



DIVISION OF
CORPORATION FINANCE

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

October 20, 2020

Andrew McDonald
Chief Executive Officer
Lifesci Acquisition II Corp.
250 W 55th St #3401
New York, NY 10019

Re: Lifesci Acquisition II Corp.
Registration Statement on Form S-1
Filed October 14, 2020
File No. 333-249480

Dear Mr. McDonald:

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 October 14, 2020

Principal Stockholders, page 73

1. Please revise your tabular disclosure to identify the natural person(s) who have sole or shared voting or investment power for the securities beneficially owned by Chardan Healthcare Investments LLC. For guidance, please refer to Item 403 of Regulation S-K.

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.

Andrew McDonald
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You may contact Joanna Lam, Staff Accountant, at (202) 551-3476 or Raj Rajan, Staff Accountant, at (202) 551-3388 if you have questions regarding comments on the financial statements and related matters. Please contact Anuja A. Majmudar, Attorney-Adviser, at (202) 551-3844 or, in her absence, Loan Lauren Nguyen, Legal Branch Chief, at (202) 551-3642 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Energy & Transportation

cc: Giovanni Caruso