

DIVISION OF CORPORATION FINANCE

May 26, 2021

Hugh Y. Rienhoff, Jr., M.D. Chief Executive Officer Imago BioSciences, Inc. 329 Oyster Point Blvd., 3rd Floor South San Francisco, CA 94080

Re: Imago BioSciences, Inc. Amendment No. 1 to Draft Registration Statement on Form S-1 Submitted May 19, 2021 CIK No. 0001623715

Dear Dr. Rienhoff:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

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

Bomedemstat in MF, page 3

1. We note your response to comment 7 and re-assert our comment. We do not believe that your amended disclosure that "there have been no dose-limiting toxicities or deaths related to drug as of the cut-off date" is properly balanced with your observation of eight serious adverse events in this trial that were deemed by investigators as possibly related to bomedemstat. Please disclose this observation in the summary section.

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Intellectual Property, page 95

2. We note your response to comment 12 and related amendments in your filing. Please identify the specific foreign jurisdictions in which you have granted patents or pending patent applications.

You may contact Li Xiao at 202-551-4391 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Dillon Hagius at 202-551-7967 or Chris Edwards at 202-551-6761 with any other questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Benjamin A. Potter