



DIVISION OF
CORPORATION FINANCE

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

January 24, 2022

David Hilbert
President and Chief Executive Officer
Arcellx, Inc.
25 West Watkins Mill Road, Suite A
Gaithersburg, MD 20878

Re: Arcellx, Inc.
Registration Statement on Form S-1
Filed January 14, 2022
File No. 333-262191

Dear Dr. Hilbert:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1 filed January 14, 2022

Overview, page 1

1. We note your response to prior comment 1. Please revise the fourth sentence of the Overview to clarify that you "are engineering" the platform to avoid the implication that the engineering work is complete. With reference again to the first full risk factor on page 16, please balance your statements about the preliminary results by revising the first sentence of the second paragraph on page 2 to clarify that the positive preliminary results address cover only a "small number of patients" that have been treated to date. Similarly, revise the fourth bullet point on page 4 to provide similar context to the statements and claims made there.

2. We note your revisions in response to prior comment 2. Please revise the summary to explain the terms "stringent complete response" and "very good partial response."
3. We note your revised disclosures in response to prior comment 4. Please revise to remove the Discovery Pipeline programs from the Summary presentation or, alternatively, revise the Business section to discuss each of these programs in greater detail, including the work that you have conducted to date for each program. In addition, revise the anticipated milestone for ddCAR to replace "Pivotal" with Phase 3, or, if "*pivotal*" is intended to mean something other than Phase 3, please provide disclosure to clarify.

Prospectus Summary

Our Key Investors and Our Financing History, page 5

4. We note the addition of a list of investors on page 5. Please limit the disclosure of specific investors to those identified in the Principal Stockholder table on page 199. Additionally, indicate that prospective investors should not rely on the named investors' investment decision, that these investors may have different risk tolerances and, if true, that these investors received their shares in offerings that were conducted at a significant discount to the IPO price.

Summary Financial Data, page 12

5. We note that you intend to grant various equity-based compensation awards in connection with your IPO based on your disclosures on page 176 and 182. Please tell us your consideration for including the compensation expense associated with these grants in your pro forma presentations here and with your capitalization and dilution presentations.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Estimates

Determining the fair value of our common stock and fair value of total equity, page 103

6. We note the additional disclosure you provided regarding the allocation of the enterprise value to determine the estimated fair value of our common stock and total equity value in response to comment 6. Please further expand your disclosures to provide the specific valuation approaches and methods along with the corresponding material estimates and assumptions used in each method to estimate the enterprise value that is being allocated to your various equity instruments.

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.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

David Hilbert
Arcellx, Inc.
January 24, 2022
Page 3

You may contact Tracey Houser at (202) 551-3736 or Al Pavot at (202) 551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Abby Adams at (202) 551-6902 or Joe McCann at (202) 551-6262 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Dan Koeppen