

LATHAM & WATKINS LLP

September 17, 2018

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VIA EDGAR AND HAND DELIVERY

United States Securities and Exchange Commission
Division of Corporation Finance
Office of Healthcare & Insurance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Mary Beth Breslin
Ada D. Sarmento
Jim B. Rosenberg
Rolf Sundwall

**Re: Gritstone Oncology, Inc.
Registration Statement on Form S-1
Filed August 23, 2018
File No. 333-226976**

Ladies and Gentlemen:

On behalf of our client, Gritstone Oncology, Inc. (the "**Company**"), we are hereby filing Amendment No. 1 to the Registration Statement on Form S-1 ("**Amendment No. 1**"). The Company previously filed its Registration Statement on Form S-1 with the U.S. Securities and Exchange Commission (the "**Commission**") on August 23, 2018 (the "**Registration Statement**"). Amendment No. 1 has been revised to reflect the Company's responses to the comment letter received September 14, 2018 from the staff of the Commission (the "**Staff**"). For your convenience, we are providing by overnight delivery a courtesy package that includes copies of Amendment No. 1, including copies which have been marked to show changes from the Registration Statement, as well as copy of this letter.

For ease of review, we have set forth below the numbered comment of your letter in bold type followed by the Company's response thereto.

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Response dated September 6, 2018

Strategic Collaboration with bluebird bio, page 121

1. **We note your response to our prior comment 1. Please revise the disclosure regarding this agreement on page 121 of your Registration Statement on Form S-1 to identify the royalty term.**

Response: The Company respectfully acknowledges the Staff's comment and in response the Company has revised page 122 of the Registration Statement.

* * *

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We hope the foregoing answers are responsive to your comments. Please do not hesitate to contact me by telephone at (650) 463-3014 or by fax at (650) 463-2600 with any questions or comments regarding this correspondence.

Very truly yours,

/s/ Brian J. Cuneo

Brian J. Cuneo
of LATHAM & WATKINS LLP

cc: Andrew Allen, M.D., Ph.D., Gritstone Oncology, Inc.
Jean Marc Bellemin, Gritstone Oncology, Inc.
Alan C. Mendelson, Latham & Watkins LLP
David Peinsipp, Cooley LLP