

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

**POST-EFFECTIVE AMENDMENT NO. 3
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

SeaStar Medical Holding Corporation
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

6770
(Primary Standard
Industrial Classification Code Number)

85-3681132
(I.R.S. Employer
Identification No.)

3513 Brighton Blvd, Suite 410
Denver, CO 80216
(844) 427-8100
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Eric Schlorff
Chief Executive Officer
3513 Brighton Blvd.
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(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, please check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 under the Securities Exchange Act of 1934:

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. Neither we nor the Selling Stockholder may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION — DATED April 21, 2023

PRELIMINARY PROSPECTUS



6,718,842 Shares of Common Stock

This prospectus relates to the offer and resale of up to 6,718,842 shares of our common stock, \$0.0001 par value per share (the “Common Stock”), by Tumim Stone Capital LLC, (“Tumim” or the “Selling Stockholder”).

The shares of Common Stock being offered by Tumim have been and may be issued pursuant to the purchase agreement dated August 23, 2022 that we entered into with Tumim (the “Purchase Agreement”). We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of our Common Stock by Tumim. However, we may receive up to \$100.0 million in aggregate gross proceeds from sales of our Common Stock to Tumim that we may make under the Purchase Agreement, from time to time after the date of this prospectus. On January 20, 2023, we issued 218,842 shares of our Common Stock, or the Commitment Shares, to Tumim as partial consideration for its irrevocable commitment to purchase shares of our Common Stock under the Purchase Agreement. See the sections titled “The Tumim Transaction” for a description of the transaction contemplated by the Purchase Agreement and “Selling Stockholder” for additional information regarding Tumim.

Tumim may sell the shares of our Common Stock included in this prospectus in a number of different ways and at varying prices. We provide more information about how Tumim may sell the shares in the section titled “Plan of Distribution.” Tumim is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the “Securities Act”).

Tumim will pay all brokerage fees and commissions and similar expenses in connection with the offer and resale of the shares by Tumim pursuant to this prospectus. We will pay the expenses (except brokerage fees and commissions and similar expenses) incurred in registering under the Securities Act the offer and resale of the shares included in this prospectus by Tumim, including legal and accounting fees. See “Plan of Distribution.”

In connection with the Business Combination (as defined herein), holders of 8,878,960 shares of Class A Common Stock, or 85.8% of the shares with redemption rights, exercised their right to redeem their shares for cash at a redemption price of \$10.377 per share, for an aggregate redemption amount of approximately \$92.1 million. The shares of Common Stock being offered for resale pursuant to this prospectus by the Selling Stockholder represent approximately 31.5% of shares outstanding on a fully diluted basis and approximately 65.0% of the total number of outstanding shares held by non-affiliates as of the date hereof. Given the substantial number of shares of Common Stock being registered for potential resale by Selling Stockholder pursuant to this prospectus, the sale of shares by the Selling Stockholder, or the perception in the market that the Selling Stockholder of a large number of shares intend to sell shares, could increase the volatility of the market price of our Common Stock or result in a significant decline in the public trading price of our Common Stock. Even if our trading price is significantly below \$10.00, the offering price for the units offered in the LMAO IPO, the Selling Stockholder, may still have an incentive to sell shares of our Common Stock because it may purchase the shares at prices lower than the public investors or the current trading price of our Common Stock. While the Selling Stockholder may experience a positive rate of return based on the trading price of the Company’s securities, the public holders of the Company’s securities may not experience a similar rate of return on the securities they purchase due to differences in the applicable purchase price and trading price. See “Risk Factors—The Selling Stockholder purchased securities in the Company at a price below the current trading price of such securities, and may experience a positive rate of return based on the current trading price. Future investors in the Company may not experience a similar rate of return.”

Our Common Stock and warrants are traded on the Nasdaq Stock Market under the symbols “ICU” and “ICUCW,” respectively. On April 18, 2023, the closing price of our Common Stock was \$2.15 per share, and the closing price of our warrants, was \$0.085 per warrant.

We are an “emerging growth company” under federal securities laws and are subject to reduced public company reporting requirements. Investing in our Common Stock or Warrants involves a high degree of risk. See the section titled “Risk Factors” beginning on page 9 of this prospectus to read about factors you should consider before buying our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2023.

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We have not, and the Selling Stockholder has not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any prospectuses supplement prepared by or on behalf of us or to which we have referred you. We and the Selling Stockholder take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares of Common Stock offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any prospectus supplement is current only as of its date, regardless of its time of delivery or any sale of our shares of Common Stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: we have not, and the Selling Stockholder has not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our shares of Common Stock and the distribution of this prospectus outside of the United States.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-1 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. The Selling Stockholder may use the shelf registration statement to sell up to an aggregate of 6,718,842 shares of Common Stock from time to time through any means described in the section titled “*Plan of Distribution.*”

A prospectus supplement may also add, update or change information included in this prospectus. Any statement contained in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in such prospectus supplement modifies or supersedes such statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. You should rely only on the information contained in this prospectus or any applicable prospectus supplement. See section titled “*Where You Can Find More Information.*”

Neither we nor the Selling Stockholder have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or any accompanying prospectus supplement we have prepared. We and the Selling Stockholder take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby and only under circumstances and in jurisdictions where it is lawful to do so. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus or any applicable prospectus supplement. This prospectus is not an offer to sell securities, and it is not soliciting an offer to buy securities, in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement is accurate only as of the date on the front of those documents only, regardless of the time of delivery of this prospectus or any applicable prospectus supplement, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “*Where You Can Find More Information.*”

This prospectus contains references to trademarks and service marks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that the applicable licensor will not assert, to the fullest extent under applicable law, its rights to these trademarks and trade names. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of it by, any other companies.

On October 28, 2022 (the “Closing Date”), LMAO consummated its business combination pursuant to that certain Agreement and Plan of Merger, dated as of April 21, 2022 (“Merger Agreement”), by and among LMAO, LMF Merger Sub, Inc., a Delaware corporation and direct wholly owned subsidiary of LMAO (“Merger Sub”), and SeaStar Medical, Inc., a Delaware corporation (“SeaStar Medical”). As contemplated by the Merger Agreement, SeaStar Medical merged with and into Merger Sub, with SeaStar Medical continuing as the surviving entity in the merger as a wholly-owned subsidiary of LMAO (the “Business Combination”). In connection with the closing of the Business Combination (the “Closing”), LMAO changed its name to “SeaStar Medical Holding Corporation” (the “Company”).

Unless the context indicates otherwise, references to the “Company,” “we,” “us” and “our” refer to the business of SeaStar Medical Holding Corporation, a Delaware corporation, and its consolidated subsidiaries following the Business Combination. “LMAO” refers to LMF Acquisition Opportunities, Inc. prior to the Business Combination.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein may contain forward-looking statements as defined by the Private Securities Litigation Reform Act of 1995. These statements are based on the beliefs and assumptions of management. Although the Company believes that its plans, intentions, and expectations reflected in or suggested by these forward-looking statements are reasonable, the Company cannot assure you that it will achieve or realize these plans, intentions, or expectations. Forward-looking statements are inherently subject to risks, uncertainties, and assumptions. Generally, statements that are not historical facts, including statements concerning the Company's possible or assumed future actions, business strategies, events, or results of operations, are forward-looking statements. In some instances, these statements may be preceded by, followed by or include the words "believes," "estimates," "expects," "projects," "forecasts," "may," "will," "should," "seeks," "plans," "scheduled," "anticipates" or "intends" or the negatives of these terms or variations of them or similar terminology.

Forward-looking statements are not guarantees of performance. You should not put undue reliance on these statements which speak only as of the date hereof. You should understand that the following important factors, among others, could affect the Company's future results and could cause those results or other outcomes to differ materially from those expressed or implied in the Company's forward-looking statements:

- the Company's future capital requirements and sources and uses of cash;
- the Company's ability to obtain funding or raise capital for its operations and future growth;
- any delays or challenges in obtaining FDA approval of the Company's SCD product candidates;
- economic downturns and the possibility of rapid change in the highly competitive industry in which the Company operates;
- the ability to develop and commercialize its products or services following regulatory approval of the Company's product candidates;
- the failure of third-party suppliers and manufacturers to fully and timely meet their obligations;
- product liability or regulatory lawsuits or proceedings relating to the Company's products and services;
- inability to secure or protect its intellectual property;
- dispute or deterioration of relationship with the Company's major partners and collaborators;
- the outcome of any legal proceedings that may be instituted against the Company following completion of the Business Combination and transactions contemplated thereby;
- the ability to maintain the listing of its Common Stock on Nasdaq;
- the risk that the Business Combination disrupts current plans and operations;
- the ability to recognize the anticipated benefits of the Business Combination, which may be affected by, among other things, competition, and the ability of the Company to grow and manage growth profitably;
- costs related to the Business Combination; and
- other risks and uncertainties indicated in this prospectus, including those under "Risk Factors" herein, and other filings that have been made or will be made with the SEC.

These and other factors that could cause actual results to differ from those implied by the forward-looking statements in this prospectus are more fully described in the "Risk Factors" section. The risks described in "Risk Factors" are not exhaustive. New risk factors emerge from time to time and it is not possible for us to predict all such risk factors, nor can the Company assess the impact of all such risk factors on its business or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward-looking statements. All forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by the foregoing cautionary statements. The Company undertakes no obligations to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

SUMMARY

This summary highlights selected information appearing elsewhere in this prospectus or the documents incorporated by reference herein. Because it is a summary, it may not contain all of the information that may be important to you. To understand this offering fully, you should read this entire prospectus, the registration statement of which this prospectus is a part and the documents incorporated by reference herein carefully, including the information set forth under the heading “Risk Factors” and our financial statements.

Business Summary

Company Overview

We are a medical technology company focused primarily on developing and commercializing our lead product candidate, the Selective Cytopheretic Device (“SCD”), for pediatric and adult acute kidney injury (“AKI”) indications. We recently submitted an application for a Humanitarian Device Exemption (“HDE”) for SCD for the treatment of pediatric patients with AKI on continuous renal replacement therapy (“CRRT”). In addition, we are currently finalizing the design of a pivotal trial of SCD for adult patients with AKI on CRRT based on a previously approved investigative device exemption (“IDE”) protocol. The SCD received a Breakthrough Device Designation from the U.S. Food and Drug Administration (“FDA”) on April 29, 2022 for the proposed use in the treatment of immunomodulatory dysregulation in adult patients who are 18 years and older with AKI. There is no guarantee that we will complete the AKI adult trial in a timely manner, or at all, nor will there be any assurance that positive data will be generated from such trial. Even if we are able to generate positive results from this trial, the FDA and other regulatory agencies may require us to conduct additional trials to support the study or disagree with the design of the trial and request changes or improvements to such design. To date, we have not obtained regulatory approval to commercialize or sell any of our products candidates.

Corporate Information

Our principal executive offices are located at 3513 Brighton Boulevard, Suite #410, Denver, Colorado 80216, and our phone number is 844-427-8100.

Business Combination

On the Closing Date, LMAO, consummated a series of transactions that resulted in the combination of Merger Sub and SeaStar Medical, pursuant to the Merger Agreement, by and among LMAO, Merger Sub and SeaStar Medical. Pursuant to the terms of the Merger Agreement, a business combination between LMAO and SeaStar Medical was effected through the merger of Merger Sub with and into SeaStar Medical, with SeaStar Medical surviving the merger as a wholly-owned subsidiary of LMAO, following the approval by shareholders of LMAO at the special meeting of the stockholders of LMAO held on October 18, 2022, 2022 (the “Special Meeting”). Following the Closing, LMAO was renamed “SeaStar Medical Holding Corporation”.

The aggregate consideration payable to the stockholders of SeaStar Medical at the Closing was \$85,408,328, which consisted of an aggregate equity value of SeaStar Medical of \$85,000,000, minus deductions for indebtedness of SeaStar Medical and SeaStar Medical transaction expenses in excess of \$800,000, plus the aggregate exercise price of (1) SeaStar Medical warrants issued and outstanding immediately prior to the Closing and (2) SeaStar Medical options issued and outstanding immediately prior to the Closing, less the value of the shares of Common Stock underlying the Assumed Equity (as defined in the Merger Agreement) (the “Closing Merger Consideration”). The Closing Merger Consideration was payable solely in shares of Common Stock, valued at \$10.00 per share, resulting in the issuance of 7,837,628 shares of common stock, par value \$0.0001 per share, of Common Stock to holders of stock of SeaStar Medical immediately prior to the Closing. At the Closing, shares of class B common stock, par value \$0.001 per share, of LMAO (“Class B Common Stock”) automatically converted into shares of

class A common stock, par value \$0.001 per share, of LMAO (“Class A Common Stock”) on a one-to-one basis, and pursuant to the charter of LMAO after the Business Combination (the “Charter”), Class A Common Stock and Class B Common Stock was reclassified as Common Stock.

As of October 26, 2022, holders of an aggregate of 8,878,960 shares of Common Stock exercised their right to redeem their Shares, after giving effect to any redemption reversals requested by stockholders to reverse their election to have their shares redeemed.

On October 17 and October 25, 2022, LMAO and SeaStar Medical entered into certain prepaid forward agreements with two institutional investors. For a more detailed description of such agreements, see the Company’s current reports on Form 8-K filed with the SEC on October 17, 2022 and October 27, 2022.

Immediately prior to the Closing, each of SeaStar Medical’s issued and outstanding convertible notes automatically converted into shares of SeaStar Medical common stock (the “Note Conversion”). Immediately prior to the effectiveness of the Business Combination, each share of SeaStar Medical’s issued and outstanding preferred stock automatically converted into shares of SeaStar Medical common stock (the “Preferred Conversion”). At Closing, the (i) SeaStar Medical warrants that would not be exercised or exchanged in connection with the Business Combination were assumed by LMAO and converted into warrants to purchase Common Stock, (ii) outstanding options for shares of SeaStar Medical common stock under SeaStar Medical’s equity plan were assumed by LMAO and converted into options to purchase Common Stock, and (iii) issued and outstanding restricted stock unit awards under SeaStar Medical’s current equity plan were assumed by LMAO and converted into LMAO restricted stock units

Summary of Risks

You should consider all the information contained in this prospectus before investing in our securities. These risks are discussed more fully in the section titled “*Risk Factors*”. If any of these risks actually occur, our business, financial condition or results of operations would likely be materially adversely affected. These risks include, but are not limited to, the following:

Risks Related to the Company’s Financial Condition

- SeaStar Medical has incurred significant losses since its inception and anticipates that it will continue to incur significant losses for the foreseeable future.
- SeaStar Medical has not generated any significant revenue and may never be profitable and SeaStar Medical has a limited operating history, which makes it difficult to forecast its future results of operations.
- If SeaStar Medical fails to obtain additional financing, it would be forced to delay, reduce or eliminate its product development program, which may result in the cessation of its operations.
- The Company’s ability to use its net operating losses to offset future taxable income may be subject to certain limitations.

Risks Related to the Company’s Business Operations

- SeaStar Medical has not received, and may never receive, approval from the FDA to market its product in the United States or abroad and SeaStar Medical is subject to certain risks relating to pursuing an FDA approval via the HDE pathway, including limitations on the ability to profit from sales of the product.

- SeaStar Medical will initially depend on revenue generated from a single product and in the foreseeable future will be significantly dependent on a limited number of products.
- If SeaStar Medical fails to comply with extensive regulations of United States and foreign regulatory agencies, the commercialization of its products could be delayed or prevented entirely.
- Delays in successfully completing SeaStar Medical's planned clinical trials could jeopardize its ability to obtain regulatory approval and delays, interruptions or the cessation of production by its third-party suppliers of important materials or delays in qualifying new materials, may prevent or delay SeaStar Medical's ability to manufacture or process its SCD device.
- Difficulties in manufacturing SeaStar Medical's SCD could have an adverse effect upon its revenue and expenses.
- SeaStar Medical faces intense competition in the medical device industry and its SCD technology may become obsolete.
- If SeaStar Medical or its contractors or service providers fail to comply with laws and regulations, it or they could be subject to regulatory actions, which could affect its ability to develop, market and sell its product candidates and any other future product candidates and may harm its reputation.
- SeaStar Medical intends to outsource and rely on third parties for the clinical development and manufacturing, sales and marketing of its SCD or any future product candidates that it may develop, and its future success will be dependent on the timeliness and effectiveness of the efforts of these third parties.
- SeaStar Medical is and will be exposed to product liability risks, and clinical and preclinical liability risks, which could place a substantial financial burden upon it should it be sued.
- Should SeaStar Medical's products be approved for commercialization, a lack of third-party coverage and reimbursement for SeaStar Medical's devices could delay or limit their adoption or adverse changes in reimbursement policies and procedures by payors may impact SeaStar Medical's ability to market and sell its products.
- A small number of the Company's stockholders, including its major stockholders, the Dow Pension Funds, could significantly influence its business.

Risks Related to the Company's Intellectual Property

- SeaStar Medical relies upon exclusively licensed patent rights from third parties which are subject to termination or expiration. If licensors terminate the licenses or fail to maintain or enforce the underlying patents, SeaStar Medical's competitive position could be materially harmed.
- If SeaStar Medical is unable to obtain and maintain sufficient patent protection for its products, if the scope of the patent protection is not sufficiently broad, or if the combination of patents, trade secrets and contractual provisions upon which it relies to protect its intellectual property are inadequate, its competitors could develop and commercialize similar or identical products, and SeaStar Medical's ability to commercialize such products successfully may be adversely affected.
- The United States government may exercise certain rights with regard to SeaStar Medical's inventions, or licensors' inventions, developed using federal government funding.
- Intellectual property rights do not necessarily address all potential threats to SeaStar Medical's competitive advantage.
- SeaStar Medical may obtain only limited geographical protection with respect to certain patent rights, which may diminish the value of its intellectual property rights in those jurisdictions and prevent it from enforcing its intellectual property rights throughout the world.

Risks Related to Being a Public Company

- The Company does not have experience operating as a United States public company and may not be able to adequately develop and implement the governance, compliance, risk management and control infrastructure and culture required for a public company, including compliance with the Sarbanes Oxley Act.
- The Company may not be able to consistently comply with all of Nasdaq's Listing Rules.
- SeaStar Medical identified a material weakness in its internal control over financial reporting. If the Company is unable to develop and maintain an effective system of internal controls over financial reporting, the Company may not be able to accurately report its financial results in a timely manner, which may materially and adversely affect the Company's business, results of operations and financial condition.
- The Company may redeem your unexpired warrants prior to their exercise at a time that is disadvantageous to you, thereby making your warrants worthless. The Company has the ability to redeem outstanding warrants at any time after they become exercisable and prior to their expiration if certain conditions are met, but none of the private placement warrants will be redeemable so long as they are held by the Sponsor or its permitted transferees.

