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June 9, 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
(File 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 by letter dated June 5, 2015 with respect to the Company's Registration Statement on Form S-1 filed on May 27, 2015 (the "***Registration Statement***"). The bold and numbered paragraphs below correspond to the numbered paragraphs in the Staff's letter and are followed by the Company's response. For the Staff's convenience, we are also sending, by courier, a copy of this letter.

Prospectus Summary
Our Product Candidates, page 3

1. **Please disclose the purpose of the manufacturing pre-validation studies at your first reference. Please also confirm that the FDA has specifically requested that you evaluate your new formulation of SER-109 prior to commencement of Phase 3 studies.**

   Response: In response to the Staff's comment, the Company supplementally advises the Staff that it intends to revise the first reference to the pre-validation studies on page 3 to read as follows (revised disclosure has been underlined):

Based on these results, 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. We plan to conduct manufacturing pre-validation studies of SER-109 in the second half of 2015 to support a Phase 3 clinical trial and a potential biologics license application and commercial launch. In doing so, we intend 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.

In response to the Staff's comment, the Company also confirms to the Staff that the FDA has requested that the Company evaluate the new formulation of SER-109, which will be used for commercial purposes, prior to commencing a Phase 3 clinical trial.

Clinical drug development involves a lengthy and expensive process.,page 16
Clinical development plan, page 101

2. **We note your response to prior comment 1. We also note that the timing and stage of the clinical development plan for SER-109 have been substantially modified over the past 6 months and it is unclear from your disclosure what factors have caused you to modify this plan beyond your first reference to discussions with the FDA. In this regard, investors are entitled to disclosure reflecting concerns expressed by the FDA where such concerns resulted in a material change to your clinical development program for your most-advanced product candidate and additional development costs. As such, with a view towards possible disclosure in the prospectus, please supplementally provide us with a discussion of any specific concerns or feedback you have received from the FDA relating to the clinical development of SER-109 and whether, and if so, how, the FDA's feedback led you to modify the clinical development program for SER-109.**

Response: In response to the Staff's comment, the Company supplementally advises the Staff that it intends to revise the first paragraph under "Clinical development plan" on page 101 to read as follows (revised disclosure has been underlined):

We initially proposed to the FDA a Phase 3 clinical trial and then a Phase 2/3 clinical trial, in each case in an effort to advance the clinical development of SER-109. However, in our subsequent interactions with the FDA, we determined that it would be more expedient to commence a Phase 2 study while we developed the final manufacturing requirements and analytic assay validation that would have been required before we could start a Phase 3 or combined Phase 2/3 clinical trial. Because the FDA cleared us to proceed with the Phase 2 clinical study, we were able to dose the first patient in this study in May 2015. We expect initial clinical study results in the middle of 2016. Following the analysis of the data to come from our Phase 2 clinical study, we plan to meet with the FDA to present Phase 2 safety and efficacy results and a proposed protocol for the Phase 3 clinical trial. We are currently planning to conduct pre-validation studies of our manufacturing process for SER-109, and we expect to obtain

sufficient data from these studies for a Phase 3 clinical trial. We plan to initiate the Phase 3 clinical trial in 2016.

If you have any questions regarding the foregoing responses or the enclosed Registration Statement, 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.