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December 1, 2016

Via EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Mail Stop 4720
Washington, D.C. 20549
Attention: Suzanne Hayes
Scot Foley
Mary Beth Breslin

**Re: Cerecor Inc.
Registration Statement on Form S-3
Filed November 8, 2016
File No. 333-214507**

Ladies and Gentlemen:

On behalf of Cerecor Inc. (the "**Company**"), we are submitting this letter and the following information in response to comments received from the staff (the "**Staff**") of the Securities and Exchange Commission, by letter dated November 18, 2016 (the "**Comment Letter**"), regarding the Company's Registration Statement on Form S-3, filed on November 8, 2016 (the "**Registration Statement**"). We are also electronically submitting Amendment No. 1 to the Form S-3 (the "**Amended Registration Statement**"), which has been amended in response to the Staff's comments.

Set forth below are the Company's responses to the Staff's comments. For the Staff's convenience, we have incorporated your comments into this response letter in italics.

Prospectus Cover Page

1. *It appears that you are relying on General Instruction I.B.6 of Form S-3 for this offering. If so, please revise your prospectus cover page to disclose the calculation of the aggregate market value of your outstanding voting and nonvoting common equity and the amount of all securities offered pursuant to General Instruction I.B.6 during the prior 12 calendar month period that ends on, and includes, the date of the prospectus. We refer you to Instruction 7 to General Instruction I.B.6.*

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on the prospectus cover page of the Amended Registration Statement accordingly.



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Exhibit Index

2. *We note that you have submitted an application for confidential treatment relating to an exhibit filed with your quarterly report on Form 10-Q on November 8, 2016. Please be advised that this application is being processed and that we will not be in a position to grant effectiveness to your registration statement until such time as the application has completed processing and comments to it, if any, have been resolved.*

Response: The Company respectfully acknowledges the Staff's comment.

3. *We note that you indicate that your Statement of Eligibility of Trustee under the Indenture will be filed by amendment or incorporated by reference to a report filed under the Exchange Act. Please be advised that you should file this Form T-1 not with a post-effective amendment or as incorporated by reference to an Exchange Act filing, but rather under form type "305B2." For guidance, please refer to Trust Indenture Act of 1939 Compliance & Disclosure Interpretation 206.01, available on the Commission's website.*

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure in the Exhibit Index of the Amended Registration Statement accordingly.

Please contact me at (202) 728-7040 or Madison Jones at (202) 728-7087 with any questions or further comments regarding the Company's response to the Comment Letter.

Sincerely,

Cooley LLP

Brent B. Siler, Esq.

cc: Uli Hacksell, Ph.D., Cerecor Inc.

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