



DIVISION OF  
CORPORATION FINANCE

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

August 15, 2018

John P. Longenecker  
Chief Executive Officer  
Aileron Therapeutics, Inc.  
281 Albany Street  
Cambridge, MA 02139

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

Dear Mr. Longenecker:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

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

Sincerely,

Division of Corporation Finance  
Office of Healthcare & Insurance

cc: Stuart M. Falber, Esq.