



DIVISION OF
CORPORATION FINANCE

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

June 11, 2024

Thomas A. Keuer
President and Chief Operating Officer
ARCA biopharma, Inc.
10170 Church Ranch Way, Suite 100
Westminster, CO 80021

Re: ARCA biopharma, Inc.
Registration Statement on Form S-4
Filed May 14, 2024
File No. 333-279387

Dear Thomas A. Keuer:

We have reviewed your registration statement and have the following comments.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies 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 this letter, we may have additional comments.

Registration Statement on Form S-4

Cover Page

1. Please clarify your disclosure to state, if true, that upon the completion of the proposed merger, the combined company will be a "controlled company" under the Nasdaq listing rules. To the extent necessary, please also add a risk factor discussing the risks to shareholders related to owning shares in a controlled company.
2. We note your disclosure that ARCA "intends to file an initial listing application for the combined company with Nasdaq." Please revise your disclosure here to clarify whether the Merger is contingent upon the approval of your Nasdaq listing application.

Risk Factors

Risks Related to the Merger

ARCA's expected disposal of its historical assets and operations in connection with its proposed Merger . . . , page 15

3. We note your disclosure here that "ARCA has two remaining ongoing development programs, and it will dispose of (or is in the process of disposing of) its legacy technology and intellectual property." Please clarify here and elsewhere as appropriate whether ARCA expects to dispose of its historical assets regardless of whether the stockholders approve the Merger. Additionally, please clarify here and elsewhere as appropriate whether the "legacy technology and intellectual property" that ARCA is in the process of disposing of includes the development programs for Gencaro and rNAPc2.

Risks Related to Oruka's Reliance on Third Parties

Oruka currently relies, and plans to rely in the future, on third parties . . . , page 72

4. Please revise your disclosure to explain that the current U.S. House of Representatives version of the BIOSECURE Act identifies WuXi Biologics as a biotechnology company of concern. Additionally, please revise your disclosure to clarify whether WuXi Biologics (Hong Kong) Limited is a subsidiary or affiliate of WuXi Biologics.

The Merger

Background of the Merger, page 96

5. We note your disclosure that in June of 2022, the Special Committee determined to abandon a non-binding proposal for a reverse merger styled transaction due to the counterparty's "early stage of development and substantial cash needs." Please revise your disclosure here to provide further details about that counterparty's stage of development.
6. We note your disclosure that it was the view of the Special Committee "that the \$6,000,000 enterprise value ascribed to ARCA was within the range of values ascribed in other recent reverse merger transactions" Please provide further details about the range of values that the Special Committee examined in this regard, including, but not limited to, the low-end and high-end of those values. Additionally, please provide further details about the companies that were involved in the other recent reverse merger transactions that the Special Committee reviewed.

Material U.S. Federal Income Tax Consequences of the Merger, page 125

7. We note your disclosure that the parties "intend" for the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code. Please revise to make clear whether the parties expect the Merger to be tax-free to U.S. holders. If you are able to conclude that the Merger is likely to be tax-free to U.S. holders, please file a tax opinion supporting such a conclusion. If there is uncertainty regarding the tax treatment of the Merger, counsel's opinion should discuss the degree of uncertainty. For

further guidance see Staff Legal Bulletin No. 19 and Item 601(b)(8) of Regulation S-K.

ARCA's Business
Overview, page 196

8. We note your disclosure on page 18 that ARCA plans to dispose of its historical assets and operations in connection with the proposed Merger. Please revise your disclosure in this section and elsewhere as appropriate to explain how and when the disposal of such assets and operations is expected to take place.

ORKA-001, page 212

9. We note your disclosure that "[b]ased on recent precedent for PsO, Oruka anticipates that the entire development program from first-in-human to biologics license application [] filing could take as little as six to seven years based on the averages for recently approved medicines." Please revise your disclosure here to note that Oruka has no control over the length of time needed for FDA review.

Oruka's Business
Overview, page 212

10. We note your disclosure on page 73 that Oruka currently relies on foreign CROs and CMOs, "including WuXi Biologics (Hong Kong) Limited [] and will likely continue to rely on foreign CROs and CMOs in the future." Please revise your disclosure in this section to disclose the nature of the business that Oruka conducts with WuXi Biologics (Hong Kong) Limited.

Oruka's Pipeline, page 212

11. Please revise your disclosure to explain what is meant by the term "Combinations" as it appears in the pipeline table.

Clinical Development Plans, page 223

12. Please clarify whether Oruka has submitted an IND with the FDA for Phase 1 clinical trials involving either ORKA-001 or ORKA-002.

Management Following the Merger
Non-Employee Directors, page 272

13. Please revise your disclosure here with respect to Ms. Ball to specifically identify the experience, qualifications, attributes or skills that led to the conclusion that Ms. Ball should serve as a director. Refer to Item 401(e) of Regulation S-K.

Unaudited Pro Forma Condensed Combined Financial Information

Notes to Unaudited Pro Forma Condensed Combined Financial Information

Accounting for the Merger, page 289

14. Please provide us an analysis concerning whether ARCA will become a shell company as defined in Rule 12b-2 of the Exchange Act prior to the closing of the Merger. Explain the plans for ARCA's two remaining ongoing development programs. Revise your disclosures as necessary to support the reverse recapitalization accounting planned for the Merger.

5. Adjustments to Unaudited Pro Forma Condensed Combined Balance Sheet as of March 31, 2024, page 290

15. Please revise your disclosure in this note to more clearly explain how you arrived to the amounts presented for adjustment 5(c.) For example, it is not clear from your narrative whether the \$249.8 million adjustment to cash is net of transaction costs of \$20.0 million given that the transaction costs appear to have been accounted for on a separate line through adjustment 5(d.) Consider disaggregating the \$249.8 million adjustments recorded to cash and to APIC similar to the table presented for adjustment 5(j.)

Comparison of Rights of Holders of ARCA Capital Stock and Oruka Capital Stock, page 299

16. We note your disclosure here, as well as in your risk factor on page 84 that the combined company will provide for the federal district courts of the United States of America to be the exclusive forum for the resolution of any complaint asserting a cause of action against the combined company or any of its directors, officers, employees, or agents and arising under the Securities Act. Please disclose that there is uncertainty as to whether a court would enforce such a provision. Please also state that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. In that regard, 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. Additionally, please revise to note that this provision may also make it more costly for a shareholder to bring a claim against you.

Principal Stockholders of ARCA, page 309

17. For the table here, as well as the table on page 312, please identify in footnotes all natural persons who have voting and/or investment power over the shares held by named entities.

Thomas A. Keuer
ARCA biopharma, Inc.
June 11, 2024
Page 5

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.

Please contact Ibolya Ignat at 202-551-3636 or Daniel Gordon at 202-551-3486 if you have questions regarding comments on the financial statements and related matters. Please contact Tamika Sheppard at 202-551-8346 or Joshua Gorsky at 202-551-7836 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Brent D. Fassett