THE OFFERING

On August 23, 2022, we entered into the Purchase Agreement with Tumim, pursuant to which Tumim has committed to purchase up to \$100.0 million of our Common Stock, or the Total Commitment, at our direction from time to time over the term of the Purchase Agreement, subject to certain terms, conditions and limitations in the Purchase Agreement. We entered into the Amendment No. 1 to the Purchase Agreement with Tumim on November 9, 2022, to, among other things, amend certain definitions in the Purchase Agreement to include certain information that was not available at the time when the Purchase Agreement was executed on August 23, 2022. Also on August 23, 2022, we entered into a registration rights agreement with Tumim (the "Registration Rights Agreement"), pursuant to which we have filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act, the shares of our Common Stock that have been and may be issued to Tumim under the Purchase Agreement. Pursuant to the terms of the Purchase Agreement, as amended, we issued 218,842 Commitment Shares to Tumim as partial consideration for its irrevocable commitment to purchase shares of our Common Stock under the Purchase Agreement, which are also covered by this prospectus.

The sale of our Common Stock by us to Tumim under the Purchase Agreement, if any, will be subject to certain limitations and may occur, from time to time at our sole discretion, over the approximately 24-month period commencing on the date of initial satisfaction of certain conditions as set forth in the Purchase Agreement, including but are not limited to the following: (i) a registration statement that includes this prospectus covering the resale by Tumim of shares of our Common Stock that have been and may be issued under the Purchase Agreement is declared effective by the SEC; (ii) a final prospectus in connection therewith is filed, (iii) the Commitment Shares have been issued to Tumim; and (iv) satisfaction of other customary conditions as set forth in the Purchase Agreement. From and after the satisfaction of all conditions to Tumim's purchase obligations set forth in the Purchase Agreement, or the Commencement, and the date on which the Commencement occurs, or the Commencement Date, we will have the right, but not the obligation, from time to time at our sole discretion, to direct Tumim to purchase certain amounts of our Common Stock, subject to certain limitations in the Purchase Agreement, that we specify in purchase notices that we deliver to Tumim under the Purchase Agreement, or each such purchase, a Purchase. The purchase price of the shares of our Common Stock that we may direct Tumim to purchase in a Purchase will be equal to 97% of the lowest daily VWAP during the three (3) consecutive trading day period ending on (and including) the trading day immediately prior to the date on which Tumim receives notice, the applicable purchase notice for such Purchase, or each such period, a Purchase Valuation Period. There is no upper limit on the price per share that Tumim could be obligated to pay for our Common Stock under the Purchase Agreement. The purchase price per share of our Common Stock to be sold in a Purchase will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the applicable Purchase Valuation Period for such Purchase. As set forth in the Purchase Agreement, the closing sale price of the Common Stock on the trading day immediately preceding such Purchase Date (as defined in the Purchase Agreement) is not less than \$0.50, which shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction.

Tumim has no right to require us to sell any shares of our Common Stock to Tumim, but Tumim is obligated to make purchases as directed by us, subject to the satisfaction of conditions set forth in the Purchase Agreement at Commencement and thereafter at each time that we may direct Tumim to purchase shares of our common stock under the Purchase Agreement. Actual sales of shares of our common stock to Tumim will depend on a variety of factors to be determined by us from time to time, including, among others, market conditions, the trading price of our common stock and determinations by us as to the appropriate sources of funding for us and our operations.

Under the applicable rules of The Nasdaq Stock Market LLC, or the Nasdaq listing rules, in no event may we issue or sell to Tumim under the Purchase Agreement and the transactions contemplated thereby, shares of our Common Stock in excess of 2,538,663 shares, or the Exchange Cap, which is 19.99% of the shares of our Common Stock outstanding immediately prior to the execution of the Purchase Agreement. We will need to obtain stockholder approval to issue shares of our Common Stock in excess of the Exchange Cap, unless the average price of all applicable sales of our common stock to Tumim under the Purchase Agreement equals or exceeds \$7.18 (which is the official closing price of the Common Stock on Nasdaq on the trading day immediately preceding the date of the Purchase Agreement, plus an incremental amount to take into account our issuance of the Commitment Shares to Tumim as consideration for its commitment to purchase shares of our Common Stock under the Purchase Agreement rather than in exchange for cash), in which case, under the Nasdaq listing rules, the Exchange Cap limitation will not apply to issuances and sales of our Common Stock under the Purchase Agreement. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our Common Stock under the Purchase Agreement if such issuance or sale would breach any Nasdaq listing rule.

The Purchase Agreement also prohibits us from directing Tumim to purchase any shares of our Common Stock if those shares, when aggregated with all other shares of our Common Stock then beneficially owned by Tumim (as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, and Rule 13d-3 thereunder), would result in Tumim beneficially owning more than 4.99% of the outstanding Common Stock, or the Beneficial Ownership Limitation.

The net proceeds under the Purchase Agreement to us will depend on the frequency and prices at which we sell shares of our stock to Tumim. We expect that any proceeds received by us from such sales to Tumim will be used for working capital and general corporate purposes.

Subject to specified exceptions included in the Purchase Agreement, we are limited in our ability to enter into specified variable rate transactions during the term of the Purchase Agreement. Such transactions include, among others, the issuance of convertible securities with a conversion or exercise price that is based upon or varies with the trading price of our common stock after the date of issuance, the issuance of securities with embedded anti-dilution provisions, the issuance of securities with an embedded put or call right or at a price subject to being reset after the initial issuance contingent on our business or market performance or entry into any new "equity line of credit" transaction or similar continuous equity offering where we may issue common equity at a price that is tied to future market prices of our common equity.

The Purchase Agreement will automatically terminate upon the earliest of (i) the first day of the month next following the 24-month anniversary of November 9, 2022 (the "Closing Date"), (ii) the date on which Tumim shall have purchased the Total Commitment worth of shares pursuant to the Purchase Agreement, (iii) the date on which the Common Stock shall have failed to be listed or quoted on the Nasdaq Global Market or any eligible market, (iv) the thirtieth (30th) trading day next following the date on which, pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any person commences a proceeding against the Company, in each case that is not discharged or dismissed prior to such thirtieth (30th) trading day, and (v) the date on which, pursuant to or within the meaning of any Bankruptcy Law, a custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors. Neither we nor Tumim may assign or transfer its rights and obligations under the Purchase Agreement, and no provision of the Purchase Agreement or the Registration Rights Agreement may be modified or waived by the parties.

As consideration for Tumim's commitment to purchase shares of our Common Stock upon the terms of and subject to satisfaction of the conditions set forth in the Purchase Agreement, on January 20, 2023, we issued 218,842 Commitment Shares as partial consideration to Tumim.

The Purchase Agreement and the Registration Rights Agreement contain customary representations, warranties, conditions and indemnification obligations of the parties. The representations, warranties and covenants contained in such agreements were made only for purposes of such agreements and as of specific dates, were solely for the benefit of the parties to such agreements and may be subject to limitations agreed upon by the contracting parties.

We do not know what the purchase price for our Common Stock will be and therefore cannot be certain as to the number of shares we might issue to Tumim under the Purchase Agreement after the Commencement Date. Although the Purchase Agreement provides that we may sell up to \$100 million of our Common Stock to Tumim, only 6,718,842 shares of our Common Stock are being registered for resale by the Selling Stockholder under this prospectus, which represents (i) the 218,842 Commitment Shares that we issued as partial consideration to Tumim on January 20, 2023 under the Purchase Agreement and (ii) up to 6,500,000 shares of Common Stock that may be issued to Tumim from and after the Commencement Date, if and when we elect to sell shares to Tumim under the Purchase Agreement. Depending on the market prices of our Common Stock at the time we elect to issue and sell shares to Tumim under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our Common Stock in order to receive aggregate gross proceeds equal to the \$100,000,000 Total Commitment available to us under the Purchase Agreement.

As of April 18, 2023, there were 13,296,516 shares of our Common Stock outstanding, of which 10,003,896 shares were held by non-affiliates. If all of the 6,718,842 shares offered by Tumim for resale under this prospectus were issued and outstanding as of the date hereof (without taking into account the 19.99% Exchange Cap limitation), such shares would represent approximately 31.5% of the total number of shares of our Common Stock outstanding and approximately 65.0% of the total number of outstanding shares held by non-affiliates, in each case as of the date hereof. If we elect to issue and sell more than the 6,718,842 shares offered under this prospectus to Tumim, which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Tumim is dependent upon the number of shares we may elect to sell to Tumim under the Purchase Agreement from and after the Commencement Date.

There are substantial risks to our stockholders as a result of the sale and issuance of our Common Stock to Tumim under the Purchase Agreement. These risks include substantial dilution, significant declines in our stock price and our inability to draw sufficient funds when needed. See “*Risk Factors*.” Issuances of our Common Stock in this offering will not affect the rights or privileges of our existing stockholders, except that the economic and voting interests of each of our existing stockholders will be diluted as a result of any such issuance. Although the number of shares of our Common Stock that our existing stockholders own will not decrease, the shares owned by our existing stockholders will represent a smaller percentage of our total outstanding shares after any such issuances to Tumim.

Resale of Common Stock

Common Stock offered by the Selling Securityholder	Up to 6,718,842 shares of our Common Stock.
Common Stock outstanding prior to this offering	13,296,516
Common Stock outstanding after this offering	19,418,510, assuming the sale of a total of 6,718,842 shares of our Common Stock. The actual number of shares issued will vary depending upon the actual sales prices under this offering.

Use of proceeds

We will not receive any proceeds from the resale of the Common Stock to be offered by the Selling Stockholder. We expect to receive up to \$100 million in aggregate gross proceeds under the Purchase Agreement from sale of our Common Stock that we elected or may elect to issue to Tumim from time to time in our sole discretion, from and after the Commencement Date.

Any proceeds that we receive from sales of our Common Stock to Tumim under the Purchase Agreement will be used for working capital and general corporate purposes. See “*Use of Proceeds.*”

Risk Factors

Investing in our Common Stock involves a high degree of risk. See the section titled “*Risk Factors*” of this prospectus and the section titled “*Risk Factors*” in the documents incorporated by reference herein for a discussion of factors you should carefully consider before investing in our Common Stock.

Nasdaq Ticker-Symbol

Common Stock: “ICU”

Warrants: “ICUCW”

RISK FACTORS

Investing in our securities involves risks. Before you make a decision to buy our securities, in addition to the risks and uncertainties discussed above under “Cautionary Note Regarding Forward-Looking Statements,” you should carefully consider the specific risks set forth herein. If any of these risks actually occur, it may materially harm our business, financial condition, liquidity and results of operations. As a result, the market price of our securities could decline, and you could lose all or part of your investment. Additionally, the risks and uncertainties described in this prospectus, any prospectus supplement or in any document incorporated by reference herein or therein are not the only risks and uncertainties that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may become material and adversely affect our business.

Risks Related to the Company’s Financial Condition

The Company has incurred significant losses since its inception and anticipates that it will continue to incur significant losses for the foreseeable future.

The Company is a medical technology company focused primarily on developing and commercializing its lead product candidate, the SCD, for pediatric and adult AKI indications. The Company has submitted an HDE application with the FDA for pediatric patients with AKI on CRRT. In addition, on February 9, 2023, the Company received approval from the FDA of its IDE application to conduct a pivotal study evaluating the effectiveness of its SCD in reducing hyperinflammation in adults with AKI requiring CRRT. The Company plans to begin enrollment in Q2 2023 and expect to generate interim study results during the fourth quarter of 2023 and topline study results and submission of a PMA application in the second half of 2024. However, there is no guarantee that the Company will complete any planned clinical trial in a timely manner, or at all, nor will there be any assurance that positive data will be generated from such trial. Even if the Company is able to generate positive results from this trial, the FDA and other regulatory agencies may require the Company to conduct additional trials to support the study or disagree with the design of the trial and request changes or improvements to such design. To date, the Company has not obtained regulatory approval to commercialize or sell any of its SCD product candidates, and it does not expect to generate any significant revenue for the foreseeable future. SeaStar Medical has incurred significant net losses since its inception and had an accumulated deficit of \$99.3 million and, \$76.3 million as of December 31, 2022 and 2021, respectively.

The Company has devoted most of its financial resources to research and development, including clinical trials and non-clinical development activities, and to obtain regulatory approval of its SCD product candidates. Since the completion of the Business Combination, the Company relied primarily on the sales of securities to fund its operations, and are limited as the Company needs to meet certain conditions before such funding becomes available. The size of its future net losses will depend, in part, on the rate of future expenditures and its ability to generate revenues. To date, none of its product candidates have generated significant revenue, and if its product candidates are not successfully developed or commercialized, or if revenues are insufficient following marketing approval, it will not achieve profitability and its business may fail. Even if the Company successfully obtains regulatory approval to market its product candidates in the United States, its revenues are also dependent upon the size of the markets outside of the United States, regulatory approval outside of the United States, and its ability to obtain market approval and achieve commercial success.

The Company expects to continue to incur substantial and increased expenses as it expands research and development activities and advances clinical programs through the regulatory approval process. The Company also expects an increase in its expenses associated with preparing for the potential commercialization of its products and creating additional infrastructure to support operations as a public company. As a result of the foregoing, it expects to continue to incur significant and increasing losses and negative cash flows for the foreseeable future.

The Company has not generated any significant revenue and may never be profitable.

The Company's ability to generate revenue and achieve profitability depends on its ability, alone or with collaborators, to successfully complete the development, obtain the necessary regulatory approvals of and commercialize its lead product candidate, the SCD. It does not anticipate generating revenues from its product candidates' sales for the foreseeable future. Its ability to generate future revenues from product sales depends heavily on its success with the following items:

- completing the clinical development of its SCD, initially for the treatment of adult AKI in the hospital setting;
- obtaining regulatory approval for its SCD for the designated indication, including the HDE in pediatrics and PMA for adults;
- launching and commercializing its SCD, including building a hospital-directed sales force and collaborating with third parties;
- obtaining third party reimbursement status from government agencies and insurance carriers; and
- entering into collaboration agreement and partnerships to commercialize its products.

Because of the numerous risks and uncertainties associated with medical device product development, the Company is unable to predict the timing or amount of increased expenses, when, or if, it will be able to achieve or maintain profitability. In addition, its expenses could increase beyond expectations if it is required by the FDA to perform additional, unanticipated studies.

Even if its product candidates are approved for commercial sale, the Company anticipates incurring significant costs associated with commercializing any approved product candidate. In the case of its SCD product candidate for the treatment of pediatric AKI, even if the Company receives approval from the FDA for its HDE application, the Company will be limited in its ability to sell and distribute its SCD units due to certain restrictions under the HDE requirements that limit the number of units that can be sold on an annual basis, which will further limit the amount of revenue that could be generated by the Company. Even if it is able to generate revenues from the sale of its products, the Company may not become profitable and may need to obtain additional funding to continue operations.

The Company has a limited operating history, which makes it difficult to forecast its future results of operations.

The Company has not received approval from the FDA and other regulatory authorities to sell its SCD product candidates and therefore it has a limited commercial operating history. According, the Company's ability to accurately forecast future results of its operations is limited and subject to a number of uncertainties and risks, including its ability to plan for and model future growth. If the Company receives regulatory approval to market and sell its SCD product candidates, its revenue growth could slow in the future, or its revenue could decline or fluctuate for a number of reasons, including slowing demand for its products, increasing competition, changing demand in the markets, new scientific or technological developments, a decrease in the growth of its overall market, its failure to attract more customers, the inability to obtain reimbursement for its products by government agencies and insurers, or its failure, for any reason, to continue to take advantage of growth opportunities. If its assumptions regarding these risks and uncertainties and its future revenue growth are incorrect or change, or if it does not address these risks successfully or forecast its results accurately, the Company's operating and financial results could differ materially from its expectations, and its business could suffer.

If the Company fails to obtain additional financing, it would be forced to delay, reduce or eliminate its product development program, which may result in the cessation of its operations.

Developing medical device products, including conducting preclinical studies and clinical trials, is expensive. The Company expects its research and development expenses to substantially increase in connection

with its ongoing activities, particularly as it advances its clinical programs. As of December 31, 2022 and 2021, SeaStar Medical had negative working capital of \$2.3 million and \$2.5 million, respectively. The Company currently does not have sufficient capital to support its operations and complete its planned regulatory approval process. The Company will need to secure additional capital to continue its operation, and such funding may not be available on acceptable terms, or at all. In addition, the Company incurred a significant amount of debt in connection with the Closing, including the issuance of unsecured and secured promissory notes to LM Funding America, Inc. (“LMFA”), LMFAO Sponsor (the “Sponsor”) and Maxim (“Maxim”), and the Company may not have sufficient funds to repay these loans. Even if the Company obtains additional funding, the Company will be required to make certain mandatory payments under such promissory notes, which will reduce the amount of proceeds available for the Company to operate its business.

On August 23, 2022, LMAO and SeaStar Medical, Inc. entered into a Common Stock Purchase Agreement (the “Purchase Agreement”) with Tumim Stone Capital LLC (“Tumim”) for the purchase of up to \$100.0 million in shares of the common stock (“Common Stock”) after the consummation of the Business Combination. There are certain conditions and limitations on the Company’s ability to utilize the \$100.0 million equity line with Tumim. The Company will be required to satisfy various conditions, which include, among others: (1) delivery of a compliance certificate; (2) filing of an initial registration statement; and (3) customary bring-down opinions and negative assurances, in order to commence the selling of Common Stock to Tumim under the Purchase Agreement. Once such conditions are satisfied, Tumim’s purchases are subject to various restrictions and other limitations, including a cap on the number of shares of Common Stock that we can sell based on the trading volume of our Common Stock, as well as certain beneficial ownership restrictions of Tumim. If any of these conditions are not satisfied or limitations are in effect, the Company may not be able to utilize all or part of the Tumim equity line, which would have an adverse impact on the Company’s ability to satisfy its capital needs and could have a material adverse impact on its business. The Company has received a total of \$1.9 million from these forward purchase agreements through February 2023. However, this source of capital may be limited since it depends substantially on the trading volume and price of our Common Stock.

In addition, the Company recently completed a convertible note financing in which the Company may issue up to a principal amount of approximately \$9.8 million of convertible notes in four separate tranches subject to certain conditions, and on March 15, 2023, the Company closed the first tranche of the financing by issuing a convertible note in a principal amount of \$3.3 million, and a warrant to purchase up to 328,352 shares of Common Stock. However, there is no guarantee that the Company will be able to satisfy the conditions required to issue additional notes under the remaining three tranches, including the requirement to obtain stockholder approval of such financing at the next annual meeting of stockholders.

