

**Salarius Pharmaceuticals, Inc.
2450 Holcombe Blvd., Suite X
Houston, TX 77021**

May 6, 2022

VIA EDGAR

Division of Corporate Finance
Office of Life Sciences
United States Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549
Attn: Christie Wong and Brian Cascio

**Re: Salarius Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2021
Filed March 25, 2022
File No. 001-36812**

Dear Sirs and Madams:

This letter sets forth responses of Salarius Pharmaceuticals, Inc. (the "**Company**") to the comments of the staff of the Division of Life Sciences (the "**Staff**") of the Securities and Exchange Commission set forth in your letter dated April 22, 2022 with respect to the Company's annual report on Form 10-K for the Fiscal Year ended December 31, 2021 (the "**Annual Report**").

The text of the Staff's comment has been included in this letter for your convenience with our response to the comment immediately below it.

Form 10-K for the Year Ended December 31, 2021
Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations Overview
Research and Development Expenses, page 56

Staff's Comment: *We note the significant increase in your research and development expenses in fiscal 2021 and that you have multiple programs/products in varying stages of development and clinical testing. Please revise future filings to provide more details about your research and development expenses for each period presented, including but not limited to by product/program as well as by the nature of the expenses. To the extent that you do not track expenses by product candidate, please disclose as such. In addition, disclose the specific reasons for significant changes in research and development expenses each period.*

Response: The Company acknowledges the Staff's comment and will provide appropriate disclosures in future filings to provide more details about its research and development expenses for each period presented, including disclosures by the Company's different product candidates. We will make these changes beginning with our quarterly report on Form 10-Q for the period ended March 31, 2022.

If you have any questions related to this letter, please contact Nicholas Griffin of Hogan Lovells US LLP at (713) 632-1400.

Sincerely,

/s/ Mark Rosenblum

Mark Rosenblum

Via E-mail:

cc: Nicholas Griffin

Hogan Lovells US LLP