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

November 10, 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.

Preliminary Proxy Statement on Schedule 14A

Filed October 8, 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 5, 2020, regarding the Company's Preliminary Proxy Statement on Schedule 14A (the "Proxy Statement") previously filed with the Commission on October 8, 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 an Amendment to the Proxy Statement (the "Amended Proxy Statement") which is being submitted to the Commission concurrently with the submission of this letter.

Preliminary Proxy Statement on Schedule 14A

Summary of the Proxy Statement, page 11

1. Revise to provide a summary term sheet on the first or second page of the proxy statement as required by Item 14(b)(1) of Schedule 14A. Refer to Item 1001 of Regulation M-A.

RESPONSE: We have provided a summary term sheet on pages 1 through 4 of the Amended Proxy Statement as required by Item 14(b)(1) of Schedule 14A.

2. Please revise the Summary to remove the description of Vincera Pharma's product candidates as being "best-in-class" or "first-in-class," because the term suggests that the products are effective and likely to be approved by the FDA. Alternatively, revise the disclosure to provide appropriate context to these claims and to provide balance to the Summary presentation.

RESPONSE: We have revised the Summary on page 16 of the Amended Proxy Statement to remove the description of Vincera Pharma's product candidates as being "best-in-class" or "first-in-class. We have made corresponding changes to the Vincera Pharma's Business and Management's Discussion and Analysis of Financial Condition and Results of Operations of Vincera Pharma sections on pages 33, 122, 140 and 152 of the Amended Proxy Statement.

3. Revise the disclosure on page 5 to identify which director is affiliated with Rosedale Park.

RESPONSE: We have revised the disclosure on page 9 of the Amended Proxy Statement to identify Jonas Grossman as the director affiliated with Rosedale Park.

Risk Factors, page 25

4. Please revise the disclosure on pages 25-26 to explain the term and termination provisions of the Bayer license.

RESPONSE: We have revised the disclosure on page 31 of the Amended Proxy Statement to explain the term and termination provisions of the Bayer license.

Special Note Regarding Forward-Looking Statements, page 72

5. On page 73 you state that shareholders "should not rely on these forward-looking statements" and "neither LSAC nor any other person assumes responsibility for the accuracy or completeness of any of these forward-looking statements." Please revise to remove these statements disclaiming responsibility for your disclosures.

RESPONSE: We have revised the disclosure on page 79 of the Amended Proxy Statement to remove such statements.

Proposal No. 1—The Business Combination Proposal, page 83

6. Please provide us your analysis regarding the availability of the exemption in Section 4(a)(2) for the issuance of LSAC Shares to the Sellers.

RESPONSE: Section 4(a)(2) of the Securities Act of 1933, as amended (the "Act"), exempts from registration "transactions by an issuer not involving any public offering." This determination of whether a transaction constitutes a "private placement" is a fact-specific analysis based on a variety of factors, including the following: (i) the number of offerees and their relationship to each other and to the issuer; (ii) the number of securities offered and the size of the offering; (iii) the manner of the offering; (iv) the sophistication and experience of the offerees; (v) the nature and kind of information provided to offerees; and (vi) restrictions on transfer.

- (i) *Number of offerees and their relationship to each other and to the issuer:* Although the number of offerees is not an exclusive means of determining the availability of Section 4(a)(2), there are six Sellers receiving LSAC shares pursuant to the merger agreement, three of whom will be executive officers and/or directors of the combined company. The limited number of Sellers and their pre-existing relationship to each other supports the validity of the private placement exemption relied upon by the Company.
- (ii) *Number of securities offered and the size of the offering*: The number of securities being offered (5,500,000 shares) and the size of the offering (\$55,000,000) are not significant enough, in light of the other facts included in this analysis, for this offering to be deemed a public offering.
- (iii) *Manner of the offering*: The offering was made through an introduction to the management team of Vincera by an affiliate of the Company. The offering did not include any general advertising or general solicitation.
- (iv) *Sophistication and experience of the offerees*: Each of the Sellers is an "accredited investor" as defined under the Act and a "sophisticated investor" who has the knowledge and experience in finance and business matters to be able to evaluate the risks and merits of the investment in the LSAC Shares. As mentioned above, three of the Sellers will be executive officers and/or directors of the combined company.
- (v) *Nature and kind of information provided to offerees*: The Sellers had reasonable access to the executive officers and directors of the Company and since the Company is required to file reports

under the Securities Exchange Act of 1934, as amended, each of the Sellers had access to all of the business and financial information contained in the Company's filings made with the Commission, including the Company's most recent Annual Report on Form 10-K filed on September 23, 2020, prior to the signing of the merger agreement. In addition, the Sellers participated in, or had access to information regarding, the discussions and negotiations relating to the merger agreement.

