

March 22, 2022

Jeffrey Hackman
President and Chief Executive Officer
Comera Life Sciences Holdings, Inc.
12 Gill Street
Suite 4650
Woburn, Massachusetts 01801

Sciences Holdings, Inc.
Statement on Form S-4

Re: Comera Life
Registration
Filed March 8, 2022
File No. 333-263377

Dear Mr. Hackman:

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-4

Summary of the Proxy Statement/Prospectus
Summary Risk Factors, page 37

1. Please revise your disclosure in this section to quantify Comera's losses pursuant to the "business email compromise fraud." Selected Unaudited Pro Forma Condensed Combined Financial Information, page 41

2. We note your statement that the historical financial information presented in this section has been adjusted to give pro forma effect to the following events that are related and/or directly attributable to the Business Combination. Please revise your disclosure to specify these events or advise.

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Unaudited Pro Forma Condensed Combined Financial Statements
Note 3 - Transaction Accounting Adjustments, page 119

3. Please revise your note to pro forma adjustment H to disclose the basis for the reclassification of the public warrants to equity, and clarify that the private warrants will continue to be recognized as liabilities.
Note 4 - Earn-Out Shares, page 120

4. Please provide us your analysis under ASC 815-40-15 supporting your

determination that
the contingent obligation to issue Earn-Out shares is considered
indexed to the company's
own stock and therefore meets the requirement for equity
classification.
The Background of the Business Combination, page 129

5. We note your response to prior comment 10 and revised disclosure.
Please revise your
disclosure to (i) disclose the reasons why OTR's board of directors
did not retain third-
party experts to conduct scientific due diligence on Comera and (ii)
describe the OTR
board's discussion on January 27, 2022 and the relevant findings of
their review.

6. We note your response to prior comment 11 and re-issue in part. Please
revise your
disclosure to explain why OTR did not include any preclinical
companies in the
comparable company analysis and only selected companies that appear to
be significantly
more advanced in clinical development than Comera.

We further your note statements that OTR believed it was
"inappropriate" to rely on the
"quantitative" results of the selected companies and made
"qualitative" judgments. Please
revise your disclosure to state what is meant by "quantitative"
results, explain why OTR
believed it was "inappropriate" to rely on these results, and to
describe what "qualitative"
judgments were made by OTR in its comparable company analysis.
Information About Comera, page 181

7. We note your response to prior comment 13 and your revised disclosure.
Please further
revise to clarify the term of these collaboration agreements and
disclose how the parties
are intended to agree that the project(s) undertaken pursuant to such
agreements have been
completed. Please also provide us with your analysis as to why none of
these agreements
constitute material contracts pursuant to Item 601(b)(10) 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.

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You may contact Jeanne Bennett at 202-551-3606 or Angela Connell at
202-551-3426 if
you have questions regarding comments on the financial statements and related
matters. Please
contact Alan Campbell at 202-551-4224 or Celeste Murphy at 202-551-3257 with
any other
questions.

FirstName LastName Jeffrey Hackman
Corporation Finance
Comapany Name Comera Life Sciences Holdings, Inc.

Sincerely,
Division of
Office of Life

Sciences
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cc: Janeane R. Ferrari, Esq.
FirstName LastName