Even if the Company receives sufficient capital in the future, the Company will be required to raise additional funds to support its own operations and complete its planned regulatory approval process, and such funding may not be available in sufficient amounts or on acceptable terms to the Company, or at all. If it is unable to raise additional capital when required or on acceptable terms, the Company may be required to:

- significantly delay, scale back or discontinue the development or commercialization of its product candidates;
- seek corporate partners on terms that are less favorable than might otherwise be available; or
- relinquish or license on unfavorable terms, its rights to technologies or product candidates that it otherwise would seek to develop or commercialize itself.

If it is unable to raise additional capital in sufficient amounts or on acceptable terms, the Company will be prevented from pursuing development and commercialization efforts, including completing the clinical trials and regulatory approval process for its SCD product candidates, which would have a material adverse impact on its business, results of operations and financial condition.

The Company's ability to use its net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2022, the Company had net operating loss ("NOL") carryforwards for federal and state (Colorado, California, and Florida) income tax purposes of \$82.3 million and \$28.9 million, respectively, which may be available to offset taxable income in the future. Under the Tax Cuts and Jobs Act of 2017, as modified by the Coronavirus Aid, Relief, and Economic Security Act, federal NOLs incurred in tax years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such federal net operating losses in tax years beginning after December 31, 2020, is limited to 80 percent of taxable income. Federal NOLs incurred before 2018 may be carried forward 20 years but are not subject to the taxable income limitation. Under current law, California NOLs generally may be carried forward 20 years (with a limited extension for California NOLs incurred in 2020-2021) without a taxable income limitation. The Company's federal NOLs include \$29.4 million that can also be carried forward indefinitely, and the remaining \$52.8 million of federal NOLs expire in various years beginning in 2027 for federal purposes. The California NOLs expire beginning in 2039 if not utilized. A lack of future taxable income would adversely affect the Company's ability to utilize these NOLs before they expire.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" (as defined in Section 382 of the Code and applicable Treasury Regulations) is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. The Company may experience a future ownership change under Section 382 of the Code that could affect its ability to utilize the NOLs to offset its income. The Company has not completed an ownership change analysis pursuant to IRC Section 382. If ownership changes within the meaning of IRC Section 382 are identified as having occurred, the amount of NOL and research tax credit carryforwards available to offset future taxable income and income tax liabilities in future years may be significantly restricted or eliminated. Further, deferred tax assets associated with such NOLs, and research tax credits could be significantly reduced upon realization of an ownership change within the meaning of IRC Section 382. Furthermore, the Company's ability to utilize NOLs of companies that it may acquire in the future may be subject to limitations. There is also a risk that due to legislative or regulatory changes, such as suspensions on the use of NOLs or other unforeseen reasons, the Company's existing NOLs could expire or otherwise be unavailable to reduce future income tax liabilities, including for state tax purposes. For these reasons, the Company may not be able to utilize a material portion of the NOLs reflected on its balance sheet, even if it attains profitability, which could potentially result in increased future tax liability to the Company and could adversely affect its business, results of operations and financial condition.

The Company has a limited operating history, which makes it difficult to forecast its future results of operations.

The Company has not received approval from the FDA and other regulatory authorities to sell its SCD product candidates and therefore it has a limited commercial operating history. According, the Company's ability to accurately forecast future results of its operations is limited and subject to a number of uncertainties and risks, including its ability to plan for and model future growth. If the Company receives regulatory approval to market and sell its SCD product candidates, its revenue growth could slow in the future, or its revenue could decline or fluctuate for a number of reasons, including slowing demand for its products, increasing competition, changing demand in the markets, new scientific or technological developments, a decrease in the growth of its overall market, its failure to attract more customers, the inability to obtain reimbursement for its products by government agencies and insurers, or its failure, for any reason, to continue to take advantage of growth opportunities. If its assumptions regarding these risks and uncertainties and its future revenue growth are incorrect or change, or if it does not address these risks successfully or forecast its results accurately, the Company's operating and financial results could differ materially from its expectations, and its business could suffer.

Risks Related to the Company's Business Operations

The Company has not received, and may never receive, approval from the FDA to market its product in the United States or abroad.

The Company may encounter various challenges and difficulties in its application to seek approval from the FDA to sell and market its SCD product candidates, including the application for HDE for pediatric AKI indication and the pivotal trial for adult AKI indication. The Company is required to submit a substantial amount of supporting documentation for its HDE application to demonstrate the eligibility of the SCD to treat pediatric patients. While the Company recently obtained approval from the FDA to conduct the AKI adult pivotal trial for SCE, there is no guarantee that the Company will be able to complete such trial in a timely manner, or at all, nor will there be any assurance that positive data will be generated from such trials. Even if the Company is able to generate positive results from this trial, the FDA and other regulatory agencies may require the Company to conduct additional trials to support the study or disagree with the design of the trial and request changes or improvements to such design. The Company is also subject to numerous other risks relating to the regulatory approval process, which include but are not limited to:

- an inability to secure and obtain support and references from collaborators and suppliers required by the FDA;
- a disagreement with the FDA regarding the design of the trial, including the number of clinical study subjects and other data, which may require SeaStar Medical to conduct additional testing or increase the size and complexity of its pivotal study;
- a failure to obtain a sufficient supply of filters to conduct its trial;
- an inability to enroll a sufficient number of subjects;
- a shortage of necessary raw materials, such as calcium; and
- delays and failures to train qualified personnel to operate the SCD therapy.

Even if the Company obtains approval, the FDA or other regulatory authorities may require expensive or burdensome post-market testing or controls. Any delay in, or failure to receive or maintain, clearance or approval for its future products could prevent the Company from generating revenue from these products or achieving profitability. Additionally, the FDA and other regulatory authorities have broad enforcement powers. Regulatory enforcement or inquiries, or other increased scrutiny on the Company, could dissuade some physicians from using its products and adversely affect its reputation and the perceived safety and efficacy of its products.

Delays or rejections may occur based on changes in governmental policies for medical devices during the period of product development. The FDA can delay, limit or deny approval of a PMA application for many reasons, including:

- the Company's inability to demonstrate the safety or effectiveness of the SCD or any other product it develops to the FDA's satisfaction;
- insufficient data from its preclinical studies and clinical trials, including for its SCD, to support approval;
- failure of the facilities of its third-party manufacturers or suppliers to meet applicable requirements;
- inadequate compliance with preclinical, clinical or other regulations;
- its failure to meet the FDA's statistical requirements for approval; and
- changes in the FDA's approval policies, or the adoption of new regulations that require additional data or additional clinical studies.

If the Company is not able to obtain regulatory approval of its SCD in a timely manner or at all, it may not be able to continue to operate its business and may be forced to shut down its operations.

The Company is subject to certain risks relating to pursuing an FDA approval via the HDE pathway, including limitations on the ability to profit from sales of the product.

Except in certain circumstances, products approved under an HDE cannot be sold for an amount that exceeds the costs of the research and development, fabrication, and distribution of the device (i.e., for profit). Currently, under section 520(m)(6)(A)(i) of the Food, Drug, and Cosmetic Act, as amended (the “FD&C Act”) by the Food and Drug Administration Safety and Innovation Act, a Humanitarian Use Device (“HUD”) is only eligible to be sold for profit after receiving HDE approval if the device (1) is intended for the treatment or diagnosis of a disease or condition that occurs in pediatric patients or in a pediatric subpopulation, and such device is labeled for use in pediatric patients or in a pediatric subpopulation in which the disease or condition occurs; or (2) is intended for the treatment or diagnosis of a disease or condition that does not occur in pediatric patients or that occurs in pediatric patients in such numbers that the development of the device for such patients is impossible, highly impracticable, or unsafe. If an HDE-approved device does not meet this eligibility criteria, the device cannot be sold for profit. With enactment of the FDA Reauthorization Act of 2017, Congress provided that the exemption for the HUD/HDE profitability is available as long as the request for an exemption is submitted on or before October 1, 2022. Not receiving an exemption for the HUD/HDE profitability would have a material adverse effect on the Company’s business, results of operations and financial condition.

In addition, if the FDA subsequently approves a PMA or clears a 510(k) for the HUD or another comparable device with the same indication, the FDA may withdraw the HDE. Once a comparable device becomes legally marketed through PMA approval or 510(k) clearance to treat or diagnose the disease or condition in question, there may no longer be a need for the HUD and so the HUD may no longer meet the requirements of section 520(m)(2)(B) of the FD&C Act.

The Company plans to expand its operations and it may not be able to manage its growth effectively, which could strain its resources and delay or derail implementation of its business objectives.

The Company will need to significantly expand its operations to implement its longer-term business plan and growth strategies, including building and expanding its internal organizational infrastructure to complete the regulatory approval process with the FDA. The Company will also be required to manage and form new relationships with various strategic partners, technology licensors, customers, manufacturers and suppliers, consultants and other third parties. This expansion and these new relationships will require the Company to significantly improve or replace its existing managerial, operational and financial systems, and procedures and controls; to improve the coordination between its various corporate functions; and to manage, train, motivate and maintain a growing employee base. The time and costs to effectuate these steps may place a significant strain on its management personnel, systems and resources, particularly if there are limited financial resources and skilled employees available at the time. The Company cannot assure that it will institute, in a timely manner or at all, the improvements to its managerial, operational and financial systems, procedures and controls necessary to support its anticipated increased levels of operations and to coordinate its various corporate functions, or that it will be able to properly manage, train, motivate and retain its anticipated increased employee base. If it cannot manage its growth initiatives, the Company will be unable to commercialize its products on a large-scale in a timely manner, if at all, and its business could fail.

The Company will initially depend on revenue generated from a single product and in the foreseeable future will be significantly dependent on a limited number of products.

If the Company receives approval from the FDA and other regulatory authorities, the Company will initially depend on revenue generated from its SCD product candidate for pediatric and adult patients with AKI and in the foreseeable future will be significantly dependent on a single or limited number of products. Given that, for the foreseeable future, the Company’s business will depend on a single or limited number of products, to the extent a particular product is not well-received by the market, the Company’s sales volume, prospects, business, results of operations and financial condition could be materially and adversely affected.

If the Company fails to comply with extensive regulations of United States and foreign regulatory agencies, the commercialization of its products could be delayed or prevented entirely.

The Company's SCD product candidate and research and development activities are subject to extensive government regulations related to its development, testing, manufacturing and commercialization in the United States and other countries. The determination of when and whether a product is ready for large-scale purchase and potential use in the United States will be made by the United States government through consultation with a number of governmental agencies, including the FDA, the National Institutes of Health and the Centers for Disease Control and Prevention. The Company's SCD has not received regulatory approval from the FDA, or any foreign regulatory agencies, to be commercially marketed and sold. The process of obtaining and complying with FDA and other governmental regulatory approvals and regulations in the United States and in foreign countries is costly, time consuming, uncertain and subject to unanticipated delays. Obtaining such regulatory approvals, if any, can take several years. Despite the time and expense exerted, regulatory approval is never guaranteed. The Company is also subject to the following risks and obligations, among others:

- the FDA may refuse to approve an application if it believes that applicable regulatory criteria are not satisfied;
- the FDA may require additional testing for safety and effectiveness;
- the FDA may interpret data from pre-clinical testing and clinical trials in different ways than the Company interprets them;
- if regulatory approval of a product is granted, the approval may be limited to specific indications or limited with respect to its distribution; and
- the FDA may change its approval policies and/or adopt new regulations.

Failure to comply with these or other regulatory requirements of the FDA may subject the Company to administrative or judicially imposed sanctions, including:

- warning letters, untitled letters or other written notice of violations;
- civil penalties;
- criminal penalties;
- injunctions;
- product seizure or detention;
- product recalls; and
- total or partial suspension of productions.

Delays in successfully completing the Company's planned clinical trials could jeopardize its ability to obtain regulatory approval.

The Company's business prospects will depend on its ability to complete studies, clinical trials, including its planned pivotal trials of its SCD for adult AKI indication, obtain satisfactory results, obtain required regulatory approvals and successfully commercialize its SCD product candidate. The completion of the Company's clinical trials, the announcement of results of the trials and its ability to obtain regulatory approvals could be delayed for a variety of reasons, including:

- slow patient enrollment;
- serious adverse events related to its medical device candidates;
- unsatisfactory results of any clinical trial;
- the failure of principal third-party investigators to perform clinical trials on the Company's anticipated schedules; and

- different interpretations of the Company's pre-clinical and clinical data, which could initially lead to inconclusive results.

The Company's development costs will increase if it has material delays in any clinical trial or if it needs to perform more or larger clinical trials than planned. If the delays are significant, or if any of its product candidates do not prove to be safe or effective or do not receive regulatory approvals, the Company's financial results and the commercial prospects for its product candidates would be harmed. Furthermore, the Company's inability to complete its clinical trials in a timely manner could jeopardize its ability to obtain regulatory approval.

Delays, interruptions, or the cessation of production by its third-party suppliers of important materials or delays in qualifying new materials, may prevent or delay the Company's ability to manufacture or process its SCD device.

The Company currently relies on a single supplier for the filters used in the SCD device for the pediatric AKI indications pursuant to a supply agreement. In the event the current supplier is unable to provide filters for the SCD device or otherwise fails to meet its obligations under the agreement, the Company may not be able to obtain a sufficient number of filters to conduct its trials and commercialize its products. In addition, the supplier may decide to discontinue or terminate the specific type of filters that are required for its SCD for reasons beyond the Company's control, in which case the Company will be forced to identify and secure an alternative source that may not be available immediately or at all. FDA review and approval of a new supplier may be required if these materials become unavailable from the Company's current suppliers. Although there may be other suppliers that have equivalent materials that would be available to the Company, FDA review of any alternate suppliers, if required, could take several months or more to obtain, if it is able to be obtained at all. Any delay, interruption, or cessation of production by the Company's third-party suppliers of important materials, or any delay in qualifying new materials, if necessary, would prevent or delay the Company's ability to manufacture its SCD.

The Company believes that it has sufficient access to the SCD inventory to conduct its current and near future clinical trials, but it is possible that the need for its SCD could increase that may require the Company to acquire more filters than it is currently able to purchase under its agreement with its supplier, and the Company may not be able to negotiate a new supply agreement successfully. If the Company is unable to find alternative sources of supply in a timely manner, any such delay could limit the Company's ability to meet demand for the SCD and delay its ongoing clinical trials, which would have a material adverse impact on its business, results of operations and financial condition.

The Company has limited experience in identifying and working with large-scale contracts with medical device manufacturers.

To achieve the levels of production necessary to commercialize its SCD and any other future products, the Company will need to secure large-scale manufacturing agreements with contract manufacturers that comply with the manufacturing standards prescribed by various federal, state, and local regulatory agencies in the United States and any other country of use. The Company has limited experience coordinating and overseeing the manufacturing of medical device products on a large-scale. Manufacturing and control problems could arise as the Company attempts to commercialize its products and manufacturing may not be completed in a timely manner or at a commercially reasonable cost. In addition, the Company may not be able to adequately finance the manufacturing and distribution of its products on terms acceptable to the Company, if at all. If the Company cannot successfully oversee and finance the manufacturing of its products after receiving regulatory approval, it may not generate sufficient revenue to become profitable.

Difficulties in manufacturing the Company's SCD could have an adverse effect upon its revenue and expenses.

The Company currently outsources all of the manufacturing of its SCD. The manufacturing of its SCD is difficult and complex. To support its current clinical trial needs, the Company complies with and intends to

continue to comply with current Good Manufacturing Practice (“cGMP”) in the manufacturing of its products. The Company’s ability to adequately manufacture and supply its SCD in a timely matter is dependent on the uninterrupted and efficient operation of its third-party manufacturers, and those of the third parties producing raw materials and supplies upon which it relies on for the manufacturing of its products. The manufacturing of the Company’s products may be impacted by:

- the availability or contamination of raw materials and components used in the manufacturing process, particularly those for which it has no other supplier;
- its ability to comply with new regulatory requirements and cGMP;
- potential facility contamination by microorganisms or viruses;
- updating of its manufacturing specifications;
- product quality success rates and yields; and
- global viruses and pandemics, including the current COVID-19 pandemic.

If efficient manufacture and supply of its SCD is interrupted, the Company may experience delayed shipments or supply constraints. If it is at any time unable to provide an uninterrupted supply of its products, the Company’s ongoing clinical trials may be delayed, which could materially and adversely affect its business, results of operations and financial condition.

The Company’s SCD technology may become obsolete.

The Company’s SCD product candidates may become obsolete prior to commercialization by new scientific or technological developments, or by others with new treatment modalities that are more efficacious and/or more economical than the Company’s products. Any one of the Company’s competitors could develop a more effective product which would render the Company’s technology obsolete. In addition, it is possible that competitors may use similar technologies, equipment or devices, including using certain “off-the-shelf” filters unauthorized by the FDA, to attempt to create a similar treatment mechanism as the SCD. Further, new technological and scientific developments within the hospital setting could cause the Company’s SCD product candidates to become obsolete. For example, the SCD relies on the existing footprint of CRRT pump systems in ICUs, as well as the growing use and adoption of regional citrate as an anticoagulant. Further developments in these areas could require the Company to reconfigure its SCD product candidates, which may not be commercially feasible, or cause them to become obsolete. Lastly, the Company’s ability to achieve significant and sustained growth in its key target markets will depend upon its success in hospital penetration, utilization, publication, its SCD’s reimbursement status and medical education. The Company’s products may not remain competitive with products based on new technologies. If it fails to sell products that satisfy its customers’ demands or respond effectively to new product announcements by its competitors, then market acceptance of the Company’s products could be reduced and its business, results of operations and financial condition could be adversely affected.

The Company faces intense competition in the medical device industry.

The Company competes with numerous United States and foreign companies in the medical device industry, and many of its competitors have greater financial, personnel, operational and research and development resources than the Company. The Company believes that multiple competitors are or will be developing competing technologies to address cytokine storms. Progress is constant in the treatment of the immune system, which may reduce opportunities for the SCD. The Company’s commercial opportunities will be reduced or eliminated if its competitors develop and market products for any of the diseases it targets that:

- are more effective;
- have fewer or less severe adverse side effects;

- are better tolerated;
- are easier to administer; or
- are less expensive than SeaStar Medical's products or its product candidates.

Even if the Company is successful in developing the SCD and any other future products and obtains FDA and other regulatory approvals necessary for commercializing them, its products may not compete effectively with other products. Researchers are continually learning more about diseases, which may lead to new technologies for treatment. The Company's competitors may succeed in developing and marketing products that are either more effective than those that it may develop or that are marketed before any SeaStar Medical products. The Company's competitors include fully integrated pharmaceutical & medical device companies and biotechnology companies, universities, and public and private research institutions. Many of the organizations competing with the Company have substantially greater capital resources, larger research and development staffs and facilities, greater experience in product development and in obtaining regulatory approvals, and greater marketing capabilities. If the Company's competitors develop more effective treatments for infectious disease or hyperinflammation or bring those treatments to market before the Company can commercialize the SCD for such uses, it may be unable to obtain any market traction for its products, or the diseases it seeks to treat may be substantially addressed by competing treatments. If the Company is unable to successfully compete against larger companies in the pharmaceutical industry, it may never generate significant revenue or be profitable.