(vi) *Restrictions on transfer:* The LSAC Shares to be issued to the Sellers will contain restrictive legends and may not be resold except pursuant to an effective registration statement under the Securities Act or an exemption contained thereunder, such as Rule 144. In addition, each of the Sellers has agreed to enter into a six-month lock-up agreement at the closing of the Business Combination with respect to the LSAC Shares.

Based on the facts set forth above, we believe the offering of the LSAC Shares to the Sellers is a valid private placement under Section 4(a)(2) of the Securities Act.

7. Please substantially revise your disclosures in this section to provide additional information with respect to specific issues discussed during the negotiations between LSAC and various candidates. For example, disclose the extent to which any other candidates were discussed at the September 11 and 17th Board meetings, and clarify when you ceased conversations with Candidates One and Two. We note that, with respect to Candidate One, you disclose that "as conversations with Vincera advanced in May 2020, the frequency of interaction with Candidate One decreased and no further substantive discussions regarding a merger with LSAC took place;" however, when discussing Candidate Three, you disclose a conference call with Candidate Three on May 27, 2020 and state that "discussions with Vincera accelerated shortly thereafter." As it does not appear that your Vincera conversations diminished your interactions with Candidate Three until after May 27, 2020, clarify any other reasons the discussions with Candidate One trailed off and ended in May, including the date of your final interaction.

RESPONSE: We have substantially revised the disclosure on pages 91 and 93 of the Amended Proxy Statement to provide additional information with respect to specific issues discussed during the negotiations between the Company and various candidates in accordance with the Staff's comment.

8. Substantially revise your background section to provide details regarding the negotiations that led to the finalization of the key terms of the proposed business combination with Vincera. For example, it is not clear how the parties determined the type and amount of consideration or that certain of the consideration should be in the form of earnout shares. Also expand your discussion of the merger agreement to identify the material terms negotiated and discuss how the issues were resolved, including changes in any terms favorable to LSAC's management and affiliates as compared to the LSAC public stockholders.

RESPONSE: We have substantially revised the background section on pages 91 through 93 of the Amended Proxy Statement to provide details regarding the negotiations that led to the finalization of the key terms of the proposed business combination with Vincera. For the Staff's information, all of the material terms of the merger agreement were negotiated in connection with the letter of intent entered into by the parties on July 16, 2020. The revisions to the background section in response to this comment include a discussion of these material terms and how they were resolved by the parties. We do not believe any of these changes resulted in terms favorable to LSAC's management and affiliates as compared to the LSAC public stockholders.

9. Expand the disclosure to further explain the material assumptions on which you based your financial analysis, and to further describe the criteria used to select the referenced companies.

RESPONSE: We have expanded the disclosure on pages 96 through 100 of the Amended Proxy Statement to further explain the material assumptions on which we based our financial analysis, and to further describe the criteria used to select the referenced companies.

LSAC's Board's Reasons for the Approval of the Business Combination, page 87

10. With reference to page 14 of your IPO prospectus, please tell us, and revise, as applicable, to indicate whether the board determined that at the time of agreement the transaction satisfied the 80% test.

RESPONSE: LSAC's board of directors determined that at the time the merger agreement was entered into, Vincera had a fair market value of at least 80% of the value of the Trust Account (excluding any deferred underwriters' fees and taxes payable on the income earned on the Trust Account). We have revised the disclosure on page 95 of the Amended Proxy Statement accordingly.

Other Agreements, page 100

11. Please revise to disclose the material terms of your voting agreement(s) with the public holders of 3,945,350 LSAC Shares and include the agreements) as an Annex to the proxy. Also revise the Background section to indicate when the agreement(s) were negotiated and executed.

RESPONSE: We have revised page 108 of the Amended Proxy Statement to disclose the material terms of our voting agreements and included the form of voting agreement as Annex D to the Amended Proxy Statement. We also have revised the Background section on page 93 of the Amended Proxy Statement to indicate when the voting agreements were negotiated and executed.

