

William Mastrianna
 Attorney Adviser
 Office of Telecommunications
 Division of Corporation Finance
 Securities and Exchange Commission
 100 F Street, N.E.
 Washington, D.C. 20549

**Re: Scholar Rock Holding Corp.
 Registration Statement on Form S-1
 Originally filed April 27, 2018
 CIK No. 0001727196**

Dear Mr. Mastrianna:

This letter is submitted on behalf of Scholar Rock Holding Corporation (the “**Company**”) in response to comments of the staff of the Division of Corporation Finance (the “**Staff**”) of the Securities and Exchange Commission (the “**Commission**”) with respect to the Company’s filing of its Registration Statement on Form S-1 (the “**Registration Statement**”) on April 27, 2018, as set forth in your letter, dated May 4, 2018 (the “**Comment Letter**”), to Nagesh K. Mahanthappa. The Company is now concurrently filing Amendment No. 1 to the Registration Statement (“**Amendment No. 1**”), which includes changes to reflect responses to the Staff’s comment and other updates.

For reference purposes, the Staff’s numbered comment has been reproduced in italics herein with responses immediately following such comment. Unless otherwise indicated, page references in the descriptions of the Staff’s comment refers to the Registration Statement, and page references in the responses refer to Amendment No. 1. All capitalized terms used and not otherwise defined herein shall have the meanings set forth in Amendment No. 1.

The responses provided herein are based upon information provided to Goodwin Procter LLP by the Company. In addition to submitting this letter via EDGAR, we are sending via Federal Express four (4) copies of each of this letter and Amendment No. 1 (marked to show changes from the Registration Statement).

Form S-1 Filed April 27, 2018

Prospectus Summary

Our Pipeline Programs, page 2

COMMENT NO. 1:

We note your response to comment 5. We continue to believe that it may be premature to include the TGFB1 and BMP6 programs on your pipeline table. You have not identified any anticipated milestones for your BMP6 program and your TGFB1 program’s anticipated

milestone appears to be too remote for reasonable inclusion on the pipeline table. We also note that three of your targets within the TGFB1 program are only in the discovery stage of development. Additionally, the indications that you have identified appear to be the general therapeutic areas that your targets have applicability within and do not necessarily appear to evince the level of specificity that you have described for SRK-015. While it may be appropriate to discuss and describe these programs elsewhere in your filing, we do not believe that it is appropriate to include these programs on your Prospectus Summary pipeline table at this time.

RESPONSE TO COMMENT NO. 1:

The Company respectfully advises the Staff that it has modified its disclosure on pages 3 and 95 to remove its pipeline table from Amendment No. 1.

Should you have any further comments or questions with regard to the foregoing, please do not hesitate to contact the undersigned by phone at (617) 570-1879, by facsimile transmission at (617) 801-8626 or by e-mail at lburlingame@goodwinlaw.com.

Sincerely,

/s/Laurie A. Burlingame
 Laurie A. Burlingame

cc: Nagesh K. Mahanthappa, *Scholar Rock Holding Corporation*
 Junlin Ho, *Scholar Rock Holding Corporation*
 Kingsley L. Taft, *Goodwin Procter LLP*