

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

February 1, 2024

Manuel Alves-Aivado Chief Executive Officer Aileron Therapeutics Inc. 738 Main Street #398 Waltham, MA 02451

> Re: Aileron Therapeutics Inc. Registration Statement on Form S-3 Filed January 29, 2024 File No. 333-276746

Dear Manuel Alves-Aivado:

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 Lauren Hamill at 303-844-1008 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Craig Hilts