Proposal No. 2—The Charter Amendment Proposal, page 101

12. Revise this section to clarify that shareholders are voting on these provisions individually, as provided on the form of proxy card.

RESPONSE: We have revised pages 109 and 112 of the Amended Proxy Statement to clarify that stockholders are voting on these provisions individually, as provided on the form of proxy card.

13. Revise the Choice of Forum discussion, here, on page 202, and in the comparative charts to agree. In the chart, you say that the federal district courts generally are the sole and exclusive forum for Exchange Act claims, and that the Delaware Court of Chancery and District Court for the District of Delaware have sole and exclusive forum for Securities Act claims. In the discussion here and on page 202, however, you state that federal district courts (not limited to Delaware) are the exclusive forum for both Securities Act and Exchange Act claims. Also revise item (i) in the discussion to clarify that it does not apply to Securities Act or Exchange Act claims. In addition, we note that Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Revise the discussion of this proposal to disclose that there is uncertainty as to whether a court would enforce the provision vesting the Delaware Court of Chancery and the District Court for the District of Delaware with exclusive forum and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

RESPONSE: We have revised the Choice of Forum disclosures for the proposed Amended Charter on pages 109, 110 and 112 of the Amended Proxy Statement in accordance with the Staff's comment and for clarity. We have also revised the exclusive forum selection discussion on page 213 of the Amended Proxy Statement to clarify that it applies to the Amended Charter of the combined company following the Business Combination.

Unaudited Pro Forma Condensed Combined Financial Information, page 123

14. You disclose that the transaction is being accounted for as a business combination using the acquisition method with LSAC as the accounting acquirer in accordance with ASC 805, Business Combinations. Please provide us with a more detailed analysis of how you determined that LSAC is the accounting acquirer. Describe in greater detail how you considered each of the factors in ASC 805-10-55-11 through 55-14.

RESPONSE: In response to the Staff's comment, the Company respectfully advises the Staff that it has reconsidered the provisions of ASC 805 and other pertinent accounting guidance in concluding that Vincera is the accounting acquirer rather than LSAC, and has revised the disclosures on pages 24, 27 and 137 of the Amended Proxy Statement accordingly.

ASC 805 provides that in a business combination involving the exchange of equity interests, all pertinent facts and circumstances should be considered. Under ASC 805, control is defined as a controlling financial interest within the meaning of ASC 810-10-15-8. Although we estimate that existing LSAC stockholders, which include the existing public stockholders and the LSAC's initial stockholders, will collectively hold more than 50% of the outstanding equity of the combined company, we do not deem this as determinative. In particular, LSAC's initial stockholders will together hold less than 14% of the outstanding equity interests of the combined company, and the remaining existing LSAC public stockholders are a disparate group of investors. Because the guidance does not clearly indicate which of the combining entities would obtain a controlling financial interest, we considered the factors in paragraphs 805-10-55-11 through 55-15 in making the determination of the accounting acquirer. As per ASC 805-10-55-11, we considered that LSAC, as legal acquirer, will transfer equity to the stockholders of Vincera, the legal acquiree, for the purchase of equity interests in Vincera.

For the purposes of ASC 805-10-55-12, LSAC is the issuer of the equity interests, and in a business combination effected primarily by exchanging equity interests, the acquirer usually is the entity that issues its equity interests. However, in some business combinations, commonly called reverse acquisitions, the issuing entity may be the acquiree. Because of this, we considered other pertinent facts and circumstances in identifying the acquirer in the Business Combination, which will be effected by exchanging equity interests. As part of this analysis, we considered the following indicators in determining that Vincera is the accounting acquirer:

- Vincera's senior management will remain as the senior management of the combined company—we considered ASC 805-10-55-12(d): Vincera's current Chief Executive Officer, Chief Operations Officer, and other key executives will continue in such executive officer positions of the combined company. No LSAC executives will be part of the combined company's management team. We consider this to be a very strong indicator that Vincera is the accounting acquirer.
- Only one director of LSAC will serve on the combined company's board of directors—we also considered ASC 805-10-55-12(c): After the Business Combination, the board of directors of the combined company will consist of nine individuals, of which seven will be nominated by the Vincera stockholders and two will be nominated by the LSAC stockholders parties to a voting agreement. Of those two, we anticipate that only one, Andrew I. McDonald, will be an existing LSAC director.
- No individual equity holder or affiliates will have a majority of the voting power—we also considered ASC 805-10-55-12(a): The LSAC Shares held by Vincera's existing stockholders will comprise approximately 39% of the combined company, while less than 14% will be attributable to LSAC's initial stockholders. The remaining 47% will be held by a disparate group of investors.
- We believe that the indicators under ASC 805-10-55-12(b) and 12(e) are not determinative.

