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LATHAM & WATKINS LLP

June 22, 2015

VIA EDGAR AND HAND DELIVERY

Mr. Jeffrey P. Riedler
Assistant Director
U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Mail Stop 3720
Washington, D.C. 20549

Re: Seres Therapeutics, Inc. Registration Statement on Form S-1 (Reg. no. 333-204484)

Dear Mr. Riedler:

On behalf of Seres Therapeutics, Inc., a Delaware corporation (the "***Company***"), we are transmitting this letter in response to comments received from the staff (the "***Staff***") of the Securities and Exchange Commission (the "***Commission***") by letter dated June 15, 2015 with respect to the Company's Registration Statement on Form S-1 (as amended, the "***Registration Statement***"). On June 16, 2015, the Company filed Amendment No. 1 to the Registration Statement ("***Amendment No. 1***") to include certain pricing information and to respond to the comment in the Staff's letter. The bold and numbered paragraph below corresponds to the numbered paragraph in the Staff's letter and is followed by the Company's response. For the Staff's convenience, we are also sending a copy of this letter by courier.

Prospectus Summary
Our Product Candidates, page 3

1. **We note your response to comment 1. Please revise your disclosure in the prospectus summary to disclose that you have refined the formulation of the inner capsule and changed the manufacturing process for SER-109 to enable production to meet commercial requirements and that the manufacturing and formulation changes have resulted in a more pure form of SER-109. Please also note that you are conducting pre-validation studies to demonstrate the ability of the manufacturing process to inactivate and clear potential pathogens of concern as you indicate on page 103 of the prospectus. Please also disclose that the FDA has specifically requested that you evaluate your new formulation of SER-109 prior to commencing a Phase 3 clinical trial.**

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 3 and 4 of the Registration Statement to read as follows (revised disclosure has been underlined):

SER-109 is a bacterial spore ecology consisting of an average of 50 bacterial species derived from healthy donors' fecal matter that is designed to prevent further recurrences of CDI in patients suffering from recurrent CDI by restoring the dysbiotic microbiome to a state of health. In our recently completed open label Phase 1b/2 clinical study, 29 of 30 patients, or 97% of patients, achieved a clinical cure, which we defined as the absence of CDI requiring antibiotic treatment during the eight-week period after SER-109 dosing. Additionally, 26 of 30 patients, or 87% of patients, achieved the primary efficacy endpoint of experiencing no recurrence of CDI associated diarrhea during the eight weeks post-treatment. The study demonstrated a favorable safety profile with no serious adverse events considered by the investigators to be attributable to SER-109 treatment. We also performed an analysis of the microbiome using sequencing technology and microbiological analysis to demonstrate a re-establishment of keystone organisms and a rapid increase in bacterial diversity, which enable the restoration of the microbiome to a healthy state. SER-109 has been granted Breakthrough Therapy designation by the FDA. We initiated a Phase 2 clinical study of SER-109 for recurrent CDI and dosed the first patient in May 2015. We expect study results in the middle of 2016. In preparation for the Phase 2 clinical study, we refined the formulation of the inner capsule and changed the manufacturing process for SER-109 to enable production to meet commercial requirements. We believe that the manufacturing and formulation changes have resulted in a more pure form of SER-109 that, based on pre-clinical studies, is comparable in potency to that used in the Phase 1b/2 clinical study. The FDA has requested that we evaluate the new formulation of SER-109 prior to commencing a Phase 3 clinical trial. We are conducting pre-validation studies to evaluate the ability of the manufacturing process to inactivate and clear the potential pathogens of concern, and we expect the data from these studies to satisfy the FDA's request and to support a potential biologics license application and commercial launch. The pre-validation studies are also intended to satisfy the FDA's request that we conduct our Phase 3 clinical trial using SER-109 product that is manufactured in a manner identical to the product that will be manufactured post-licensure.

If you have any questions regarding the foregoing responses, please do not hesitate to contact me by telephone at (617) 948-6060.

Very truly yours,

/s/ Peter N. Handrinos

Peter N. Handrinos
of LATHAM & WATKINS LLP

cc: Roger J. Pomerantz, M.D., Seres Therapeutics, Inc.