

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 12b-25

NOTIFICATION OF LATE FILING

(Check one): Form 10-K Form 20-F Form 11-K Form 10-Q
 Form 10-D Form N-CEN Form N-CSR

For Period Ended: December 31, 2023

- Transition Report on Form 10-K
 Transition Report on Form 20-F
 Transition Report on Form 11-K
 Transition Report on Form 10-Q

For the Transition Period Ended:

Read Instruction (on back page) Before Preparing Form. Please Print or Type.
Nothing in this form shall be construed to imply that the Commission has verified any information contained herein.

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates:

**PART I
REGISTRANT INFORMATION**

Full Name of Registrant: Aileron Therapeutics, Inc.
Former Name if Applicable:
Address of Principal Executive Office (Street and Number): 12407 N. Mopac Expy. Suite 250 #390
City, State and ZIP Code: Austin, Texas 78758

**PART II
RULES 12b-25(b) AND (c)**

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate)

- (a) The reason described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;
- (b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-CEN or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q or subject distribution report on Form 10-D, or portion thereof, will be filed on or before the fifth calendar day following the prescribed due date; and
- (c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

**PART III
NARRATIVE**

State below in reasonable detail why Forms 10-K, 20-F, 11-K, 10-Q, 10-D, N-CEN, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period.

Aileron Therapeutics, Inc. (the "Company") has determined that it is unable to file its Annual Report on Form 10-K for the fiscal year ended December 31, 2023 (the "Form 10-K") within the prescribed time period without unreasonable effort or expense. The Company requires additional time to complete technical accounting matters related to the purchase price allocation of its acquisition of Lung Therapeutics, Inc. (the "Lung Acquisition"), which closed on October 31, 2023, and to finalize its financial statements included in the Form 10-K. The closing of the Lung Acquisition was reported on a current report on Form 8-K filed with the Securities and Exchange Commission on October 31, 2023. The Company intends to file the Form 10-K no later than the fifteenth calendar day after the prescribed due date.

PART IV

OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification

James Brian Windsor
(Name)

737
(Area Code)

802-1989
(Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s). Yes No

(3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? Yes No

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

The Company's results of operations for the year ended December 31, 2023 will be significantly different as compared to the results of operations for the corresponding period for the year ended December 31, 2022 due to the Lung Acquisition. The results of operations for the year ended December 31, 2023 of the Company include the results of operations of Lung Therapeutics, Inc. from October 31, 2023, the closing date of the Lung Acquisition, and are therefore not directly comparable to the results of operations for the corresponding period in the prior fiscal year.

Forward-Looking Statements

This Form 12b-25 includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements generally relate to future events, such as statements related to expected results of operations to be reported in the Form 10-K and the timing of filing the Form 10-K. We use words such as "anticipate," "believe," "estimate," "expect," "hope," "intend," "may," "plan," "predict," "project," "target," "potential," "would," "can," "could," "should," "continue," and other words and terms of similar meaning to help identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including the Company's ability to complete the Form 10-K and the audit of its financial statements for the fiscal year ended December 31, 2023 within the applicable time periods; as well as the risks and uncertainties discussed in the "Risk Factors" section of the Company's Annual Report on Form 10-K for the year ended December 31, 2022, which is on file with the United States Securities and Exchange Commission (the "SEC"); the risks and uncertainties discussed under the heading "Risk Factors" of the Company's Current Report on Form 8-K filed with the SEC on January 25, 2024; and in subsequent filings that the Company files with the SEC. These forward-looking statements should not be relied upon as representing the Company's view as of any date subsequent to the date of this Form 12b-25, and we expressly disclaim any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

AILERON THERAPEUTICS, INC.
(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

Date: April 1, 2024

By: /s/ James Brian Windsor
Name: James Brian Windsor
Title: President and Chief Executive Officer
