 13, 2016, by and between Cerecor Inc. and Eli Lilly and Company (incorporated by reference to Exhibit 10.1.1 to the Quarterly Report on Form 10-Q filed on November 8, 2016).

- Equity Distribution Agreement, dated as of January 27, 2017, by and between Cerecor Inc. and Maxim Group LLC (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on January 27, 2017).
- 10.23# Securities Purchase Agreement, dated as of April 27, 2017, by and between Cerecor, Inc. and Armistice Capital Master Fund Ltd. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on April 28, 2017).
- 10.24 Registration Rights Agreement, dated as of April 27, 2017, by and between Cerecor, Inc. and Armistice Capital Master Fund Ltd. (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on April 28, 2017).

8

- 10.25+ Employment Agreement by and between Cerecor Inc. and Robert C. Moscato, Jr., effective November 21, 2017. (incorporated by reference to exhibit 10.25 to the Annual Report on Form 10-K on April 2, 2018).
 - 21.1 <u>List of Subsidiaries of the Registrant. (incorporated by reference to exhibit 21.1 to the Annual Report on Form 10-K on April 2, 2018).</u>
 - 23.1 Consent of Ernst & Young LLP, independent registered public accounting firm. (incorporated by reference to exhibit 23.1 to the Annual Report on Form 10-K on April 2, 2018).
 - 31.1 Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
 - 31.2 Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1 ** Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (incorporated by reference to exhibit 32.1 to the Annual Report on Form 10-K on April 2, 2018).
- 101.INS XBRL Instance Document. (incorporated by reference to exhibit 23.1 to the Annual Report on Form 10-K on April 2, 2018).
- 101.SCH XBRL Taxonomy Extension Schema Document. (incorporated by reference to the Annual Report on Form 10-K on April 2, 2018).
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document. (incorporated by reference to the Annual Report on Form 10-K on April 2, 2018).
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document. (incorporated by reference to the Annual Report on Form 10-K on April 2, 2018).
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document. (incorporated by reference to the Annual Report on Form 10-K on April 2, 2018).
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document. (incorporated by reference to the Annual Report on Form 10-K on April 2, 2018).

C

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and 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.

^{*} The schedules to these agreements have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company agrees to furnish a copy of any schedule omitted from the agreements to the SEC upon request.

[#] Confidential treatment requested under 17 C.F.R. §§ 200.80(b)(4) and 230.406. The confidential portions of this exhibit have been omitted and are marked accordingly. The confidential portions have been filed separately with the Securities and Exchange Commission.

⁺ Management contract or compensatory agreement.

^{**} This certification is being furnished solely to accompany this Annual Report pursuant to 18 U.S.C. Section 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and are not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: May 25, 2018

10

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

- I, Peter Greenleaf, certify that:
- 1. I have reviewed this Annual Report on Form 10-K/A of Cerecor Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 25, 2018 /s/ Peter Greenleaf

Peter Greenleaf Chief Executive Officer (Registrant's Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

- I, Mariam E. Morris, certify that:
- 1. I have reviewed this Annual Report on Form 10-K/A of Cerecor Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact

necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 25, 2018

/s/ Mariam E. Morris

Mariam E. Morris Chief Financial Officer

(Registrant's Principal Financial and Accounting Officer)