



DIVISION OF
CORPORATION FINANCE

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

September 2, 2022

Bruce M. Rodgers
Chief Executive Officer
LMF Acquisition Opportunities, Inc.
1200 W. Platt St., Suite 100
Tampa, Florida 33606

Re: LMF Acquisition Opportunities, Inc.
Amendment No. 2 to Registration Statement on Form S-4
Filed August 24, 2022
File No. 333-264993

Dear Mr. Rodgers:

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 July 22, 2022 letter.

Amendment No. 2 to Registration Statement on Form S-4

Cover Page

1. We note the revised disclosure on the cover page in response to comment 1. We further note that your "anticipated" scenario shown on the cover page appears to actually be your "No Redemption" scenario shown on page 121. Please update your disclosure to clarify the estimated ownership percentages provided is for the "No Redemption" scenario or otherwise advise. Also, please revise the assumptions underlying the two scenarios depicted on the cover page to eliminate repetition and highlight the differences as it appears the only differences between the two scenarios is "no redemptions" versus "maximum redemptions." Finally, please refrain from describing your "No Redemption"

scenario as the the "anticipated" or "expected" scenario and make clarifying disclosure throughout your filing, including on pages 8, 26, 73 and 143.

Questions and Answers about the Proposals

Q: What equity stake will current stockholders of LMAO and SeaStar Medical stockholders hold in the Combined Company after the closing?, page 8

2. Given the uncertainty regarding the potential number of LMAO public stockholders exercising their redemption rights, please update your disclosure in this section so that the disclosure is consistent with your three scenarios (No Redemption, 50% Redemption and Maximum Redemption) set out in your table on page 27.

Background of the Business Combination, page 99

3. We reissue comments 5 and 6 to the extent it remains unclear who led the efforts on behalf of LMAO to find an acquisition partner and what consideration the Board gave to various potential candidates in the process, including when and how many times the Board met to consider acquisition candidates. Revise to clarify. In doing so, please clarify throughout the background section what transactions the Board considered and determined to pursue or eliminated from consideration. In particular, for example, on page 101, you disclose, "[a]fter several more discussions between LMAO's management team and Board and with Company A and its financial advisors" further action occurred. Clarify if there were "several more discussions" with the Board and how many times the Board met with members of management at that point and and each time you reference "several more discussions" involving the Board, which occurs again numerous times throughout the background section.
4. We note the information provided in response to comment 8. Please update your disclosure to clarify why the Board felt it appropriate to rely on the enterprise valuations of large cap comparable companies given the current size of SeaStar Medical. In your correspondence you state the "LMAO Board believed that the nature of SeaStar Medical's product candidate in conjunction with its regulatory strategy was an important element of the future value of SeaStar Medical." Please update your disclosure in your registration statement to discuss the qualitative and quantitative factors your Board relied upon in greater detail to arrive at the pre-money valuation of no less than \$85 million.

Proposal 6 - The Nasdaq Proposal
Overview, page 143

5. Please update your disclosure here to disclose the \$2.5 million of Commitment Shares payable to Tumim Stone Capital under the Common Stock Purchase Agreement.

Clinical Studies, page 169

6. We reissue comment 12 to the extent that you have not disclosed all serious adverse events that were deemed study related. For example, on pages 170-171, list all of the

SAEs experienced. On page 171, for the SCD-003-IDEG090189 study where no SAEs were found to be "definitively" related to the device by the principal investigator, please disclose any SAEs that were possibly related to the device or otherwise advise. In addition, in the first full paragraph on page 172, list all SAEs, not only "the most frequent categories." In this regard, it may be useful to provide this disclosure in tabular form.

General

7. We note the revised disclosure on the cover page regarding the Tumim Stone Capital LLC Common Stock Purchase Agreement. Revise the cover page to disclose the discount to market price to be paid by Tumim and clarify that the agreement is an "equity-line financing agreement" consistent with your disclosure on page 24 and elsewhere. In addition, please update your disclosure on the cover page to describe the \$2.5 million commitment fee payable to Tumim in the form of Commitment Shares and update your estimated ownership percentages upon completion of the Business Combination throughout your filing to account for the estimated Commitment Shares. Finally, please include a separate, specific risk factor to address the potential dilutive effect of your equity line agreement with Tumim.
8. We note the revised disclosure on page 108 in response to comment 2. The revised disclosure states the fact of the potential conflict of interest, but does not address what consideration the board gave to that fact. Please revise accordingly. In addition, please include a cross-reference to your risk factor on page 72 where Maxim's potential conflicts of interest is discussed in greater detail.

You may contact Tracie Mariner at (202) 551-3744 or Al Pavot at (202) 551-3738 if you have questions regarding the financial statements and related matters. Please contact Abby Adams at (202) 551-6902 or Jason Drory at (202) 551-8342 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Curt P. Creely, Esq.