If the Company's products, or the malfunction of its products, cause or contribute to a death or a serious injury, the Company will be subject to medical device reporting regulations, which can result in voluntary corrective actions or agency enforcement actions.

Under the FDA medical device reporting regulations, medical device manufacturers are required to report to the FDA that a device has or may have caused or contributed to a death or serious injury or has malfunctioned in a way that would likely cause or contribute to a death or serious injury. If the Company fails to report these events to the FDA within the required timeframes, or at all, the FDA could take enforcement action against the Company. Any such adverse event involving the Company's products could also result in future voluntary corrective actions, such as recalls or customer notifications, or agency action, such as inspection or enforcement action. Any corrective action, whether voluntary or involuntary, as well as defending against potential lawsuits, will require the dedication of the Company's time and capital, distract management from operating its business, and may harm the Company's reputation and financial results.

The Company outsources many of its operational and development activities for which it may not have full control.

The Company relies on third-party consultants or other vendors to manage and implement much of the day-to-day responsibilities of conducting clinical trials and manufacturing its current product candidates. Accordingly, the Company is and will continue to be dependent on the timeliness and effectiveness of the efforts of these third parties. The Company's dependence on third parties includes key suppliers and third-party service providers supporting the development, manufacturing, and regulatory approval of its SCD, as well as support for its information technology systems and other infrastructure. While its management team oversees these vendors, the failure of any of these third parties to meet their contractual, regulatory, and other obligations, or the development of factors that materially disrupt the performance of these third parties, could have a material adverse effect on the Company's business, results of operations and financial condition. It is possible that the current COVID-19 pandemic might constrain the ability of third-party vendors to provide services that the Company requires.

If a clinical research organization that the Company utilizes is unable to allocate sufficient qualified personnel to its studies in a timely manner or if the work performed by it does not fully satisfy the requirements of the FDA or other regulatory agencies, the Company may encounter substantial delays and increased costs in completing its development efforts. Any manufacturer of the Company's products may encounter difficulties in

the manufacturing of enough new product to meet demand, including problems with product yields, product stability or shelf life, quality control, adequacy of control procedures and policies, compliance with FDA regulations and the need for FDA approval of new manufacturing processes and facilities. If any of these occur, the development and commercialization of the Company's product candidates could be delayed, curtailed, or terminated because the Company may not have sufficient financial resources or capabilities to continue such development and commercialization on its own.

If the Company or its contractors or service providers fail to comply with laws and regulations, it or they could be subject to regulatory actions, which could affect its ability to develop, market and sell its product candidates and any other future product candidates and may harm its reputation.

If the Company or its manufacturers or other third-party contractors fail to comply with applicable federal, state or foreign laws or regulations, the Company could be subject to regulatory actions, which could affect its ability to successfully develop, market and sell its SCD product candidate or any future product candidates under development and could harm its reputation and lead to reduced or non-acceptance of its proposed product candidates by the market. Even technical recommendations or evidence by the FDA through letters, site visits, and overall recommendations to academia or biotechnology companies may make the manufacturing of a clinical product extremely labor intensive or expensive, making the product candidate no longer viable to manufacture in a cost-efficient manner. The mode of administration or the required testing of the product candidate may make that candidate no longer commercially viable. The conduct of clinical trials may be critiqued by the FDA, or a clinical trial site's Institutional Review Board or Institutional Biosafety Committee, which may delay or make impossible the clinical testing of a product candidate. For example, the Institutional Review Board for a clinical trial may stop a trial or deem a product candidate unsafe to continue testing. This would have a material adverse effect on the value of the product candidate and the Company's business, results of operations and financial condition.

If the Company obtains approval for its products, SeaStar Medical may still be subject to enforcement action if it engages in improper marketing or promotion of its products.

The Company is not permitted to promote or market its product candidates until FDA approval is obtained. After approval, its promotional materials and training methods must comply with the FDA and other applicable laws and regulations, including the prohibition of the promotion of unapproved or off-label use. Practitioners may use the Company's products off-label, as the FDA does not restrict or regulate a practitioner's choice of treatment within the practice of medicine. However, if the FDA determines that the Company's promotional materials or training constitutes promotion of an off-label use, it could request that the Company modify its training or promotional materials or subject the Company to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fine, or criminal penalties. Other federal, state, or foreign enforcement authorities might also take action if they consider the Company's promotional or training materials to constitute promotion of an off-label use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement. In that event, the Company's reputation could be damaged, which may lead to reduced or non-acceptance of its proposed product candidates by the market. In addition, the off-label use of the Company's products may increase the risk of product liability claims. Product liability claims are expensive to defend and could divert the attention of the Company's management, result in substantial damage awards against the Company, and harm its reputation.

The Company intends to outsource and rely on third parties for the clinical development and manufacture, sales and marketing of its SCD or any future product candidates that it may develop, and its future success will be dependent on the timeliness and effectiveness of the efforts of these third parties.

The Company does not have the required financial and human resources to carry out on its own all the pre-clinical and clinical development for its SCD product candidate or any other or future product candidates that it may develop, and do not have the capability and resources to manufacture, market or sell its SCD product candidate or any future product candidates that it may develop. The Company's business model calls for the

partial or full outsourcing of the clinical, development, manufacturing, sales, and marketing of its product candidates in order to reduce its capital and infrastructure costs as a means of potentially improving its financial position. The Company's success will depend on the performance of these outsourced providers. If these providers fail to perform adequately, the Company's development of product candidates may be delayed and any delay in the development of the Company's product candidates may have a material and adverse effect on its business, results of operations and financial condition.

The Company is and will be exposed to product liability risks, and clinical and preclinical liability risks, which could place a substantial financial burden upon it should it be sued.

The Company's business exposes it to potential product liability and other liability risks that are inherent in the testing, manufacturing, and marketing of medical devices. Claims may be asserted against it. A successful liability claim or series of claims brought against it could have a material adverse effect on the Company's business, results of operations and financial condition. The Company may not be able to continue to obtain or maintain adequate product liability insurance on acceptable terms, if at all, and such insurance may not provide adequate coverage against potential liabilities. Claims or losses in excess of any product liability insurance coverage that the Company may obtain could have a material adverse effect on its business, results of operations and financial condition.

The Company's SCD product candidate may be used in connection with medical procedures where those products must function with precision and accuracy. If medical personnel or their patients suffer injury as a result of any failure of the Company's products to function as designed, or its products are designed inappropriately, the Company may be subject to lawsuits seeking significant compensatory and punitive damages. The risk of product liability claims, product recalls and associated adverse publicity is inherent in the testing, manufacturing, marketing, and sale of medical products. The Company intends to obtain general clinical trial liability insurance coverage; however, its insurance coverage may not be adequate or available. In addition, the Company may not be able to obtain or maintain adequate product liability insurance on acceptable terms, if at all, and such insurance may not provide adequate coverage against potential liabilities. Any product recall or lawsuit in excess of any product liability insurance coverage that the Company may obtain could have a material adverse effect on its business, results of operations and financial condition. Moreover, a product recall could generate substantial negative publicity about the Company's products and business and inhibit or prevent commercialization of other future product candidates.

United States legislative or FDA regulatory reforms may make it more difficult and costly for the Company to obtain regulatory approval of its product candidates and to manufacture, market and distribute its products after approval is obtained.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulatory approval, manufacture and marketing of regulated products or the reimbursement thereof. In addition, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect the Company's business and its products. Any new regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of future products. It is impossible to predict whether legislative changes will be enacted, or FDA regulations, guidance or interpretations will be changed, and what the impact of such changes, if any, may be on the Company's new product development efforts.

The Company is subject to stringent and changing privacy laws, regulations and standards as well as policies, contracts and other obligations related to data privacy and security.

The Company collects, receives, stores, processes, uses, generates, transfers, discloses, makes accessible, protects, and shares personal information and other information ("Process" or "Processing"), including information it collects in connection with clinical trials, as necessary to operate its business, for legal and marketing purposes, and for other business-related purposes.

There are numerous federal, state, local and international laws, regulations and guidance regarding privacy, information security and Processing, the number and scope of which is changing, subject to differing applications and interpretations, and which may be inconsistent. The Company is subject, and may become subject in the future, to certain of these laws, regulations, and guidance, and it is also subject to the terms of its external and internal privacy and security policies, representations, certifications, standards, publications, frameworks, and contractual obligations to third parties related to privacy, information security and Processing.

If the Company fails, or is perceived to have failed, to address or comply with such obligations, it could:

- increase its compliance and operational costs;
- expose it to regulatory scrutiny, actions, fines and penalties;
- result in reputational harm; interrupt or stop its clinical trials;
- result in litigation and liability; result in an inability to process personal data or to operate in certain jurisdictions; or
- harm its business operations or financial results or otherwise result in a material harm to its business.

Additionally, given that these obligations impose complex and burdensome obligations and that there is substantial uncertainty over the interpretation and application of these obligations, the Company may be required to incur material costs, divert management attention, and change its business operations, including its clinical trials, in an effort to comply, which could materially adversely affect its business, results of operations and financial condition.

The California Consumer Privacy Act of 2018 (“CCPA”) is an example of the increasingly stringent data protection legislation in the United States. The CCPA gives California residents expanded rights to access and require deletion of their personal information, opt-out of certain personal information sharing, and receive detailed information about how their personal information is used. The CCPA created civil penalties for violations, as well as a private right of action for data breaches and statutory damages ranging from \$100 to \$750 per violation, which is expected to increase data breach class action litigation and result in significant exposure to costly legal judgements and settlements. Although there are limited exemptions for clinical trial data under the CCPA, the CCPA and other similar laws could impact the Company’s business activities depending on how they are interpreted.

The Company’s business operations will be adversely affected if its security measures, or those maintained on its behalf, are compromised, limited or fails.

In the ordinary course of its business, the Company handles and processes proprietary, confidential and sensitive information, including personal data, intellectual property, trade secrets, and proprietary business information owned or controlled by us or other third parties, or collectively. The Company may use and share such sensitive information with service providers and other third parties. If the Company, its service providers, partners, or other relevant third parties have experienced, or in the future experience, any security incident or incidents that result in any data loss; deletion or destruction; unauthorized access to; loss, unauthorized acquisition, disclosure, or exposure of, confidential and sensitive information, it may adversely affect SeaStar Medical’s business, results of operations and financial condition, including the diversion of funds to address the breach, and interruptions, delays, or outages in its operations and development programs.

Cyberattacks, malicious internet-based activity and online and offline fraud are prevalent and continue to increase, including the possibility that the ongoing conflict between Russia and Ukraine could result in cyberattacks or cybersecurity incidents that may have a direct or indirect impact on our operations. In addition to threats from traditional computer “hackers,” threat actors, software bugs, malicious code (such as viruses and worms), employee theft or misuse, denial-of-service attacks (such as credential stuffing) and ransomware attacks, sophisticated nation-state and nation-state supported actors now engage in attacks (including advanced persistent

threat intrusions). The Company may also be the subject of phishing attacks, viruses, malware installation, server malfunction, software or hardware failures, loss of data or other computer assets, or other similar issues any of which could have a material and adverse effect on its business, results of operations and financial condition.

Should the Company's products be approved for commercialization, a lack of third-party coverage and reimbursement for the Company's devices could delay or limit their adoption.

In both the United States and international markets, the use and success of medical devices is dependent in part on the availability of reimbursement from third-party payors, such as government and private insurance plans. Healthcare providers that use medical devices generally rely on third-party payors to pay for all or part of the costs and fees associated with the medical procedures being performed or to compensate them for their patient care services. Should the Company's products under development be approved for commercialization by the FDA, reimbursement may not be available in the United States or other countries or, even if approved, the amount of reimbursement may not be sufficient to allow sales of the Company's future products, including the SCD, on a profitable basis. The coverage decisions of third-party payors will be significantly influenced by the assessment of the Company's future products by health technology assessment bodies. These assessments are outside the Company's control, and any such evaluations may not be conducted or have a favorable outcome.

If approved for use in the United States, the Company expects that any products that it develops, including the SCD, will be purchased primarily by medical institutions through their operations budget. Payors may include the Centers for Medicare & Medicaid Services ("CMS"), which administers the Medicare program and works in partnership with state governments to administer Medicaid, other government programs and private insurance plans. The process involved in applying for coverage and incremental reimbursement from CMS is lengthy and expensive. Further, Medicare coverage is based on the Company's ability to demonstrate that the treatment is "reasonable and necessary" for Medicare beneficiaries. Even if products utilizing the Company's SCD technology receive FDA and other regulatory clearance or approval, they may not be granted coverage and reimbursement by any payor, including by CMS. For some governmental programs, such as Medicaid, coverage and adequate reimbursement differ from state to state and some state Medicaid programs may not pay adequate amounts for the procedure products utilizing the Company's technology system, or any payment at all. Moreover, many private payors use coverage decisions and payment amounts determined by CMS as guidelines in setting their coverage and reimbursement policies and amounts. However, no uniform policy for coverage and reimbursement of medical devices exists among third-party payors in the United States. Therefore, coverage and reimbursement can differ significantly from payor to payor. If CMS or other agencies limit coverage or decrease or limit reimbursement payments for doctors and hospitals, this may affect coverage and reimbursement determinations by many private payors for any future SeaStar Medical products.

Should any of its future products, including the SCD, be approved for commercialization, adverse changes in reimbursement policies and procedures by payors may impact the Company's ability to market and sell its products.

Healthcare costs have risen significantly over the past decade, and there have been and continue to be proposals by legislators, regulators and third-party payors to decrease costs. Third-party payors are increasingly challenging the prices charged for medical products and services and instituting cost containment measures to control or significantly influence the purchase of medical products and services.

For example, in the United States, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "ACA"), among other things, reduced and/or limited Medicare reimbursement to certain providers. However, on December 14, 2018, a Texas United States District Court Judge ruled that the Affordable Care Act is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act of 2017. Additionally, on June 17, 2021, the United States Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. Thus, the ACA remains in effect without the "individual mandate."

Further, prior to the United States Supreme Court ruling, on January 28, 2021, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace, which began on February 15, 2021 and remained open through August 15, 2021. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is possible that the ACA will be subject to judicial or Congressional challenges in the future. It is unclear how any such challenges and litigation, and the healthcare reform measures of the Biden administration will impact the ACA and the Company's business. The Budget Control Act of 2011, as amended by subsequent legislation, further reduces Medicare's payments to providers by 2% through fiscal year 2031. However, COVID-19 relief legislation suspended the 2% Medicare sequester from May 1, 2020 through March 31, 2022. Under current legislation, the actual reduction in Medicare payments will vary from 1% in 2022 to up to 3% in the final fiscal year of this sequester. These reductions may reduce providers' revenues or profits, which could affect their ability to purchase new technologies.

Furthermore, the healthcare industry in the United States has experienced a trend toward cost containment as government and private insurers seek to control healthcare costs by imposing lower payment rates and negotiating reduced contract rates with service providers. In addition, Congress is considering additional health reform measures. Legislation could be adopted in the future that limits payments for the Company's products from governmental payors. It is also possible that additional governmental action is taken in response to the COVID-19 pandemic. Furthermore, commercial payors such as insurance companies, could adopt similar policies that limit reimbursement for medical device manufacturers' products. Therefore, it is possible that SeaStar Medical's products or the procedures or patient care performed using its products will not be reimbursed at a cost-effective level.

The Company faces similar risks relating to adverse changes in reimbursement procedures and policies in other countries where it may market its products. Reimbursement and healthcare payment systems vary significantly among international markets. The Company's inability to obtain international reimbursement approval, or any adverse changes in the reimbursement policies of foreign payors, could negatively affect its ability to sell its products in foreign markets and have a material adverse effect on its business, results of operations and financial condition.

The Company depends on key personnel and its inability to attract and retain qualified personnel could impede its ability to achieve its business objectives.

The Company's success depends on the continuing service of key employees, especially its Chief Executive Officer, Eric Schlorff. The loss of any of these individuals could have a material and adverse effect on the Company's business, results of operations and financial condition. The Company will also be required to hire and recruit highly skilled managerial, scientific, and administrative personnel to fully implement its business plan and growth strategies. Due to the specialized scientific nature of its business, the Company is highly dependent upon its ability to attract and retain qualified scientific, technical and managerial personnel. Competition for these individuals is intense and the Company may not be able to attract, assimilate or retain additional highly qualified personnel in the future. The Company may not be able to engage the services of qualified personnel at competitive prices or at all, particularly given the risks of employment attributable to its limited financial resources and lack of an established track record. Also, if the Company is required to attract personnel from other parts of the United States or abroad, it may have significant difficulty doing so because of the costs associated with moving personnel to the area. If the Company cannot attract and retain qualified staff and executives, it may be unable to develop its products and achieve regulatory clearance, and its business could fail.

The Company's products may in the future be subject to product recalls.

The FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products in the event of material deficiencies or defects in their design or manufacture. For the

FDA, the authority to require a recall must be based on a finding that there is reasonable probability that the device would cause serious injury or death. Manufacturers may, under their own initiative, recall a product if any material deficiency in a device is found. The FDA requires that certain classifications of recalls be reported to the FDA within ten working days after the recall is initiated. A government-mandated or voluntary recall could occur as a result of an unacceptable risk to health, component failures, malfunctions, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of the Company's products would divert managerial and financial resources and have an adverse effect on the Company's reputation, business, results of operations and financial condition, which could impair its ability to produce its products in a cost-effective and timely manner in order to meet its customers' demands.

The Company may also be subject to liability claims, be required to bear other costs, or take other actions that may have a negative impact on its future sales and its ability to generate profits. Companies are required to maintain certain records of recalls, even if they are not reportable to the FDA or the competent authority of another country. The Company may initiate voluntary recalls involving its products in the future that it determines do not require notification of the FDA or the competent authority of another country. If the FDA disagrees with the Company's determinations, they could require the Company to report those actions as recalls. A future recall announcement could harm the Company's reputation with customers and negatively affect its sales. Moreover, the FDA could take enforcement action for failing to report recalls. The Company is also required to follow detailed recordkeeping requirements for all firm-initiated medical device corrections and removals.

The Company's business is subject to risks arising from future pandemics.

Worldwide pandemics have presented substantial public health and economic challenges and has affected the Company's employees, patients, communities, and business operations, as well as the United States and global economy and financial markets.

