



DIVISION OF  
CORPORATION FINANCE

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

July 22, 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. 1 to Registration Statement on Form S-4**  
**Filed July 11, 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.

Amendment No. 1 to Registration Statement on Form S-4

Cover Page

1. We note your revised disclosure in response to comment 1. Please revise the disclosure in this section to clarify whether and to what extent the anticipated ownership percentages and the "maximum redemptions" scenario are based on the same assumptions outlined after the disclosure added in response to comment 1.
2. We note the revisions in response to comment 3 and reissue the comment in part. In the section beginning on page 104, please clarify what consideration the Board gave to Maxim's potential conflicts of interest when reaching its fairness determination.

SeaStar Medical, page 18

3. We note your response to comment 8 and reissue the comment to the extent we sought the disclosure in the summary section, in the discussion of SeaStar Medical.

Risks Related to SeaStar Medical's Financial Condition

SeaStar Medical's estimates of market opportunity, industry projections and forecasts . . . , page 54

4. We note the revised disclosure in response to comment 9 and reissue the comment insofar as the revised disclosure states that SeaStar Medical is responsible for the disclosure in the document. Revise to clarify that LMF Acquisition Opportunities, Inc., the registrant, is responsible for the disclosure in the filing as requested in our comment.

Background of the Business Combination, page 97

5. We reissue comment 12 to the extent that you have not adequately disclosed when the LMAO Board met to consider and/or eliminate the various transactions. For example, on page 101, it appears the LMAO Board met on September 23, 2021, at some point between the call when Maxim initiated contact and a call later in the same day when LMAO's Maxim contacts informed SeaStar that LMAO was not interested in pursuing substantive discussions until SeaStar substantially completed its PCAOB audit. If so, revise to clarify.
6. We reissue comment 13 to the extent that you continue to refer to LMAO's actions throughout this section such as who at LMAO met with Maxim and without specifying who acted on behalf of LMAO. For example, on page 100, you state "an LMAO board member" and "LMAO's management team." Revise to clarify, for example, who at "LMAO expressed concerns regarding Company H's ongoing litigation" and who at LMAO "tabled further discussions with Company I."
7. We note the revised disclosure in response to comment 14 including your revised disclosure that Skyway provided "valuation analysis" and "presentations" to your board in connection with your board determining that at the time the Merger Agreement was entered into, SeaStar Medical had a fair market value of at least 80% of the value of the Trust Account. Please provide us with copies of the materials that Skyway prepared and shared with your board in connection with this transaction, including any board books, transcripts and summaries of oral presentations made to the board. We may have additional comments after we review those materials.
8. Please clarify how your board arrived at the pre-money valuation of approximately \$85 million for SeaStar Medical. We note that the discounted cash flow analysis provided by Skyway appears to show an enterprise value of \$82.1 million, which appears to be below the threshold amount for satisfaction of the 80% test which you disclose to be "approximately \$84.5 million."

LMAO's Board's Reasons for the Approval of the Business Combination, page 104

9. We note the revised disclosure in response to comment 15; however, you only address the three criteria that you have determined SeaStar Medical to meet, which does not comprise all the criteria from the Form S-1. We note the disclosure in the Form S-1, that "[i]n the event that we decide to enter into our initial business combination with a target business that does not meet the above criteria and guidelines, we will disclose that the target business does not meet the above criteria in our stockholder communications related to our initial business combination."
10. We note your disclosure here that "FDA approval and subsequent commercialization of its pediatric and adult AKI product candidates is an inflection point for SeaStar Medical and the company would benefit from LMAO's incremental capital." Approval is solely within the authority of the FDA, and speculating on FDA approval is not appropriate. Please revise your disclosure here to clarify that the "potential" FDA approval and subsequent commercialization is an inflection point.

Our Clinical Stage Product Pipeline, page 166

11. We reissue comment 19 to the extent that you continue to use the term "pipeline" in the title and introduction to this section and that you continue to use a graphic with indicia of a pipeline table. Please revise to provide the disclosure in narrative form. We also note that the columns do not line up with the bullet points properly; therefore the current presentation is unclear in addition to the potential for confusion of your products with pharmaceuticals.

Clinical Studies, page 167

12. We note the revised disclosure in response to comment 20. Please revise to further clarify who performed the studies and to disclose the type and number of all serious adverse events that were determined to be study-related.

Intellectual Property, page 172

13. We note the revised disclosure in response to comment 21. In addition to the license agreement, file the agreement that governs your co-ownership with the University of Michigan of the patents and applications in Patent Family 1, as required by Item 601(b)(10)(ii)(B) of Regulation S-K. Revise this section to disclose the material terms of the co-ownership agreement or otherwise advise.

General

14. We note your revised disclosure in response to comment 29 and reissue in part. We note your disclosure that "no other investors have committed to purchasing securities in a potential private placement in public equity" other than Dow Pension Funds; however, your disclosure does not clearly state the material terms of the potential PIPE, including

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the price. Please update your disclosure to highlight material differences in the terms and price of securities issued at the time of the IPO as compared to the private placement contemplated at the time of the business combination or otherwise advise.

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.