

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

August 25, 2023

Joseph J. Sarret Chief Executive Officer and Director CohBar, Inc. 1455 Adams Drive, Suite 1308 Menlo Park, CA 94025

Re: CohBar, Inc.

Amendment No. 1 to Registration Statement on Form S-4

Filed August 10, 2023 File No. 333-273101

Dear Joseph J. Sarret:

We have reviewed your amended 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. Unless we note otherwise, our references to prior comments are to comments in our August 3, 2023 letter.

Amendment No. 1 to Registration Statement on Form S-4 filed August 10, 2023

What are the material U.S. federal income tax consequences of the Merger to holders of CohBar capital stock?, page 8

1. We note your revised disclosure in response to prior comment 2. Please revise to remove the "generally" language from the Q&A or briefly identity the factors that could lead to the transaction being taxable to the CohBar shareholders.

The bylaws of the combined company will provide that..., page 96

2. We note that your revisions on page 96 describing the Delaware Forum Provision state that the combined company reserves the right to assert that the Court of Chancery of the

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State of Delaware will be the exclusive forum for certain litigation, including any derivative action and claims arising under the Exchange Act. In this regard, we note that Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Further, we note that this disclosure on page 96 appears to conflict with the last sentence of the paragraph captioned "Choice of forum" on page 97. Please revise or advise.

Background of the Merger, page 107

3. With reference to prior comment 11, we note that your revised disclosure indicates that in April 2023 K&V Investment One decided that it would only pay \$2.00 per share instead of \$4.00 per share. Please further revise to disclose the Investor's stated reason(s), if any, for renegotiating the price down to the \$2.00 level.

Opinion of CohBar's Financial Advisor, page 125

4. We note your revised disclosures and your response to prior comment 18. Please revise to clarify whether, and if so how, Ladenburg conducted an assessment of the \$25 million valuation for CohBar. To the extent that Ladenburg did not assess this valuation, then please revise the Q&A and other disclosures concerning the fairness opinion to explain that Ladenburg did not conduct an assessment of the CohBar valuation in the course of rendering its opinion that the Exchange Ratio was fair to the CohBar holders. Also, revise the Form S-4 to present the precedent transaction analysis that is now referenced on page 118.

Analysis of Selected Publicly Traded Companies, page 129

5. We note your revisions in response to prior comment 20 indicate that "considerations and judgments" concerning companies to which Morphogenesis was compared "include the exclusion of select comparable companies." In this regard, we note that preceding disclosure in the same paragraph indicating that Ladenburg did not exercise any judgment or exclusionary practices to add or remove companies meeting the stated parameters appears to conflict. Please revise or advise. Additionally, please revise your disclosure to disclose the excluded companies and/or transactions, and explain why each company or transaction was excluded.

Material U.S. Federal Income Tax Consequences of the Merger, page 138

6. We note your response to prior comment 24. Please revise the disclosure on page 139 to explain, if true, that counsel to Morphogenesis and the Company have concluded that there is not significant doubt that the Merger qualifies as a "reorganization."

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Morphogenesis Pipeline, page 219

7. With respect to the pipeline tables on pages 219 and 228, we reissue prior comment 28 with respect to IFx-3.0. The basis for the statement that the company expects IND-enabling studies for this candidate to be concluded in late 2024 is unclear. Please revise this column to be consistent with disclosure on page 220 stating that Morphogenesis plans on identifying a lead candidate for IFx-3.0 late in 2023 and beginning IND-enabling studies in early 2024.

You may contact Frank Wyman at 202-551-3660 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Lauren Hamill at 303-844-1008 or Joe McCann at 202-551-6262 with any other questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Branden Berns