A future pandemic may directly or indirectly impact the timeline for the launch of its SCD product candidate. The Company may experience disruptions that could severely impact its business, clinical trials, and manufacturing and supply chains, including:

- further delays or difficulties in enrolling patients in its clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- the diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospital staff supporting the conduct of its clinical trials;
- the interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others or interruption of clinical trial subject visits and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- the interruption of, or delays in receiving, supplies of its product candidates from its contract manufacturing organizations due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems;
- delays in clinical sites receiving the supplies and materials needed to conduct its clinical trials and interruptions in global shipping may affect the transport of clinical trial materials;
- limitations on employee resources that would otherwise be focused on the conduct of its clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- delays in receiving feedback or approvals from the FDA or other regulatory authorities with respect to future clinical trials or regulatory submissions;

- changes in local regulations as part of a response to a future pandemic, which may require it to change the ways in which its clinical trials are conducted, resulting in unexpected costs, or discontinuing the clinical trials altogether;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations on employee resources or the forced furlough of government employees;
- the refusal of the FDA to accept data from clinical trials in affected geographies; and
- difficulties launching or commercializing products, including due to reduced access to doctors as a result of social distancing protocols.

In addition, the spread of a future pandemic may negatively impact the Company's ability to raise additional capital on a timely basis or at all.

The extent to which a future pandemic may impact the Company's business, including its clinical trials, manufacturing and supply chains and financial condition will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the continued geographic spread of the disease, the duration of the pandemic, travel restrictions and social distancing in the United States and other countries, continued business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the disease.

A small number of the Company's stockholders, including its major stockholders, the Dow Pension Funds, could significantly influence its business.

The Company has a few significant stockholders who own a substantial percentage of its outstanding shares of Common Stock, including Dow Employees' Pension Plan Trust and Union Carbide Employees' Pension Plan Trust. These few significant shareholders, either individually or acting together, may be able to exercise significant influence over matters requiring shareholder approval, including the election of directors and approval of significant corporate transactions, such as a merger or other sale of the Company or its assets. This concentration of ownership may make it more difficult for other shareholders to effect substantial changes in the Company, may have the effect of delaying, preventing or expediting, as the case may be, a change in control of the Company and may adversely affect the market price of the Common Stock. Further, the possibility that one or more of these significant shareholders may sell all or a large portion of their Common Stock in a short period of time could adversely affect the trading price of our Common Stock.

The Company's forecasted operating and financial results rely in large part upon assumptions and analyses developed by the Company. If these assumptions and analyses prove to be incorrect, the Company's actual operating and financial results may be significantly below its forecasts.

The Company has previously provided projected financial and operating information that reflected its estimates of future performance. Whether actual operating and financial results and business developments will be consistent with the Company's expectations and assumptions as reflected in its forecast depends on a number of factors, many of which are outside the Company's control, including, but not limited to:

- whether the Company can obtain sufficient capital to develop and commercialize its SCD product candidate and grow its business;
- whether the Company can manage relationships with key suppliers;
- the ability to obtain necessary regulatory approvals;
- demand for the Company's products;
- the timing and costs of new and existing marketing and promotional efforts;
- competition, including from established and future competitors;

- the Company's ability to retain existing key management, to integrate recent hires and to attract, retain and motivate qualified personnel;
- the overall strength and stability of the economies in the markets in which it operates or intends to operate in the future; and
- regulatory, legislative and political changes.

Unfavorable changes in any of these or other factors, most of which are beyond the Company's control, could materially and adversely affect its business, results of operations and financial condition.

The Company's estimates of market opportunity, industry projections and forecasts of market growth may prove to be inaccurate.

The market opportunity estimates and growth forecasts included in this prospectus, including information concerning the Company's industry and the markets in which the Company intends to operate, are obtained from publicly available information released by independent industry and research organizations and other third party sources. Although the Company is responsible for the disclosure provided in this prospectus and believes such third-party information is reliable, the Company has not independently verified any such third-party information. In addition, projections, assumptions and estimates of the future performance of the industry in which the Company operates are subject to uncertainty and risk due to a variety of factors. As a result, inaccuracies in third-party information, or in the projections, may adversely impact the assumptions that are relied upon for the Company's internal business planning and in the analysis of investors.

Risks Related to the Company's Intellectual Property

The Company relies upon exclusively licensed patent rights from third parties which are subject to termination or expiration. If licensors terminate the licenses or fail to maintain or enforce the underlying patents, the Company's competitive position could be materially harmed.

The Company relies in part upon exclusively licensed patent rights for the development of its SCD technology. For example, the Company co-owns with, and exclusively licenses from, the University of Michigan patents related to the SCD technology. If UOM were to terminate its license with the Company, it would no longer have exclusive rights to the co-owned patents and UOM would be free to license UOM's interest in the co-owned patents to a competitor of the Company.

The Company may become reliant in the future upon licenses to certain third-party patent rights and proprietary technologies necessary to develop and commercialize its SCD technology or other technologies. If the Company is unable to timely obtain these licenses on commercially reasonable terms, if at all, its ability to commercially exploit such products may be inhibited or prevented. If these licenses do not provide exclusive rights to use the subject intellectual property in all relevant fields of use and all territories in which the Company chooses to develop or commercialize its technology and products, it may not be able to prevent competitors from developing and commercializing competitive products in such territories. Even if the Company is able to obtain necessary licenses, it may be required to pay significant licensing fees in order to market its products.

Should any of the Company's current or future licenses be prematurely terminated for any reason, or if the patents and intellectual property owned by its licensors are challenged or defeated by third parties, the Company's research and commercialization efforts could be materially and adversely affected. The Company's licenses may not continue in force for as long as is required to fully develop and market its products. It is possible that if the licenses are terminated or the underlying patents and intellectual property are challenged or defeated, suitable replacements may not be obtained or developed on terms acceptable to the Company, if at all. There is also the related risk that the Company may not be able to make the required payments under any patent license, in which case the licensor may terminate the license.

Further, the Company's licensors may not successfully prosecute the patent applications which it has licensed and on which the Company's business depends or may prosecute them in a manner not in the best interests of the Company. Further, licensors may fail to maintain licensed patents, may decide not to pursue litigation against third-party infringers, may fail to prove infringement or may fail to defend against counterclaims of patent invalidity or unenforceability.

In addition, despite of the Company's best efforts, a licensor could claim that the Company has materially breached a license agreement and terminate the license, thereby removing the Company's ability to obtain regulatory approval for and to market any product covered by such license. If the Company's licenses are terminated, or if the underlying patents fail to provide the intended market exclusivity, competitors would have the freedom to seek regulatory approval of, and to market, identical products.

Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation related issues;
- the extent to which the Company's technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under any collaboration relationships the Company might enter into in the future;
- the Company's diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the ownership of inventions and know how resulting from the joint creation or use of intellectual property by the Company and its licensors; and
- the priority of invention of patented technology.

If disputes over intellectual property that the Company has licensed prevent or impair its ability to maintain its current licensing arrangements on acceptable terms, it may be unable to successfully develop and commercialize the affected product candidates.

If the Company is unable to obtain and maintain sufficient patent protection for its products, if the scope of the patent protection is not sufficiently broad, or if the combination of patents, trade secrets and contractual provisions upon which it relies to protect its intellectual property are inadequate, its competitors could develop and commercialize similar or identical products, and the Company's ability to commercialize such products successfully may be adversely affected.

The Company's success depends in large part on its ability to protect its proprietary rights to the technologies incorporated into its products, including its ability to obtain and maintain patent protection in the United States and other countries related to its SCD technology and other technologies that it deems important to its business. The Company relies on a combination of patent protection, trade secret laws and nondisclosure, confidentiality, and other contractual restrictions to protect its proprietary technology. If the Company does not adequately protect its intellectual property, competitors may be able to erode or negate any competitive advantage it may have, which could harm its business, result of operations and financial condition. To protect the Company's proprietary technologies, it has pursued patent protection in the United States and abroad related to its SCD technology and other technologies that are important to its business. The patent application and approval process are expensive and time-consuming. The Company may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Failure to protect, obtain, maintain, or extend adequate patent and other intellectual property rights could materially adversely affect the Company's ability to develop and market its products. The enforcement, defense and maintenance of such patents and other intellectual property rights may be challenging and costly.

The Company cannot be certain that any patents that it has been issued or granted will not later be found to be invalid and/or unenforceable. The Company cannot be certain that pending patent applications will be issued in a form that provides it with adequate protection to prevent competitors from developing competing products. As a medical device technology company, the Company's patent position is uncertain because it involves complex legal and factual considerations. The standards applied by United States Patent and Trademark Office ("USPTO"), and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable as methods of medical treatment. Consequently, patents may not be issued from any applications that are currently pending or that are filed in the future. As such, the Company does not know the degree of future protection that it will have for its technology. As a result, the issuance, scope, validity, enforceability, and commercial value of the Company's patent rights are highly uncertain.

Only issued patents can be enforced against third parties practicing the technology claimed in such patents. Pending patent applications cannot be enforced unless and until patents get issued from such applications. Assuming the other requirements for patentability are met, currently, patents are granted to the party who was the first to file a patent application. However, prior to March 16, 2013, in the United States, patents were granted to the party who was the first to invent the claimed subject matter. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, the Company cannot be certain that it was the first to make the inventions claimed in its patents or pending patent applications, or that it was the first to file for patent protection of such inventions.

Moreover, because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, the Company patents or pending patent applications may be challenged in the courts or by the USPTO or by foreign patent offices. For example, the Company may be subject to a third-party pre-issuance submission of prior art to the USPTO, or become involved in post-grant review procedures such as oppositions, derivations, reexaminations, inter parties review or interference proceedings, in the United States or elsewhere, challenging its patent rights or the patent rights of third parties. An adverse determination in any such challenges may result in the loss of exclusivity or in patent claims being narrowed, invalidated, or held unenforceable, in whole or in part, which could limit the Company's ability to stop others from using or commercializing similar products, or limit the duration of the Company's patent protection. In addition, given the amount of time required for the development, testing and regulatory review of medical devices, the Company's patents might expire before or shortly after such products receive FDA approval and are commercialized, or before it receives approval to market its products in a foreign country.

Patent applications may not result in patents being issued which protect any current and future product candidates, in whole or in part, or which effectively prevent others from commercializing competitive products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of the Company's patents or narrow the scope of its patent protection. In addition, the laws of foreign countries may not protect the Company's rights to the same extent or in the same manner as the laws of the United States. For example, European patent law restricts the patentability of methods of treatment of the human body more than United States patent law.

Although the Company believes that certain of its patents and applications, if they are granted, will help protect the proprietary nature of its SCD technology, this protection may not be sufficient to protect the Company during the development of that technology. Even if the Company's patent applications are issued as patents, they may not be issued in a form that will provide it with any meaningful protection, prevent competitors from competing with it or otherwise provide it with any competitive advantage. The Company's competitors may be able to circumvent its patents by developing similar or alternative technologies or products in a non-infringing manner. The Company's competitors may also seek approval to market their own products similar to or otherwise competitive with any of the Company's products. Thus, even if the Company has valid and enforceable patents, these patents still may not provide protection against competing products or technologies sufficient to achieve its business objectives.

If the Company does not obtain protection under the Hatch-Waxman Act and similar non-United States legislation for extending the term of patents covering its products, its business, results of operations and financial condition may be materially harmed.

Patents have a limited duration. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest United States non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents related to the Company's products, or their uses are obtained, once the patent life has expired, the Company may be open to competition from competitive products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting the Company's products might expire before or shortly after such products received FDA approval and are commercialized. As a result, the Company's patent portfolio may not provide the company with sufficient rights to exclude others from commercializing similar or identical products.

Depending upon the timing, duration and requirements of FDA marketing approval of the Company's product candidates, its United States patents, if issued, may be eligible for a limited patent term extension under the Hatch-Waxman Act, or under similar legislation in other countries. However, the Company's patent and patent applications are only eligible for a patent term extension under the Hatch Waxman Act if they relate to a medical device classified by the FDA as a Class III device. Therefore, if the Company's product candidates are not classified as Class III devices, it will not be able to apply for an extension of term for any patents covering such approved products. If eligible, the Hatch-Waxman Act permits a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. The patent term extension cannot extend the remaining term of a patent beyond 14 years from the date of product candidate approval, and only one patent related to an approved product candidate may be extended. However, the Company may not receive an extension if it fails to apply within applicable deadlines, fails to apply prior to expiration of relevant patents or otherwise fails to satisfy applicable requirements. Moreover, the length of the extension could be less than requested.

Accordingly, if the Company is unable to obtain a patent term extension or the term of any such extension is less than requested, the period during which the Company can enforce its patent rights for that product will be shortened and competitors may obtain approval to market competing products sooner than expected. As a result, the Company's business, results of operations and financial condition could be adversely and materially affected.

The Company could become involved in intellectual property litigation that could be costly, result in the diversion of management's time and efforts, require the Company to pay damages, prevent it from selling its commercially available products and/or reduce the margins it may realize from its products.

The Company's commercial success depends, in part, on its ability to develop and market its SCD technology, as well as any future technologies that it develops, without infringing the intellectual property and other proprietary rights of third parties.

The medical device industry is characterized by extensive litigation and administrative proceedings over patent and other intellectual property rights. Whether a product infringes a patent involves complex legal and factual issues, and the determination is often uncertain. There may be existing patents of which the Company is unaware that its products under development may inadvertently infringe. The likelihood that patent infringement claims may be brought against the Company increases as the number of competitors increases, as it introduces new products and achieves more visibility in the marketplace.

Any infringement claim against the Company, even if without merit, may cause the Company to incur substantial costs, and would place a significant strain on its financial resources, divert the attention of management from its core business, and harm its reputation. In some cases, litigation may be threatened or brought by a patent holding company or other adverse patent owner who has no relevant product revenues and against whom the Company's patents may provide little or no deterrence. If the Company is found to infringe any

patents, the Company could be required to pay substantial damages, including triple damages if an infringement is found to be willful. The Company also could be forced, including by court order, to cease developing, manufacturing, or commercializing infringing products. The Company also could be required to pay royalties and could be prevented from selling its products unless it obtains a license or is able to redesign its products to avoid infringement. The Company may not be able to obtain a license enabling it to sell its products on reasonable terms, or at all. If the Company fails to obtain any required licenses or makes any necessary changes to its technologies or the products, the Company may be unable to commercialize one or more of its products or may have to withdraw products from the market, either of which would have a material adverse effect on its business, results of operations and financial condition.

In the event a competitor infringes upon any of the Company's patents or other intellectual property rights, enforcing its rights may be difficult, time consuming and expensive, and would divert management's attention from managing its business. The Company may not be successful on the merits in any enforcement effort. In addition, the Company may not have sufficient resources to litigate, enforce or defend its intellectual property rights.

Issued patents covering one or more of the Company's products could be found invalid or unenforceable if challenged in patent office proceedings, or in court.

Competitors may infringe the Company's patents, trademarks, or other intellectual property. To counter infringement or unauthorized use of its intellectual property, the Company may be required to initiate legal proceedings against a third party to enforce its intellectual property rights. If the Company were to file a claim against a third party to enforce a patent covering one of its products, the defendant could counterclaim that the Company's patent rights are invalid and/or unenforceable (a common practice in the United States).

Grounds for a validity challenge could be an alleged failure to meet one or more statutory requirements for patentability, including, for example, lack of novelty, obviousness, lack of written description or non-enablement. In addition, patent validity challenges may, under certain circumstances, be based upon non-statutory obviousness-type double patenting, which, if successful, could result in a finding that the claims are invalid for obviousness-type double patenting or the loss of patent term, including a patent term adjustment granted by the USPTO, if a terminal disclaimer is filed to obviate a finding of obviousness-type double patenting. Grounds for an unenforceability assertion could be based on an allegation that someone connected with prosecution of the patent intentionally withheld relevant information from the USPTO or made a misleading statement, during prosecution.

In any patent infringement proceeding, there is a risk that a court will decide that a Company patent is invalid or unenforceable, in whole or in part. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that the Company does not have the right to stop the other party from using the invention at issue on the grounds that the Company's patent claims do not cover the invention at issue. An adverse outcome in a litigation or proceeding involving the Company's patents could limit its ability to assert its patents against those other parties and other competitors, which may curtail or preclude its ability to exclude third parties from selling similar products. Any of these occurrences could adversely and materially affect the Company's business, results of operations and financial condition.

Even if the Company establishes infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of the Company's confidential information could be compromised by disclosure during litigation.

Additionally, third parties are able to challenge the validity of issued patents through administrative proceedings in the patent offices of certain countries, including the USPTO and the European Patent Office. Although the Company believes that it has conducted its patent prosecution in accordance with the duty of

candor and in good faith, the outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity question, for example, the Company cannot be certain that there is no invalidating prior art, of which it and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, the Company would lose some or all of the patent protection for one or more of its products. Such a loss of patent protection could have a material adverse impact on its business, results of operations and financial condition. Further, intellectual property litigation could lead to unfavorable publicity that could harm the Company's reputation.

Other parties may challenge certain of the Company's foreign patent applications. If any such parties are successful in opposing its foreign patent applications, the Company may not gain the protection afforded by those patent applications in particular jurisdictions and may face additional proceedings with respect to similar patents in other jurisdictions, as well as related patents. The loss of patent protection in one jurisdiction may influence the Company's ability to maintain patent protection for the same technology in other jurisdictions.

Further, disputes may arise regarding the ownership or inventorship of the Company's patents. While the Company has entered into assignment of intellectual property agreements with its employees, consultants, and collaborators and believes that it owns its patents and applications, the assignment and other ownership agreements that it relies on could be challenged. If a court or administrative body determined that the Company's does not own certain of its patents or patent applications, or that inventorship of certain of its patents is incorrect, the Company's title to its patents could be invalidated and its ability to develop and commercialize its technology could be materially harmed.

If the Company is unable to protect the confidentiality of its trade secrets, the value of its technology could be adversely and materially affected, and its business could be harmed.

The Company has also entered into non-disclosure and confidentiality agreements with all of its employees, advisors, consultants, contract manufacturers, clinical investigators and other third parties involved in the development and commercialization of its technology in order to protect its intellectual property and other proprietary technologies some of which may not be amenable to patent protection. However, these agreements may not be enforceable or may not provide meaningful protection for the Company's trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements. For example, trade secrets and confidential know-how can be difficult to maintain as confidential. Although the Company uses reasonable efforts to protect its trade secrets, any party with whom it has executed a confidentiality agreement could breach that agreement and disclose the Company's confidential information.

Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time consuming, and the outcome is unpredictable. Accordingly, the Company may not be able to obtain adequate remedies for such breaches, despite any legal action it might take against persons making such unauthorized disclosure. In addition, courts outside the United States sometimes are less willing than in the United States to protect trade secrets.

