

April 2, 2021

Thomas Butler
Chief Executive Officer
Biomea Fusion, Inc.
726 Main Street
Redwood City, CA 94063

Re: Biomea Fusion, Inc.
Registration

Statement on Form S-1
2021

Filed March 26,
File No. 333-254793

Dear Mr. Butler:

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

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

Registration Statement on Form S-1

Prospectus Summary
Overview, page 1

1. We note your response to prior comment 2 regarding the two programs in your pipeline table on page 2 with undisclosed targets which appear to be in the discovery phase. Since your filing contains minimal discussion of these two programs, it appears that these programs are not sufficiently material to your operations to warrant inclusion in the pipeline table. Please remove these two programs. We also believe that Optimization should be depicted under the Discovery column. A textual discussion of the program is a more appropriate place to make distinctions regarding different segments within a particular phase. Please revise accordingly.

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

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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.

You may contact Eric Atallah at 202-551-3663 or Daniel Gordon at 202-551-3486 if you have questions regarding comments on the financial statements and related matters. Please

contact Dillon Hagius at 202-551-7967 or Ada D. Sarmiento at 202-551-3798 with any other questions.

FirstName LastNameThomas Butler

Corporation Finance
Comapany NameBiomea Fusion, Inc.

Sciences
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cc: Miles P. Jennings, Esq.
FirstName LastName

Sincerely,

Division of

Office of Life