Although LSAC will issue equity in the Business Combination, we believe that Vincera will have the ability to influence the business affairs of the combined company because Vincera's senior management will constitute the senior management of the combined company and because we anticipate that more existing

directors of Vincera will sit on the board of directors of the combined company than existing directors of LSAC. We recognize that the existing LSAC stockholders, which include the existing public stockholders and LSAC's initial stockholders will collectively hold more than 50% of the combined company's outstanding equity. However, when excluding disparate investors that are existing public stockholders, LSAC's initial stockholders will hold less than 14% of the combined company's outstanding equity. Accordingly, LSAC respectfully advises the Staff that it has determined that, pursuant to ASC 805, and based on the factors discussed above, Vincera is the accounting acquirer.

Vincera's Business Overview, page 132

15. Revise the graphics on pages 134, 136, 137, 141, 145 so all of the fonts are large enough to be legible.

RESPONSE: We have revised the graphics on pages 142, 144, 145, 151 and 155 of the Amended Proxy Statement in accordance with the Staff's comment.

16. Please revise the Business section to clarify what work Vincera and its employees have conducted to date. For instance, it should be clear whether clinical and pre-clinical work was performed by Vincera and its employees or whether that work was performed by Bayer or another third-party.

RESPONSE: We have revised the disclosure on pages 32, 53, 122 and 140 of the Amended Proxy Statement to clarify that none of Vincera's employees have performed any preclinical or clinical studies on the Bayer assets to date.

Vincera's Business

Clinical Trials, page 138

17. Expand your disclosure of Study 18117 to indicate when the trial was conducted. Also, expand to discuss the duration of the trial, how the drug candidate was administered, who conducted and/or sponsored the trial, and any serious adverse events that were experienced, including the number of patients experiencing SAEs. State the primary and secondary endpoints related to safety, tolerability, pharmacokinetics and dosage.

RESPONSE: We have expanded the disclosure of Study 18117 on pages 146 and 147 of the Amended Proxy Statement in accordance with the Staff's comment.

18. Revise your discussion concerning Study 17496 to address, if applicable, the same items referenced in the comment above concerning Study 18117. Also, disclose the number of patients in Study 17496 before the expansion, and explain whether any of the reported results to date are statistically significant. Revise the table at the bottom of page 139 or the surrounding text to explain "evaluable patients" and briefly describe neutropenia. Revise the disclosure on page 141 to disclose all serious adverse events, rather than only adverse events affecting more than 15% of the participants. In addition, clarify who is presently conducting and/or sponsoring Study 17496 and whether that changes once the Bayer license agreement becomes effective.

RESPONSE: We have revised and expanded the disclosure of Study 17496 on pages 147 through 151 of the Amended Proxy Statement in accordance with the Staff's comment.

Intellectual Property, page 149

19. Please revise to disclose all jurisdictions, the type of patents and term with respect to each patent family.

RESPONSE: We have revised the disclosure on page 159 of the Amended Proxy Statement to expand our disclosure of the jurisdictions, the type of patents and term with respect to each patent family. The Company respectfully advises the Staff that we believe disclosure of all jurisdictions with respect to each patent family would not be meaningful for investors.

Compensation of Directors and Executive Officers of LSAC, page 187

20. Revise to disclose the material terms of the executive employment agreements, if known, that will be effective upon the closing of the Business Combination, as disclosed on pages 188-89.

RESPONSE: In response to the Staff's comment, the Company respectfully advises the Staff that none of the material terms of the executive employment agreements are known at this time. If, following the date of this response letter, the Company enters into new executive employment agreements, or the material terms of the executive employment agreements become available, the Company will describe the material terms of the agreements and file the new agreements accordingly.

General

21. Please revise Annex A to include a list briefly identifying the contents of all omitted schedules to your merger agreement.

RESPONSE: We have revised Annex A of the Amended Proxy Statement to include a list briefly identifying the contents of all omitted schedules to the merger agreement.

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