If any of the Company's trade secrets were to be lawfully obtained or independently developed by a competitor, it would have no right to prevent such third party, or those to whom the third party communicates such technology or information, from using that technology or information to compete with the Company. If any of its trade secrets were to be disclosed to or independently developed by a competitor, its business, results of operations and financial condition.

Those with whom the Company collaborates on research and development related to current and future technologies and products may have rights to publish data and other information to which the Company has rights. In addition, the Company sometimes engages individuals or entities to conduct research relevant to its business. The ability of these individuals or entities to publish or otherwise publicly disclose data and other information generated during the course of their research is subject to certain contractual limitations. But these

contractual provisions may be insufficient or inadequate to protect the Company's confidential information. If the Company does not apply for patent protection prior to such publication, or if it cannot otherwise maintain the confidentiality of its proprietary technology and other confidential information, then its ability to obtain patent protection or to protect its trade secret information may be jeopardized.

New technology may lead to the Company's competitors developing superior products which would reduce demand for its products regardless of any patent protection it may have.

Research into technologies similar to the Company's technologies is proceeding at a rapid pace, and companies and research institutions are actively engaged in the development of products similar to the Company's products. These new technologies may, if successfully developed, offer significant performance or price advantages when compared with the Company's technologies. The Company's existing patents or its pending and proposed patent applications may not offer meaningful protection if a competitor develops a novel product based on a new technology.

The United States government may exercise certain rights with regard to the Company's inventions, or licensors' inventions, developed using federal government funding.

The United States federal government retains certain rights in inventions produced with its financial assistance under the Patent and Trademark Law Amendments Act (as amended, the "Bayh-Dole Act"). Certain of the Company's exclusively owned patents and patent applications and those patents and applications that it co-owns with and exclusively licenses from the University of Michigan were developed using federal funding from the National Institutes of Health, the U.S. Department of Defense, and/or the U.S. Army Medical Research and Materiel Command. Consequently, pursuant to the Bayh-Dole Act, the U.S. government has certain rights in patents and applications that cover SeaStar Medical's SCD technology, in particular, to those patents and applications identified in the section of this prospectus titled "*Business – Intellectual Property*" belonging to Patent Families 1-4.

The U.S. federal government has certain rights, including so-called "march-in rights," to any patent rights that were funded in part by the U.S. government and any products or technology developed from such patent rights. When new technologies are developed with U.S. government funding, the U.S. government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the U.S. government to use the invention for non-commercial purposes. These rights may permit the U.S. government to disclose the Company's confidential information to third parties and to exercise march-in rights to use or to allow third parties to use the Company's licensed patents, including certain patents relating to SCD product candidates. The U.S. government can exercise its march-in rights if it determines that action is necessary because the Company fails to achieve the practical application of government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, the Company's rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Furthermore, the U.S. government may have the right to take title to government-funded inventions if the Company fails to disclose the inventions to the government in a timely manner or fails to file a patent application within specified time limits.

If the U.S. government exercises such march-in rights, the Company may not be able to develop or commercialize its product candidates effectively or profitably, or at all, which could harm the Company's business, results of operations and financial condition. In addition, if any intellectual property owned or licensed by the Company becomes subject to any of the rights or remedies available to the U.S. government or third parties pursuant to the Bayh-Dole Act, this could impair the value of the Company's intellectual property and could adversely affect its business.

The Company also sometimes collaborates with academic institutions to accelerate its research or development. While the Company tries to avoid engaging its academic partners in projects in which there is a risk that federal funds may be co-mingled, it cannot be sure that any co-developed intellectual property will be

free from government rights pursuant to the Bayh-Dole Act. If, in the future, the Company co-owns or licenses technology which is critical to its business that is developed in whole or in part with federal funds subject to the Bayh-Dole Act, its ability to enforce or otherwise exploit patents covering such technology may be adversely and materially affected.

Changes to the patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing the Company's ability to protect its products.

As is the case with other medical device companies, the Company's success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the medical device industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law in September 2011, could increase those uncertainties and costs. The Leahy-Smith Act included a number of significant changes to United States patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents, such as through post grant and inter parties review proceedings at the USPTO. In addition, the Leahy-Smith Act transformed the United States patent system into a "first to file" system effective March 2013. The Leahy-Smith Act and its implementation could make it more difficult for the Company to obtain patent protection for its inventions and increases the uncertainties and costs surrounding the prosecution of the Company's patent applications and the enforcement or defense of its issued patents, all of which could harm its business, results of operations and financial condition.

The United States Supreme Court has ruled on several patent cases, either narrowing the scope of patent protection available or weakening the rights of patent owners in certain circumstances. Additionally, there have been proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact the Company's ability to enforce its proprietary technology. Depending on future actions by Congress, the United States courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in ways that would weaken the Company's ability to obtain new patents or to enforce its existing and future patents.

Intellectual property rights do not necessarily address all potential threats to the Company's competitive advantage.

The degree of future protection afforded by the Company's intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect its business, or permit it to maintain its competitive advantage. The following examples are illustrative:

- others may be able to make products that are the same as or similar to the Company's products but that are not covered by the claims of patents that it owns or has rights to;
- the Company or its licensors or any current or future strategic partners might not have been the first to conceive or reduce to practice the inventions covered by its patents or pending patent applications;
- the Company or its licensors or any future strategic partners might not have been the first to file patent applications covering the inventions in the Company's patents or applications;
- others may independently develop similar or alternative technologies or duplicate any of the Company's technologies without infringing the Company's intellectual property rights;
- the Company's pending patent rights may not lead to issued patents, or the patents, if granted, may not provide it with any competitive advantage, or may be held invalid or unenforceable, as a result of legal challenges by its competitors;
- the Company's competitors might conduct research and development activities in countries where it does not have patent rights and then use the information learned from such activities to develop competitive products for sale in the Company's major commercial markets;

- third parties manufacturing or testing the Company's products or technologies could use the intellectual property of others without obtaining a proper license;
- the Company may not develop additional technologies that are patentable; and
- third parties may allege that the Company's development and commercialization of its products infringe their intellectual property rights, the outcome of any related litigation may have an adverse effect on the Company's business, result of operations and financial condition.

Obtaining and maintaining the Company's patent protection depends on compliance with various procedural, document submissions, fee payment and other requirements imposed by governmental patent agencies, and its patent protection could be reduced or eliminated for noncompliance with these requirements.

Periodic maintenance fees on any issued patent are owed to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies also require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or the lapse of a patent or patent application, resulting in the partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If the Company or its licensors fail to maintain the patents and patent applications covering the Company's products, its competitive position would be adversely affected.

The Company may obtain only limited geographical protection with respect to certain patent rights, which may diminish the value of its intellectual property rights in those jurisdictions and prevent it from enforcing its intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on product candidates in all countries throughout the world would be prohibitively expensive. Accordingly, the Company has not and in the future may not file for patent protection in all national and regional jurisdictions where such protection may be available. In addition, it may decide to abandon national and regional patent applications before grant, or to not pay maintenance fees on granted patents in certain jurisdictions. Finally, the grant proceeding of each national/regional patent office is an independent proceeding that may lead to situations in which applications in some jurisdictions are refused by the relevant patent offices, while other applications are granted. It is also quite common that depending on the country, the scope of patent protection may vary for the same product candidate or technology.

Competitors may use the Company's technologies to develop their own products in jurisdictions where the Company has not obtained patent protection and, further, may export otherwise infringing products to territories where the Company has patent protection, but where patent enforcement is not as strong as that in the United States. These products may also compete with the Company's products in jurisdictions where it does not have any issued or licensed patents or where the Company's patent or other intellectual property rights are not effective or sufficient to prevent these products from competing with the Company.

Additionally, some countries do not afford intellectual property protection to the same extent as the laws of the United States and Europe. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries do not favor the enforcement of patents and other intellectual property rights. This could make it difficult for the Company to stop the infringement of its patents or the misappropriation of its other intellectual property rights in these countries. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If the Company or any of its licensors is forced to grant a

license to third parties with respect to any patents relevant to its business, its competitive position may be impaired and its business, results of operations and financial condition may be adversely affected. Consequently, the Company may not be able to prevent third parties from practicing its inventions in certain countries outside the United States and Europe. Competitors may use the Company's technologies to develop their own products in jurisdictions where the Company has not obtained patent protection. Furthermore, they may export otherwise infringing products to jurisdictions where the Company has patent protection, if the Company's ability to enforce its patents to stop the infringing activities in those jurisdictions is inadequate.

Proceedings to enforce the Company's patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert its efforts and resources from other aspects of its business. Furthermore, while the Company intends to protect its intellectual property rights in major markets for its products, it may not be able to initiate or maintain similar efforts in all jurisdictions in which it wishes to market its products. Accordingly, the Company's efforts to protect its intellectual property rights in such countries may be inadequate.

Risks Related to Being a Public Company

The Company does not have long-term experience operating as a United States public company and may not be able to adequately implement the governance, compliance, risk management and control infrastructure and culture required for a public company, including compliance with the Sarbanes Oxley Act.

The Company is building experience operating as a United States public company, of which, the Company's executive officers have limited experience in managing a United States public company, which makes their ability to comply with applicable laws, rules, and regulations uncertain. The Company's failure to comply with all laws, rules and regulations applicable to United States public companies could subject the Company and its management to regulatory scrutiny or sanction, which could harm its reputation and share price.

Prior to the completion of the Business Combination in October 2022, the Company has not previously been required to establish and maintain the disclosure controls and procedures, and internal controls over financial reporting applicable to a public company in the United States, including the Sarbanes-Oxley Act. Although the Company is developing and implementing governance, compliance, risk management and control framework and culture required for a public company, the Company may not be able to meet the requisite standards expected by the SEC and/or its investors. The Company may also encounter errors, mistakes, and lapses in processes and controls resulting in failures to meet the requisite standards expected of a public company.

As a United States public reporting company, the Company incurs significant legal, accounting, insurance, compliance, and other expenses. The Company cannot predict or estimate the amount of additional costs it may incur or the timing of such costs. Compliance with reporting, internal control over financial reporting and corporate governance obligations may require members of its management and its finance and accounting staff to divert time and resources from other responsibilities to ensure these new regulatory requirements are fulfilled.

If it fails to adequately implement the required governance and control framework, the Company could be at greater risk of failing to comply with the rules or requirements associated with being a public company. Such failure could result in the loss of investor confidence, could harm the Company's reputation, and cause the market price of the Company's securities to decline. Other challenges in complying with these regulatory requirements may arise because the Company may not be able to complete its evaluation of compliance and any required remediation in a timely fashion. Furthermore, any current or future controls may be considered as inadequate due to changes or increased complexity in regulations, the Company's operating environment or other reasons.

Due to inadequate governance and internal control policies, misstatements, or omissions due to error or fraud may occur and may not be detected, which could result in failures to make required filings in a timely

manner and make filings containing incorrect or misleading information. Any of these outcomes could result in SEC enforcement actions, monetary fines, or other penalties, as well as damage to the Company's reputation, business, financial condition, operating results and share price.

The Company may not be able to consistently comply with all of Nasdaq's Listing Rules.

As a public company, the Company is subject to Nasdaq listing rules. If it fails to meet the requirements of the applicable listing rules, such failure may result in the Company not being listed by Nasdaq, a suspension of the trading of its shares, or delisting in the future. This may further result in legal or regulatory proceedings, fines and other penalties, legal liability for the Company, the inability for the Company's stockholders to trade their shares and negatively impact the Company's share price, reputation, operations, and financial position, as well as its ability to conduct future fundraising activities.

SeaStar Medical identified a material weakness in its internal control over financial reporting. If the Company is unable to develop and maintain an effective system of internal controls over financial reporting, the Company may not be able to accurately report its financial results in a timely manner, which may materially and adversely affect the Company's business, results of operations and financial condition.

The Company's management is responsible for establishing and maintaining adequate internal controls over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with U.S. GAAP. The Company's management also evaluates the effectiveness of its internal controls, and the Company discloses any changes and material weaknesses identified through such evaluation of its internal controls. A material weakness is a deficiency, or a combination of deficiencies, in the internal controls over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

In the course of preparing the consolidated financial statements that are included in this prospectus, SeaStar Medical has identified material weaknesses in its internal controls over financial reporting as of December 31, 2022, which relates to a deficiency in the design and operation of its financial accounting and reporting controls. Specifically, the material weakness resulted from a lack of segregation of duties within the financial accounting and reporting processes, including the absence of an independent review and approval process in recording transactions to the consolidated financial statements, disbursement and payroll systems. While the Company intends to implement measures to remediate the material weakness including hiring additional accounting staff with requisite experiences and skills, there is no guarantee that it can be remediated in a timely fashion or at all. The Company's failure to correct this material weakness could result in inaccurate consolidated financial statements and could also impair its ability to comply with the applicable financial reporting requirements on a timely basis. These compliance issues could cause investors to lose confidence in the Company's reported financial information and may result in volatility in and a decline in the market price of the Company's securities.

As discussed in Item 9A of the Company's Form 10-K for the fiscal year ended December 31, 2022 filed with the SEC, the Company was unable, without incurring unreasonable effort or expense, to conduct an assessment of our internal control over financial reporting as of December 31, 2022. Accordingly, the Company is excluding management's report on internal control over financial reporting pursuant to Section 215.02 of the SEC Division of Corporation Finance's Regulation S-K Compliance & Disclosure Interpretations. While the Company is currently taking steps to develop and enhance its internal control process the Company's management may conclude that its internal control over financial reporting is not effective, or the level at which the Company's controls are documented, designed, or reviewed is not adequate, and may result in the Company's independent registered public accounting firm issuing a report that is qualified. In addition, the reporting obligations may place a significant strain on the Company's management, operational and financial resources and systems for the foreseeable future. The Company may be unable to complete its evaluation testing and any required remediation in a timely manner.

During the course of documenting and testing the Company's internal control procedures, in order to satisfy the requirements of Section 404, the Company may subsequently identify deficiencies in its internal control over financial reporting. Moreover, if the Company fails to maintain the adequacy of its internal control over financial reporting, as these standards are modified, supplemented, or amended from time to time, it may not be able to conclude on an ongoing basis that it has effective internal control over financial reporting in accordance with Section 404. If the Company fails to achieve and maintain an effective internal controls environment, it could result in material misstatements in its consolidated financial statements and a failure to meet its reporting obligations, which may cause investors to lose confidence in its reported financial information. This could in turn limit the Company's access to capital markets and harm its results of operations. The Company may also be required to restate its consolidated financial statements from prior periods if such deficiencies are identified. Additionally, ineffective internal control over financial reporting could expose it to increased risk of fraud or misuse of corporate assets and subject it to potential delisting from Nasdaq, regulatory investigations and civil or criminal sanctions. All of these consequences could adversely impact the Company's reputation, business, results of operations, financial condition and share price.

The Company may redeem your unexpired warrants prior to their exercise at a time that is disadvantageous to you, thereby making your warrants worthless.

The Company has the ability to redeem outstanding warrants at any time after they become exercisable and prior to their expiration, at a price of \$0.01 per warrant, provided that the last reported sales price of our Common Stock equals or exceeds \$18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30 trading-day period ending on the third trading day prior to the date on which we give proper notice of such redemption and provided certain other conditions are met. If and when the warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. Redemption of the outstanding warrants could force you (i) to exercise your warrants and pay the exercise price therefor at a time when it may be disadvantageous for you to do so, (ii) to sell your warrants at the then-current market price when you might otherwise wish to hold your warrants or (iii) to accept the nominal redemption price which, at the time the outstanding warrants are called for redemption, is likely to be substantially less than the market value of your warrants. None of the private placement warrants will be redeemable by us so long as they are held by the Sponsor or its permitted transferees.

We may suffer from lack of availability of additional funds.

We expect to have ongoing needs for working capital in order to fund operations, continue to expand our operations and recruit experienced personnel. To that end, we will be required to raise additional funds through equity or debt financing. However, there can be no assurance that we will be successful in securing additional capital on favorable terms, if at all. If we are successful, whether the terms are favorable or unfavorable, there is a potential that we will fail to comply with the terms of such financing, which could result in severe liability for us. If we are unsuccessful, we may need to (a) initiate cost reductions; (b) forego business development opportunities; (c) seek extensions of time to fund liabilities, or (d) seek protection from creditors. In addition, any future sale of our equity securities would dilute the ownership and control of your shares and could be at prices substantially below prices at which our shares currently trade. Our inability to raise capital could require us to significantly curtail or terminate our operations altogether. We may seek to increase our cash reserves through the sale of additional equity or debt securities. The sale of convertible debt securities or additional equity securities could result in additional and potentially substantial dilution to our shareholders. The incurrence of indebtedness would result in increased debt service obligations and could result in operating and financing covenants that would restrict our operations and liquidity. In addition, our ability to obtain additional capital on acceptable terms is subject to a variety of uncertainties.

In addition, if we are unable to generate adequate cash from operations, and if we are unable to find sources of funding, it may be necessary for us to sell all or a portion of our assets, enter into a business combination, or

reduce or eliminate operations. These possibilities, to the extent available, may be on terms that result in significant dilution to our shareholders or that result in our shareholders losing all of their investment in our Company.

Our management team has limited experience operating a public company.

Most members of our management team have limited experience operating a publicly traded company, interacting with public company investors and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage our transition to being a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, results of operations, cash flows and financial condition.

Risks Related to the Offering

It is not possible to predict the actual number of shares we will sell under the Purchase Agreement to the Selling Stockholder, or the actual gross proceeds resulting from those sales.

On August 23, 2022, we entered into the Purchase Agreement with Tumim, pursuant to which Tumim has committed to purchase up to \$100 million in shares of our Common Stock, subject to certain limitations and conditions set forth in the Purchase Agreement. The shares of our Common Stock that may be issued under the Purchase Agreement may be sold by us to Tumim at our discretion from time to time over a 24-month period commencing on the Commencement Date. We entered into the Amendment No. 1 to the Purchase Agreement with Tumim on November 9, 2022, to, among other things, amend certain definitions in the Purchase Agreement to include certain information that was not available at the time when the Purchase Agreement was executed on August 23, 2022.

The shares of our Common Stock that may be issued under the Tumim Purchase Agreements may be sold by us to Tumim at our discretion from time to time over an approximately 24-month period commencing on the Commencement Date of the Purchase Agreement, provided that a registration statement covering the resale of shares of Common Stock that have been and may be issued under the Purchase Agreement is declared effective by the SEC, a final prospectus in connection therewith is filed, and the other conditions set forth in the Purchase Agreements are satisfied. We generally have the right to control the timing and amount of any sales of our shares of Common Stock to Tumim under the Purchase Agreement. Sales of our Common Stock, if any, to Tumim under the Purchase Agreement will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Tumim all, some or none of the shares of our Common Stock that may be available for us to sell to Tumim pursuant to the Purchase Agreement.

