

June 19, 2017

By Electronic Submission

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Suzanne Hayes

Re: Aileron Therapeutics, Inc.
Registration Statement on Form S-1
Filed June 2, 2017
File No. 333-218474

Ladies and Gentlemen:

On behalf of Aileron Therapeutics, Inc. (the "Company") set forth below is the Company's response to the comment of the staff (the "Staff") of the Securities and Exchange Commission provided orally by Joseph McCann of the Staff on June 13, 2017 (the "Oral Comment") with respect to the Company's Registration Statement on Form S-1 (the "Registration Statement").

This letter is being filed with Amendment No. 1 to the Registration Statement ("Amendment No. 1"). For convenience, a summary of the Oral Comment is set forth below. The Company has responded to the Oral Comment by making changes to the disclosure in the Registration Statement.

1. *Please expand the discussion of the Company's rights and obligations under the Harvard and Dana Farber Cancer Institute license agreement with respect to third party proposed products.*

Response: In response to the Oral Comment, the Company has revised the disclosure on page 114 of Amendment No. 1.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109
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If you have any further questions or comments, or if you require any additional information, please contact the undersigned by telephone at (617) 526-6663 or facsimile at (617) 526-5000. Thank you for your assistance.

Best regards,

/s/ Stuart M. Falber

Stuart M. Falber

cc: Vanessa Robertson, *Securities and Exchange Commission*
James Rosenberg, *Securities and Exchange Commission*
Jeffrey Gabor, *Securities and Exchange Commission*
Joseph McCann, *Securities and Exchange Commission*
Joseph A. Yanchik III, *Aileron Therapeutics, Inc.*

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