LIFESCI ACQUISITION CORP. 250 W. 55th St., #3401 New York, NY 10019

November 27, 2020

VIA EDGAR

U.S. Securities and Exchange Commission Division of Corporation Finance, Office of Life Sciences 100 F Street, N.E. Washington, D.C. 20549 Attention: Ms. Abby Adams

Re: Re: LifeSci Acquisition Corp.

Revised Preliminary Proxy Statement on Schedule 14A

Filed November 10, 2020 File No. 001-39244

Dear Ms. Adams:

LifeSci Acquisition Corp. (the "Company", "we", "us" or "our") hereby transmits our response to the comment letter received by us from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission"), dated November 25, 2020, regarding the Company's Revised Preliminary Proxy Statement on Schedule 14A (the "Proxy Statement") previously filed with the Commission on November 10, 2020.

For the Staff's convenience, we have repeated below the Staff's comments in bold, and have followed each comment with the Company's response. Changes to the Proxy Statement based on the Staff's comments are reflected in a further revised Proxy Statement (the "Amended Proxy Statement") which is being submitted to the Commission concurrently with the submission of this letter.

Revised Preliminary Proxy Statement on Schedule 14A filed November 10, 2020

Summary Term Sheet, page 1

We note the added disclosure in response to comment 1. Revise the third bullet point describing Vincera Pharma to clarify, if true, that
Vincera would become a "clinical-stage biopharmaceutical company" if and when the merger is completed and the Bayer license is
effective.

RESPONSE: We have revised the third bullet point on page 1 of the Amended Proxy Statement describing Vincera Pharma to clarify that Vincera Pharma would become a "clinical-stage biopharmaceutical company" if and when the Merger is completed and the Bayer license is effective. We have also made corresponding changes to pages 16, 122 and 140 of the Amended Proxy Statement.

Q: Do any of LSAC's directors or officers have interests that may conflict with my interests with respect to the Business Combination?, page 9

Please revise this question and answer to highlight, without limitation, Mr. Grossman's affiliation with LifeSci Investments, Rosedale Park and Chardan, and to discuss all financial interests that will accrue to these entities in the event the Business Combination is consummated. In this regard, we note the disclosures on pages 11 and 13 indicate that Chardan will be eligible to receive deferred underwriting discounts and/or commissions. Please also tell us whether the Sponsor or any affiliates have ownership or financial interests in Vincera.

RESPONSE: We have revised this question and answer on page 9 of the Amended Proxy Statement to disclose, without limitation, Mr. Grossman's affiliation with LifeSci Investments, Rosedale Park and Chardan, as well as all financial interests that will accrue to these entities in the event the Business Combination is consummated. We have also disclosed that neither the Sponsor nor any of its affiliates have ownership or financial interests in Vincera Pharma.

Background of the Business Section, page 89

3. With reference to the May 7 entry, please revise to identify the individuals affiliated with LSAC who made the introduction.

RESPONSE: We have revised the disclosure on page 91 of the Amended Proxy Statement to identify the individual affiliated with LSAC who made the introduction.

Other Agreements, page 108

4. We refer to prior comment 11. Please revise the disclosure in this subsection to describe briefly the termination provisions and remedies of the voting agreement. Please also revise to explain briefly what incentive(s), if any, were provided to the holders to enter into the agreement.

RESPONSE: We have revised the disclosure on page 108 of the Amended Proxy Statement to describe the termination provisions and remedies of the voting agreement. We have also disclosed on page 108 of the Amended Proxy Statement that no incentives were provided to the holders to enter into the voting agreements.

Unaudited Pro Forma Condensed Combined Balance Sheet, page 134

5. Please remove the line items for In-process research and development, Goodwill and Deferred income taxes payable as they all have a zero balance.

RESPONSE: We have removed the line items for In-process research and development, Goodwill and Deferred income taxes payable on page 134 of the Amended Proxy Statement in accordance with the Staff's comment.

6. It appears that the retained earnings of LSAC are carried over in the pro forma balance sheet and that the retained earnings of Vincera Pharma have been eliminated. Considering your revised disclosure that LSAC has been treated as the acquired company, explain to us how this is appropriate and revise as necessary. Include your consideration of ASC 80540-45-2 as to why you did not include an adjustment to eliminate the historical retained earnings of LSAC.

RESPONSE: In response to the Staff's comment, the Company respectfully advises the Staff that it has reviewed the revised earnings treatment for LSAC and Vincera Pharma, and has adjusted the pro forma balance sheet to eliminate accumulated deficit of LSAC rather than Vincera Pharma. These changes have been made on pages 80 and 134 of the Amended Proxy Statement.

Notes to Unaudited Pro Forma Condensed Combined Financial Information, page 137

7. Please revise the disclosure to clarify that LSAC's unaudited balance sheet as of September 30, 2020 and the related notes are included elsewhere in the proxy statement rather than incorporated by reference.

RESPONSE: We have revised the disclosure on page 137 of the Amended Proxy Statement to clarify that LSAC's unaudited balance sheet as of September 30, 2020 and the related notes are included elsewhere in the Amended Proxy Statement.

Clinical Trial, page 146

8. We note your revised disclosures in response to prior comment 17. Please revise to disclose all serious adverse events and not just the most common ones.

RESPONSE: We have revised the disclosure on page 147 of the Amended Proxy Statement to disclose each serious adverse event in accordance with the Staff's comment.

9. We reissue comment 18 to the extent that you have not briefly explained neutropenia, other than to say it is an on-target effect.

RESPONSE: We have revised the disclosure on page 150 of the Amended Proxy Statement to expand the description of neutropenia in accordance with the Staff's comment.

General

10. With reference to your disclosure on page 3, please revise the proxy card to indicate that consummation of the Business Combination is conditioned upon approval of all of the Proposals, including, as applicable, the five separate voting items contained under the Proposal No. 2 heading.

RESPONSE: We have revised the proxy card to indicate that consummation of the Business Combination is conditioned upon approval of each of the Proposals, including each of the sub-proposals under Proposal No. 2. We have also made a corresponding clarification change to page 3 of the Amended Proxy Statement.

We thank the Staff in advance for its review of the foregoing and the Amended Proxy Statement. If you have further comments, we ask that you forward them by electronic mail to our counsel, David J. Levine, Esq., at dlevine@loeb.com by telephone at (212) 407-4923.

Very truly yours,

/s/ Andrew McDonald

Andrew McDonald Chief Executive Officer