Because the purchase price per share to be paid by Tumim for the shares of Common Stock that we may elect to sell to Tumim under the Purchase Agreement, if any, will fluctuate based on the market prices of our Common Stock during the applicable Purchase Valuation Period for each Purchase made pursuant to the Purchase Agreement, if any, it is not possible for us to predict, as of the date of this prospectus and prior to any such sales, the number of shares of Common Stock that we will sell to Tumim under the Purchase Agreement, the purchase price per share that Tumim will pay for shares purchased from us under the Purchase Agreement, or the aggregate gross proceeds that we will receive from those purchases by Tumim under the Purchase Agreement, if any.

Moreover, although the Purchase Agreement provides that we may sell up to an aggregate of \$100 million of our Common Stock to Tumim, only 6,718,842 shares of our Common Stock are being registered for resale by Tumim under the registration statement that includes this prospectus, consisting of (i) the 218,842 Commitment

Shares that we previously issued to Tumim as partial consideration for its commitment to purchase our Common Stock under the Purchase Agreement and (ii) up to 6,500,000 shares of Common Stock that we may elect to sell to Tumim, in our sole discretion, from time to time from and after the Commencement Date under the Purchase Agreement. If after the Commencement Date we elect to sell to Tumim all of the 218,842 shares of Common Stock being registered for resale under this prospectus that are available for sale by us to Tumim in Purchases under the Purchase Agreement, depending on the market prices of our Common Stock during the applicable Purchase Valuation Period for each Purchase made pursuant to the Purchase Agreement, the actual gross proceeds from the sale of all such shares may be substantially less than the \$100 million Total Commitment available to us under the Purchase Agreement, which could materially adversely affect our liquidity.

If it becomes necessary for us to issue and sell to Tumim under the Purchase Agreement more than the 6,718,842 shares being registered for resale under the registration statement that includes this prospectus in order to receive aggregate gross proceeds equal to the Total Commitment of \$100 million under the Purchase Agreement, we must file with the SEC one or more additional registration statements to register under the Securities Act the resale by Tumim of any such additional shares of our Common Stock we wish to sell from time to time under the Purchase Agreement, which the SEC must declare effective and we will need to obtain stockholder approval to issue shares of Common Stock in excess of the Exchange Cap under the Purchase Agreement in accordance with applicable Nasdaq rules, unless the average per share purchase price paid by Tumim for all shares of Common Stock sold under the Purchase Agreement equals or exceeds \$7.18, in which case, under applicable Nasdaq rules, the Exchange Cap limitation will not apply to issuances and sales of Common Stock under the Purchase Agreement, in each case, before we may elect to sell any additional shares of our Common Stock to Tumim under the Purchase Agreement. In addition, Tumim will not be required to purchase any shares of our Common Stock if such sale would result in Tumim's beneficial ownership exceeding 4.99% of the then outstanding shares of our Common Stock.

Any issuance and sale by us under the Purchase Agreement of a substantial amount of shares of Common Stock in addition to the 6,718,842 shares of Common Stock being registered for resale by Tumim under this prospectus could cause additional substantial dilution to our stockholders. The number of shares of our Common Stock ultimately offered for sale by Tumim is dependent upon the number of shares of Common Stock, if any, we ultimately sell to Tumim under the Purchase Agreement.

Our inability to access a portion or the full amount available under the Purchase Agreements, in the absence of any other financing sources, could have a material adverse effect on our business. The extent to which we rely on Tumim as a source of funding will depend on a number of factors including the prevailing market price of our Common Stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Tumim were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we were to receive all \$100.0 million in gross proceeds under the Purchase Agreement, we may still need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

The sale of the shares of Common Stock acquired by the Selling Stockholder, or the perception that such sales may occur, could cause the price of our Common Stock to fall.

Depending on market liquidity at the time, issuances and any subsequent sales of our Common Stock may cause the trading price of our Common Stock to fall.

The 6,718,842 shares of Common Stock being registered for resale by the Selling Stockholder in this prospectus currently represent 31.5% of shares outstanding on a fully diluted basis and approximately 65.0% of the total number of outstanding shares held by non-affiliates. The Selling Stockholder may resell all, some, or none of those shares at any time or from time to time in its discretion. Even though the current trading price is

significantly below the LMAO IPO price, the Selling Stockholder may have an incentive to sell because it will still profit because of the lower price that it purchased its shares than the public investors. Additionally, the issuance of a substantial number of shares of our Common Stock to the Selling Stockholder, or the anticipation of such issuances, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

Investors who buy shares at different times will likely pay different prices and may experience different levels of dilution.

If and when the Selling Stockholder elect to sell shares of our Common Stock upon exercise of the Warrants, the Selling Stockholder may resell all, some or none of such shares at any time or from time to time in its discretion and at different prices. As a result, investors who purchase shares from the Selling Stockholder in this offering at different times will likely pay different prices for those shares, and so may experience different levels of dilution and in some cases substantial dilution and different outcomes in their investment results. Investors may experience a decline in the value of the shares they purchase from the Selling Stockholder in this offering as a result of future sales made by us to the Selling Stockholder at prices lower than the prices such investors paid for their shares in this offering. In addition, if we sell a substantial number of shares to the Selling Stockholder, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with the Selling Stockholder may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales.

We may require additional financing to sustain our operations and without it we will not be able to continue operations.

Subject to the terms and conditions of the Purchase Agreement, we may, at our discretion, direct Tumim to purchase up to an aggregate of up to \$100.0 million of our Common Stock under the Purchase Agreement from time-to-time over an approximately 24-month period beginning on the Commencement Date, provided that a registration statement covering the resale of shares of Common Stock that have been and may be issued under the Purchase Agreement is declared effective by the SEC, a final prospectus in connection therewith is filed, and the other conditions set forth in the Purchase Agreement are satisfied. Although the Purchase Agreement provides that we may sell up to an aggregate of \$100.0 million of our Common Stock to Tumim, only 6,500,000 shares of our Common Stock that we may elect to sell to Tumim under the Purchase Agreement are being registered. The purchase price per share for the shares of our common stock that we may elect to sell to Tumim under the Purchase Agreement will fluctuate based on the market prices of our Common Stock during the applicable Purchase Valuation Period for each purchase made pursuant to the Purchase Agreement. Accordingly, it is not currently possible to predict the number of shares that will be sold to Tumim, the actual purchase price per share to be paid by Tumim for those shares, the actual gross proceeds to be raised in connection with those sales, and whether or not we will need to register additional shares for resale by Tumim under the Purchase Agreement.

The extent to which we rely on Tumim as a source of funding will depend on a number of factors, including the prevailing market price of our Common Stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Tumim were to prove unavailable or prohibitively dilutive, we may need to secure another source of funding in order to satisfy our working capital needs. Even if we were to sell to Tumim all of the shares of our Common Stock available for sale to Tumim under the Purchase Agreement, we will still need additional capital to fully implement our business plan. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences would be a material adverse effect on our business, operating results, financial condition and prospects.

Our management team will have broad discretion over the use of the net proceeds from shares of Common Stock issued to the Selling Stockholder under the Purchase Agreement, if any, and you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management team will have broad discretion as to the use of the net proceeds from shares of Common Stock issued to the Selling Stockholder under the Purchase Agreement, and we could use such proceeds for purposes other than those contemplated at the time of commencement of this offering. Accordingly, you will be relying on the judgment of our management team with regard to the use of those net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that, pending their use, we may invest those net proceeds in a way that does not yield a favorable, or any, return for us. The failure of our management team to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flows.

The Selling Stockholder purchased securities in the Company at a price below the current trading price of such securities, and may experience a positive rate of return based on the current trading price, but other public investors may not experience a similar rate of return.

The shares of Common Stock being registered for resale pursuant to this prospectus include shares that were purchased at prices that may be significantly below the trading price of our Common Stock and the sale of which would result in the Selling Stockholder realizing a significant gain. The shares of Common Stock being offered for resale pursuant to this prospectus by the Selling Stockholder represent approximately 31.5% of shares outstanding on a fully diluted basis and approximately 65.0% of the total number of outstanding shares held by non-affiliates as of the date hereof. Given the substantial number of shares of Common Stock being registered for potential resale by Selling Stockholder pursuant to this prospectus, the sale of shares by the Selling Stockholder, or the perception in the market that the Selling Stockholder of a large number of shares intend to sell shares, could increase the volatility of the market price of our Common Stock or result in a significant decline in the public trading price of our Common Stock. Even if our trading price is significantly below \$10.00, the offering price for the units offered in the LMAO IPO, the Selling Stockholder may still have an incentive to sell shares of our Common Stock because it may purchase the shares at prices lower than the public investors or the current trading price of our Common Stock. Accordingly, while the Selling Stockholder may experience a positive rate of return based on the trading price of the Company's securities, the public holders of the Company's securities may not experience a similar rate of return on the securities they purchase due to differences in the applicable purchase price and trading price.

THE TUMIM TRANSACTION

On August 23, 2022, we entered into the Purchase Agreement with Tumim, pursuant to which Tumim has committed to purchase up to \$100.0 million of our Common Stock, at our direction from time to time over the term of the Purchase Agreement, subject to certain terms, conditions and limitations in the Purchase Agreement. We also entered into the Registration Rights Agreement with Tumim, pursuant to which we have filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act, the shares of our Common Stock that have been and may be issued to Tumim under the Purchase Agreement.

Under the terms and subject to the conditions of the Purchase Agreement, we have the right, but not the obligation, to sell to Tumim, and Tumim is obligated to purchase up to \$100.0 million of our Common Stock. Such sales of our Common Stock, if any, will be subject to certain limitations, and may occur from time to time at our sole discretion, over the approximately 24-month period commencing on the Commencement Date, provided that a registration statement that includes this prospectus covering the resale by Tumim of shares of our Common Stock that have been and may be issued under the Purchase Agreement is declared effective by the SEC, a final prospectus in connection therewith is filed and the other conditions set forth in the Purchase Agreement are satisfied.

Tumim has no right to require us to sell any shares of our Common Stock to Tumim, but Tumim is obligated to make purchases at our direction subject to certain conditions. There is no upper limit on the price per share that Tumim could be obligated to pay for the Common Stock under the Purchase Agreement. Actual sales of shares of our Common Stock to Tumim will depend on a variety of factors to be determined by us from time to time, including, among others, market conditions, the trading price of our Common Stock and determinations by us as to the appropriate sources of funding for us and our operations.

We do not know what the purchase price for our Common Stock will be and therefore cannot be certain as to the number of shares we might issue to Tumim under the Purchase Agreement after the Commencement Date. Although the Purchase Agreement provides that we may sell up to \$100.0 million of our common stock to Tumim, only 6,718,842 shares of our Common Stock are being registered under the Securities Act for resale by Tumim under this prospectus, which represent the (i) 218,842 Commitment Shares that we issued to Tumim on January 20, 2023 as partial consideration of its irrevocable commitment to purchase shares of our Common Stock under the Purchase Agreement and (ii) up to 6,500,000 shares of Common Stock that may be issued to Tumim from and after the Commencement Date, if and when we elect to sell shares which have been or may be issued to Tumim in the future under the Purchase Agreement, if and when we sell shares to Tumim under the Purchase Agreement.

Prior to the issuance of the Commitment Shares, there were 12,699,668 shares of our Common Stock outstanding. If all of the 6,718,842 shares offered by Tumim for resale under this prospectus were issued and outstanding as of the date hereof (without taking into account the 19.99% Exchange Cap limitation), such shares would represent approximately 31.5% of the total number of shares of our Common Stock outstanding and approximately 65.0% of the total number of outstanding shares held by non-affiliates as of the date hereof. If we elect to issue and sell more than the 6,718,842 shares offered under this prospectus to Tumim, which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Tumim is dependent upon the number of shares we may elect to sell to Tumim under the Purchase Agreement from and after the Commencement Date.

Under the Nasdaq listing rules, in no event may we issue or sell to Tumim under the Purchase Agreement shares of our Common Stock in excess of the Exchange Cap. We will need to obtain stockholder approval to issue shares of our Common Stock in excess of the Exchange Cap, unless the average price of all applicable sales of our common stock to Tumim under the Purchase Agreement equals or exceeds \$7.18 (which is the official closing price of the Common Stock on Nasdaq on the trading day immediately preceding the date of the Prior

Purchase Agreement, plus an incremental amount to take into account our issuance of the Commitment Shares to Tumim as consideration for its commitment to purchase shares of our Common Stock under the Purchase Agreement rather than in exchange for cash), such that issuances and sales of our Common Stock to Tumim under the Purchase Agreement would be exempt from the Exchange Cap limitation under the Nasdaq listing rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any Nasdaq listing rule.

The Purchase Agreement also prohibits us from directing Tumim to purchase any shares of our Common Stock if those shares, when aggregated with all other shares of our Common Stock then beneficially owned by Tumim and its affiliates, would result in Tumim and its affiliates having beneficial ownership, at any single point in time, of more than the Beneficial Ownership Limitation.

The net proceeds under the Purchase Agreement to us will depend on the frequency and prices at which we sell shares of our stock to Tumim. We expect that any proceeds received by us from such sales to Tumim will be used for working capital and general corporate purposes.

As consideration for Tumim's irrevocable commitment to purchase shares of our common stock upon the terms of and subject to satisfaction of the conditions set forth in the Purchase Agreement, on January 20, 2023, we issued, as partial consideration, 218,842 Commitment Shares to Tumim.

Purchase of Shares Under the Purchase Agreement

Upon the Commencement and subject to the conditions set forth in the Purchase Agreement, we have the right, but not the obligation, from time to time at our sole discretion over the approximately 24-month period commencing on the Commencement Date, to direct Tumim to purchase amounts of our Common Stock under the Purchase Agreement, that we specify in purchase notices that we deliver to Tumim under the Purchase Agreement on any trading day. The maximum number of shares that may be purchased pursuant to a Purchase is equal to a number of shares of our common stock equal to the lowest of, or the Purchase Maximum Amount:

- (i) 100% of the average daily trading volume in the Common Stock on the Trading Market (or, in the event the Common Stock is then listed on an Eligible Market, 100% of the average daily trading volume in the Common Stock on such Eligible Market) for the five (5) consecutive Trading Day period ending on (and including) the Trading Day immediately preceding the applicable VWAP Purchase Exercise Date for such VWAP Purchase;
- (ii) the product (rounded up or down to the nearest whole number) obtained by multiplying (A) the daily trading volume in the Common Stock on the Trading Market (or Eligible Market, as applicable) on the applicable VWAP Purchase Exercise Date for such VWAP Purchase by (B) 0.25; and
- (iii) the quotient (rounded up or down to the nearest whole number) obtained by dividing (A) \$15,000,000 by (B) the VWAP on the Trading Market (or Eligible Market, as applicable) on the Trading Day immediately preceding the applicable VWAP Purchase Exercise Date for such VWAP Purchase (in each case to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction during the applicable period).

As set forth in the Purchase Agreement, the closing sale price of the Common Stock on the trading day immediately preceding such Purchase Date (as defined in the Purchase Agreement) is not less than \$0.50, which shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction.

Tumim is obligated to accept each purchase notice prepared and timely delivered on or prior to 8:30 am, New York City time, on the trading day of the applicable Purchase Valuation Period, or each, a Purchase

Exercise Date, by us in accordance with the terms of and subject to the satisfaction of the conditions contained in the Purchase Agreement; provided that, Tumim is not obligated to purchase any shares of our Common stock set forth in a valid purchase notice in excess of the Purchase Maximum Amount. We may deliver a purchase notice on a Purchase Exercise Date, provided that (i) we may not deliver more than one purchase notice to Tumim on any single trading day, (ii) we may not deliver a purchase notice to Tumim on any trading day during the period commencing on the Purchase Exercise Date on which a prior purchase notice has previously been delivered by us to Tumim under the Purchase Agreement, and ending on the applicable trading day immediately following the last trading day of the applicable Purchase Valuation Period, or each such date, a Purchase Settlement Date, or such later trading day on which Tumim has received all of the Purchase Shares subject to such prior purchase notice in electronic form as "DWAC Shares" (as defined in the Purchase Agreement), and (iii) all Purchase Shares subject to all prior purchase notices previously delivered by us to Tumim have in fact been received by Tumim as DWAC Shares prior to our delivery of such purchase notice to Tumim on such Purchase Exercise Date.

The purchase price of the shares of our Common Stock that we may direct Tumim to purchase pursuant to a Purchase under the Purchase Agreement will be equal to 97% of the lowest daily VWAPs during the Purchase Valuation Period as set forth in the Purchase Agreement.

The payment for, against simultaneous delivery of, shares in respect of each purchase under the Purchase Agreement will be settled on the applicable Purchase Settlement Date immediately following the applicable Purchase Valuation Period for such Purchase, as set forth in the Purchase Agreement.

Conditions to Commencement and Delivery of Purchase Notices

Our ability to deliver purchase notices to Tumim under the Purchase Agreement arises upon the occurrence of Commencement, which is subject to the satisfaction of certain conditions, all of which are entirely outside of Tumim's control, including, among other things, the following:

- the accuracy in all material respects of our representations and warranties included in the Purchase Agreement;
- us having performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Purchase Agreement to be performed, satisfied or complied with by us;
- the effectiveness of this registration statement that includes this prospectus;
- the SEC shall not have issued any stop order suspending the effectiveness, prohibiting or suspending the use of the registration statement that includes this prospectus;
- there shall not have occurred any event and there shall not exist any condition or state of facts, which makes any statement of a material fact made in the registration statement that includes this prospectus untrue or which requires the making of any additions to or changes to the statements contained therein in order to state a material fact required by the Securities Act to be stated therein or necessary in order to make the statements then made therein, in light of the circumstances under which they were made not misleading;
- this prospectus, in final form, shall have been filed with the SEC under the Securities Act, and all reports, schedules, registrations, forms, statements, information and other documents required to have been filed by the Company with the SEC pursuant to the reporting requirements of the Exchange Act, shall have been filed with the SEC;
- trading in our Common Stock shall not have been suspended by the SEC, Nasdaq or the Financial Industry Regulatory Authority, or FINRA, we shall not have received any final and non-appealable notice that the listing or quotation of the Common Stock on Nasdaq shall be terminated on a date certain (unless, prior to such date, the common stock is listed or quoted on the Nasdaq Global Market,

the Nasdaq Capital Market, the New York Stock Exchange or the NYSE American (or any nationally recognized successor to any of the foregoing), or each, an Eligible Market), and there shall be no suspension of, or restriction on, accepting additional deposits of the Common Stock, electronic trading or book-entry services by DTC with respect to the Common Stock;

- we shall have complied with all applicable federal, state and local governmental laws, rules, regulations and ordinances in connection with the execution, delivery and performance of the Purchase Agreement and the Registration Rights Agreement;
- the absence of any statute, regulation, order, decree, writ, ruling or injunction by any court or governmental authority of competent jurisdiction which prohibits the consummation of or that would materially modify or delay any of the transactions contemplated by the Purchase Agreement or the Registration Rights Agreement;
- the absence of any action, suit or proceeding before any arbitrator or any court or governmental authority seeking to restrain, prevent or change the transactions contemplated by the Purchase Agreement or the Registration Rights Agreement, or seeking material damages in connection with such transactions;
- all of the shares of our Common Stock that may be issued pursuant to the Purchase Agreement shall have been approved for listing or quotation on the Nasdaq Global Market (or if the Common Stock is not then listed on the Nasdaq Global Market, on any Eligible Market);
- no condition, occurrence, state of facts or event constituting a material adverse effect shall have occurred and be continuing;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us;
- Tumim has received the Commitment Shares as DWAC Shares;
- the delivery to the Company's transfer agent of instructions and a notice of effectiveness relating to this registration statement directing the Company's transfer agent to issue to Tumim all the Commitment Shares and Purchase Shares as DWAC Shares;
- the Company having reserved 6,500,000 shares of our Common Stock for the purpose of issuing Purchase Shares; and
- the receipt by Tumim of the opinions, bring-down opinions and negative assurances from outside counsel to us in the forms mutually agreed to by us and Tumim prior to the date of the Purchase Agreement.

