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Via EDGAR and FedEx

June 21, 2019

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Attn: Dorrie Yale
Mary Beth Breslin

**Re: Mirum Pharmaceuticals, Inc.
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted May 24, 2019
CIK No. 0001759425**

Ladies and Gentlemen:

On behalf of Mirum Pharmaceuticals, Inc. (the "**Company**"), we submit this letter in response to comments received from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**Commission**") by letter dated June 6, 2019 (the "**Comment Letter**") with respect to the Company's amended Draft Registration Statement on Form S-1 (the "**Draft Registration Statement**") confidentially submitted to the Commission on May 24, 2019. Concurrently with the submission of this response letter, the Company is filing its Registration Statement on Form S-1 ("**Registration Statement**"). In addition to addressing the comments raised by the Staff in the Comment Letter, the Company has included other revisions and updates to its disclosure in the Registration Statement. For the Staff's reference, we have included two copies of the Registration Statement marked to show all changes from the Draft Registration Statement.

For the convenience of the Staff, the numbering of the paragraphs below corresponds to the numbering of the comments in the Comment Letter, the text of which is incorporated into this response letter for convenience in italicized type and followed by the Company's response. In the responses below, page number references are to the Registration Statement.

Business
Our Clinical Trials of Maralixibat in PFIC
Phase 2 INDIGO Trial, page 96

1. *We note your response to prior comment 13. Please clarify the narrative discussion here to explain whether the secondary endpoint for pruritus was met.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 97 of the Registration Statement.

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Principal Stockholders, page 150

2. *We note your revised disclosures in the table, but certain of the footnotes do not appear to contain corresponding disclosure. Please reconcile or advise.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 158 of the Registration Statement.

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Please contact me at (858) 550-6044 or Kristin VanderPas at (415) 693-2097 with any questions or further comments regarding the Company's response to the Staff's comments.

Sincerely,

/s/ Jason L. Kent

Jason L. Kent

Cooley LLP

cc: Christopher Peetz, Mirum Pharmaceuticals, Inc.
Michael Grey, Mirum Pharmaceuticals, Inc.
Ian Clements, Ph.D., Mirum Pharmaceuticals, Inc.
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