DIVISION OF CORPORATION FINANCE

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

May 23, 2019

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Manuel C. Alves Aivado, M.D., Ph.D. Chief Executive Officer Aileron Therapeutics, Inc. 490 Arsenal Way, Suite 210 Watertown, MA 02472

Re: Aileron Therapeutics, Inc.
Registration Statement on Form S-3
Filed August 7, 2018
File No. 333-226650

Dear Mr. Alves Aivado:

It has been more than nine months since you filed this registration statement and it is now out of date. Within 30 days from the date of this letter, you should either:

- amend it to comply with the applicable requirements of the Securities Act of 1933, the rules and regulations under the Act, and the requirements of the form; or
- file a request for withdrawal.

If you requested confidential treatment for portions of any exhibits to your registration statement and you request withdrawal of that registration statement, please submit a concurrent request for withdrawal of your application for confidential treatment.

If you do not amend the registration statement or file a request for withdrawal (or provide us with a satisfactory explanation of why you have not done either) within 30 days, we may enter an order declaring the registration statement abandoned under rule 479 of the Act.

Please contact Ada D. Sarmento at 202-551-3798 with any questions.

Sincerely,

Manuel C. Alves Aivado, M.D., Ph.D. Aileron Therapeutics, Inc. May 23, 2019 Page 2

> Division of Corporation Finance Office of Healthcare & Insurance

cc: The Corporation Trust Company

CERTIFIED MAIL
RETURN RECEIPT REQUESTED