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October 9, 2015

VIA FEDEX

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549

Re: Cerecor Inc.
Amendment No. 3 to Registration Statement on Form S-1
Filed on October 1, 2015
File No. 333-204905

Dear Ms. Hayes:

On behalf of our client, Cerecor Inc. (the "Company"), we are responding to the comment of the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") in your letter dated October 9, 2015 (the "Comment Letter") to Dr. Paterson, President and Chief Executive Officer of the Company, with respect to Amendment No. 3 to the Company's Registration Statement on Form S-1 referred to above (the "Registration Statement"). In response to your Comment Letter, set forth below is your comment in bold followed by the Company's response. The page numbers in the bold caption refer to the page in the Registration Statement. All terms used but not defined herein have the meanings assigned to such terms in the Registration Statement.

Capitalization, page 69

- You disclose that you assume the warrants included in your units will be accounted for as equity instruments and that you will not make your final determination on classification until prior to the issuance of your next quarterly financial statements. Please tell us what information is not currently available in order to conclude that**

Almaty Astana Beijing Boston Brussels Chicago Dallas Dubai Frankfurt Hartford Houston London Los Angeles Miami Moscow New York
Orange County Paris Philadelphia Pittsburgh Princeton San Francisco Santa Monica Silicon Valley Singapore Tokyo Washington Wilmington

the warrants would not be accounted for as equity and whether, and, if so, to what extent that information will inform as to the appropriateness of an alternative accounting for the warrants. Notwithstanding, you indicate, in the last risk factor on page 62, that if a registration statement is not available upon the exercise of the warrants the holders will receive restricted shares upon exercise. Please confirm that your warrants explicitly provide for settlement in unregistered shares if a registration statement is not available. Otherwise, tell us why classification of the warrants as liabilities under the guidance in ASC 815-40-25-11 through 25-16 is not appropriate under the operation of the U.S. securities laws regarding the settlement of publicly issued warrants.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Response: The Company has reviewed the provisions of the Class A Warrant Agreement and Class B Warrant Agreement (together, the "Warrants") and has completed its analysis of the equity classification criterion and concluded that the Warrants will be accounted for as equity instruments. Specifically as to your request to confirm that the Warrants explicitly provide for settlement in unregistered shares if a registration statement is not available, the Company has considered the following:

- Section 3.3.2 of the Warrants enables the holders to exercise the Warrants for unregistered shares in the event the Company does not maintain an effective registration statement with the Commission. The ability to utilize the cashless exercise feature is the holder's sole remedy against the Company for failure to maintain the effectiveness of the registration statement and the sole method of exercise of the Warrants during the period an effective registration statement does not exist. In addition, the last sentence of Section 3.3.4 of the Warrants provides that in no event will the Company be obligated to pay the holder any cash consideration upon exercise.
- Section 3.3.2 provides:
 - Notwithstanding anything contained herein to the contrary, if on the date of exercise of the Warrants there is no effective registration statement registering the Warrant Shares, or the prospectus contained therein is not available for the resale of the Warrant Shares, if the Registered Holder desires to exercise the Warrants, the Registered Holder may only exercise the Warrants in whole or in part in lieu of making a cash payment, by providing notice to the Chief Financial Officer of

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the Company in a subscription form of its election to utilize cashless exercise, in which event the Company shall issue to the Holder the number of Warrant Shares determined as follows:

- $X = Y [(A-B)/A]$
- where:
 - X = the number of Warrant Shares to be issued to the Holder.
 - Y = the number of Warrant Shares with respect to which this Warrant is being exercised.
 - A = the fair market value of one share of Common Stock.
 - B = the Warrant Price.

- The last sentence of Section 3.3.4 provides:
 - In addition, in no event will the Company be obligated to pay such Registered Holder any cash consideration upon exercise or otherwise "net cash settle" the Warrant.

As a result, the Company has deleted the wording on pages 15 and 69 of the S-1 stating that "our final determination as to their classification will occur upon completion of a detailed analysis, which will occur prior to the issuance of our next quarterly financial statements".

For the convenience of the Staff's review, copies of this letter and Amendment No. 4 to the Registration Statement, marked to reflect changes against the Registration Statement, are being delivered to Mr. Scot Foley.

If you have any questions, please feel free to contact me at (215) 963-5262 or Kevin Shmelzer at (215) 963-5716.

Sincerely,

/s/ Joanne R. Soslow

Joanne R. Soslow

JRS/avg

c: Blake M. Paterson, M.D.
Kevin S. Shmelzer
Mitchell S. Nussbaum
Tahra T. Wright

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