Our ability to deliver Purchase notices to Tumim under the Purchase Agreement is subject to the satisfaction of certain conditions at time of each delivery of a Purchase notice, all of which are entirely outside of Tumim's control, including, among other things, the following:

- the accuracy in all material respects of our representations and warranties included in the Purchase Agreement;
- us having performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Purchase Agreement to be performed, satisfied or complied with by us;
- we shall have complied with all applicable federal, state and local governmental laws, rules, regulations and ordinances in connection with the execution, delivery and performance of the Purchase Agreement and the Registration Rights Agreement;
- the absence of any statute, regulation, order, decree, writ, ruling or injunction by any court or governmental authority of competent jurisdiction which prohibits the consummation of or that would materially modify or delay any of the transactions contemplated by the Purchase Agreement or the Registration Rights Agreement;

- the absence of any action, suit or proceeding before any arbitrator or any court or governmental authority seeking to restrain, prevent or change the transactions contemplated by the Purchase Agreement or the Registration Rights Agreement, or seeking material damages in connection with such transactions;
- all of the shares of our Common Stock that may be issued pursuant to the Purchase Agreement shall have been approved for listing or quotation on the Nasdaq Global Market (or if the Common Stock is not then listed on the Nasdaq Global Market, on any Eligible Market);
- no condition, occurrence, state of facts or event constituting a material adverse effect shall have occurred and be continuing;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us;
- the effectiveness of this registration statement that includes this prospectus (and any one or more additional registration statements filed with the SEC that include shares of our common stock that may be issued and sold by us to Tumim under the Purchase Agreement);
- the delivery to the Company's transfer agent of instructions and a notice of effectiveness relating to any other additional registration statement filed with the SEC that includes shares of our common stock that may be issued and sold by us to Tumim under the Purchase Agreement directing the Company's transfer agent to issue to Tumim all the Purchase Shares as DWAC Shares;
- the SEC shall not have issued any stop order suspending the effectiveness, prohibiting or suspending the use of the registration statement that includes this prospectus (or any one or more additional registration statements filed with the SEC that include shares of our common stock that may be issued and sold by us to Tumim under the Purchase Agreement);
- there shall not have occurred any event and there shall not exist any condition or state of facts, which makes any statement of a material fact made in the registration statement that includes this prospectus (or in any one or more additional registration statements filed with the SEC that include shares of our common stock that may be issued and sold by us to Tumim under the Purchase Agreement) untrue or which requires the making of any additions to or changes to the statements contained therein in order to state a material fact required by the Securities Act to be stated therein or necessary in order to make the statements then made therein (in the case of this prospectus or the prospectus included in any one or more additional registration statements filed with the SEC under the Registration Rights Agreement, in light of the circumstances under which they were made) not misleading;
- this prospectus (or any one or more additional registration statements filed with the SEC that include shares of our common stock that may be issued and sold by us to Tumim under the Purchase Agreement), in final form, shall have been filed with the SEC under the Securities Act, and all reports, schedules, registrations, forms, statements, information and other documents required to have been filed by the Company with the SEC pursuant to the reporting requirements of the Exchange Act, shall have been filed with the SEC;
- trading in our Common Stock shall not have been suspended by the SEC, Nasdaq or FINRA, we shall not have received any final and non-appealable notice that the listing or quotation of the common stock on Nasdaq shall be terminated on a date certain (unless, prior to such date, the common stock is listed or quoted on the Nasdaq Global Market, the Nasdaq Capital Market, the New York Stock Exchange or the NYSE American (or any nationally recognized successor to any of the foregoing), or each, an Eligible Market), and there shall be no suspension of, or restriction on, accepting additional deposits of the common stock, electronic trading or book-entry services by DTC with respect to the Common Stock;
- the issuance and sale of the Purchase Shares subject to a Purchase notice shall not exceed the Purchase Maximum Amount or cause the Total Commitment, Beneficial Ownership Limitation or Exchange Cap to be exceeded;

- the Purchase Shares shall have been duly authorized and all Purchase Shares issued under prior Purchase notices shall have been delivered as DWAC Shares; and
- the receipt by Tumim of the opinions, bring-down opinions and negative assurances from outside counsel to us in the forms mutually agreed to by us and Tumim prior to the date of the Purchase Agreement.

No Short-Selling or Hedging by Tumim

Tumim has covenanted not to cause or engage in any manner whatsoever, any direct or indirect short selling or hedging of our shares.

Prohibition on Variable Rate Transactions

Subject to specified exceptions included in the Purchase Agreement, we are limited in our ability to enter into specified variable rate transactions during the term of the Purchase Agreement. Such transactions include, among others, the issuance of convertible securities with a conversion or exercise price that is based upon or varies with the trading price of our common stock after the date of issuance, the issuance of securities with embedded antidilution provisions, the issuance of securities with an embedded put or call right or at a price subject to being reset after the initial issuance contingent on our business or market performance or entry into any new "equity line of credit" transaction or similar continuous equity offering where we may issue common equity at a price that is tied to future market prices of our common equity.

Termination of the Purchase Agreement

Unless earlier terminated as provided hereunder, the Purchase Agreement shall terminate automatically on the earliest to occur of:

- (i) the first day of the month next following the 24-month anniversary of the Closing Date of the Purchase Agreement,
- (ii) the date on which Tumim shall have purchased the Total Commitment worth of shares pursuant to the Purchase Agreement,
- (iii) the date on which the Common Stock shall have failed to be listed or quoted on the Trading Market or any Eligible Market,
- (iv) the thirtieth (30th) Trading Day next following the date on which, pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any person commences a proceeding against the Company, in each case that is not discharged or dismissed prior to such thirtieth (30th) Trading Day, and
- (v) the date on which, pursuant to or within the meaning of any Bankruptcy Law, a custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors.

We have the right to terminate the Purchase Agreement at any time after the Commencement Date, at no cost or penalty, upon one trading day's prior written notice to Tumim. We and Tumim may also terminate the Purchase Agreement at any time by mutual written consent.

Tumim also has the right to terminate the Purchase Agreement upon 10 trading days' prior written notice to us, but only upon the occurrence of certain events, including:

- the occurrence of a Material Adverse Effect (as defined in the Purchase Agreement);
- the occurrence of a Fundamental Transaction (as defined in the Purchase Agreement) involving us;

- our failure to file with the SEC the registration statement that includes this prospectus or any additional registration statement we are required to file with the SEC pursuant to the Registration Rights Agreement, within the time periods set forth in the Registration Rights Agreement;
- while the registration statement that includes this prospectus or any additional registration statement or any post-effective amendments thereto are required to be maintained effective pursuant to the Registration Rights Agreement, the effectiveness of such registration statements or post-effective amendments lapse for any reason (including the issuance of a stop order by the SEC), or this prospectus or the prospectus included in any additional registration statement we file with the SEC pursuant to the Registration Rights Agreement otherwise becomes unavailable to Tumim for the resale of all of the shares of common stock included therein, and such lapse or unavailability continues for a period of 20 consecutive Trading Days or for more than an aggregate of 60 Trading Days in any 365-day period, other than due to acts of Tumim; or
- trading in the common stock on the Nasdaq Global Market (or if the common stock is then listed on an Eligible Market, trading in the common stock on such Eligible Market) has been suspended for a period of three consecutive trading days.

No termination of the Purchase Agreement by us or by Tumim will become effective prior to the first Trading Day immediately following the applicable settlement date related to any pending purchase notice that has not been fully settled in accordance with the terms and conditions of the Purchase Agreement, and will not affect any of our respective rights and obligations under the Purchase Agreement with respect to any pending purchase notice, and both we and Tumim have agreed to complete our respective obligations with respect to any such pending purchase notice under the Purchase Agreement. Furthermore, no termination of the Purchase Agreement will affect the Registration Rights Agreement, which will survive any termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on our Stockholders

All shares of our Common Stock that have been or may be issued or sold by us to Tumim under the Purchase Agreement that are being registered under the Securities Act for resale by Tumim in this offering are expected to be freely tradable. The shares of our Common Stock being registered for resale in this offering (excluding the 218,842 Commitment Shares we already issued to Tumim as partial consideration) may be issued and sold by us to Tumim from time to time at our discretion over a period of up to approximately 24 months commencing on the Commencement Date, provided that the conditions precedent to Commencement have occurred. The resale by Tumim of a significant amount of shares registered for resale in this offering at any given time, or the perception that these sales may occur, could cause the market price of our Common Stock to decline and to be highly volatile. Sales of our Common Stock, if any, to Tumim under the Purchase Agreement will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Tumim all, some or none of the shares of our Common Stock that may be available for us to sell to Tumim pursuant to the Purchase Agreement. If and when we do sell shares to Tumim, after Tumim has acquired the shares, Tumim may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Tumim by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our Common Stock. In addition, if we sell a substantial number of shares to Tumim under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Tumim may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our shares to Tumim and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Tumim to purchase up to \$100.0 million of our Common Stock, subject to certain limitations. We have registered only a portion of the shares that may be issuable under the Purchase Agreement and, therefore, we may seek to issue

and sell to Tumim under the Purchase Agreement more shares of our Common Stock than are offered under this prospectus in order to receive the aggregate gross proceeds equal to the \$100.0 million Total Commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act any such additional shares, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale under this prospectus is dependent upon the number of shares we direct Tumim to purchase under the Purchase Agreement.

The following table sets forth the amount of gross proceeds we would receive from Tumim from our sale of Common Stock to Tumim under the Purchase Agreement at varying purchase prices:

<u>Assumed Average Purchase Price Per Share</u>	<u>Number of Registered Shares to be Issued if Full Purchase</u> (1)	<u>Percentage of Outstanding Shares After Giving Effect to the Issuance to Tumim</u> (2)	<u>Gross Proceeds from the Sale of Shares to Tumim Under the Purchase Agreement</u> (4)
\$2.15 ⁽³⁾	6,500,000	33.5%	\$ 13,975,000
\$3.00	6,500,000	33.5%	\$ 19,500,000
\$4.00	6,500,000	33.5%	\$ 26,000,000
\$4.30 ⁽⁵⁾	6,500,000	33.5%	\$ 27,950,000
\$5.00	6,500,000	33.5%	\$ 32,500,000
\$6.00	6,500,000	33.5%	\$ 39,000,000

- (1) Although the Purchase Agreement provides that we may sell up to \$100.0 million of our common stock to Tumim, we are only registering 6,500,000 shares under this prospectus which represents: (i) 218,842 Commitment Shares that we already issued as partial consideration to Tumim as a commitment fee for making the irrevocable commitment under the Purchase Agreement; and (ii) an additional 6,500,000 shares which may be issued to Tumim in the future under the Purchase Agreement, if and when we sell shares to Tumim under the Purchase Agreement, and which may or may not cover all the shares we ultimately sell to Tumim under the Purchase Agreement, depending on the purchase price per share. As a result, we have included in this column only those shares that we are registering in this offering. If we seek to issue under the Purchase Agreement, the Prior Purchase Agreement, and the transactions contemplated thereby, shares of our common stock in excess of 2,538,663 shares, or 19.99% of the total common stock outstanding immediately prior to the execution of the Purchase Agreement, we may be required to seek stockholder approval in order to be in compliance with the Nasdaq listing rules.
- (2) The denominator is based on 13,296,516 shares outstanding as of March 31, 2023, which includes the 218,842 Commitment Shares issued to Tumim as partial consideration upon execution of the Purchase Agreement and 378,006 shares issued under the Purchase Agreement as of March 31, 2023, and adjusted to include the number of shares set forth in the adjacent column which we would have sold to Tumim, assuming the purchase price in the first column. The numerator is based on the number of shares issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the first column.
- (3) The closing sale price of our Common Stock on April 18, 2023.
- (4) For illustration purposes only. Gross proceeds from the sale of shares to Tumim under the Purchase Agreement cannot exceed \$100.0 million in the aggregate.
- (5) The closing sale price of our Common Stock on January 19, 2023, immediately before this offering.

Letter Agreement

On October 28, 2022, LMAO, SeaStar Medical, and Tumim entered into a letter agreement (the "Tumim Letter Agreement") to amend certain terms of the Purchase Agreement following the consummation of the Business Combination ("Business Combination Closing Date"). Pursuant to the Tumim Letter Agreement, among other things, the parties agreed to the following amendments with respect to the Commitment Fee and Commitment Shares: (a) LMAO, or the Company from and after the Closing Date, is required to pay to Tumim

\$1,000,000 of the Commitment Fee in cash on the Business Combination Closing Date; (b) the Company is required to pay to Tumim \$500,000 of the Commitment Fee in cash no later than the earliest of (i) the 30th calendar day immediately following the Effective Date of the Initial Registration Statement (each as defined in the Purchase Agreement), (ii) the 30th calendar day immediately following the Effectiveness Deadline (as defined in the Purchase Agreement) of the Initial Registration Statement, and (iii) not later than the second trading date immediately after the date on which written notice of termination is delivered by the Company or Tumim pursuant to the terms of the Purchase Agreement; and (c) the Company shall pay to Tumim the balance of the Commitment Fee, or \$1,000,000, as Commitment Shares as set forth under the terms in the Purchase Agreement.

Amendment No.1 to Purchase Agreement

On November 9, 2022, the Company, SeaStar, and Tumim entered into Amendment No. 1 to the Purchase Agreement (the “Purchase Agreement Amendment”), pursuant to which, among other things, the parties agreed to the following with respect to the Company’s obligation to pay Tumim a \$2.5 million commitment fee, as follows: (a) the Company would have paid Tumim \$1,000,000 of the commitment fee in cash on the Business Combination Closing Date, which amount was paid on such day on October 28, 2022; (b) the Company will pay Tumim \$500,000 of the commitment fee in cash no later than the earliest of (i) the 30th calendar day immediately following the Effective Date of the Initial Registration Statement, (ii) the 30th calendar day immediately following the Effectiveness Deadline (as defined in the Registration Rights Agreement) of the Initial Registration Statement, and (iii) not later than the second trading date immediately after the date on which written notice of termination is delivered by the Company or Tumim pursuant to the terms of the Purchase Agreement; and (c) the Company will pay Tumim the balance of the commitment fee, or \$1,000,000, in newly issued shares of common stock, the per share value of which will be determined by reference to the volume weighted average prices of the common stock immediately prior to the filing of the Initial Registration Statement. In addition, the Purchase Agreement Amendment provided certain price and share information and amended certain definitions in the Purchase Agreement to include certain information that was not available at the time when the Purchase Agreement was executed on August 23, 2022, including the definitions of “Base Price,” “Commitment Fee,” “Commitment Shares,” “Common Stock,” “Minimum Price,” “VWAP Purchase Maximum Amount,” and “VWAP Purchase Price”.

On November 9, 2022, the Company, SeaStar Medical, and Tumim entered into the Amendment No. 1 to Registration Rights Agreement (the “RRA Amendment”) to make certain amendments to the filing deadline prior to which the Company shall file the Initial Registration Statement and to conform the terms of the Registration Rights Agreement to those of the Purchase Agreement (where applicable), as amended by the Purchase Agreement Amendment.

Following the execution of the Purchase Agreement Amendment and the RRA Amendment on November 9, 2022, the closing under the Purchase Agreement occurred, at which time the Purchase Agreement and the Registration Rights Agreement, each as amended, became fully effective in all respects.

USE OF PROCEEDS

All of the securities offered by the Selling Securityholder pursuant to this prospectus will be sold by the Selling Securityholder for their respective accounts. We will not receive any of the proceeds from these sales. Unless we inform you otherwise in a prospectus supplement or free writing prospectus, we intend to use the net proceeds that we receive under the Purchase Agreement for general corporate purposes, including, but not limited to, working capital for operations, capital expenditures and future acquisitions.

The Selling Securityholder will pay any underwriting commissions and discounts, and expenses incurred by the Selling Securityholder for brokerage, marketing costs, or legal services (other than those detailed below). We will bear the costs, fees and expenses incurred in effecting the registration of the securities covered by this prospectus, including all registration and filing fees, securities or blue sky law compliance fees, fees and expenses of our counsel and our independent registered public accounting firm, and fees and expenses of legal counsel (subject to certain dollar limitations).

DIVIDEND POLICY

We have not paid any cash dividends on Common Stock to date. Our Board of Directors (the "Board") may from time to time consider whether or not to institute a dividend policy. It is our present intention to retain any earnings for use in our business operations and accordingly, we do not anticipate the Board declaring any dividends in the foreseeable future. The payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial condition. The payment of any cash dividends will be within the discretion of our Board.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is intended to help you understand our business, financial condition, results of operations, liquidity and capital resources. You should read this discussion in conjunction with the Company's consolidated financial statements and related notes thereto included elsewhere in this prospectus. In connection with the Business Combination, SeaStar Medical was determined to be the accounting acquirer.

In addition to historical financial analysis, this discussion and analysis contains forward-looking statements based upon current expectations that involve risks, uncertainties and assumptions, as described under the heading "Cautionary Note Regarding Forward-Looking Statements." Actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of various factors, risks and uncertainties, including those set forth under "Risk Factors" included elsewhere (or incorporated by reference) in this prospectus. Unless the context otherwise requires, references in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" to "we," "us," "our," and "the Company" are intended to mean the business and operations of SeaStar Medical Holding Corporation and its consolidated subsidiaries following the Business Combination, and references to "SeaStar Medical" refers to SeaStar Medical Inc.

Overview

On October 28, 2022, LMAO consummated a series of transactions that resulted in the combination of LMF Merger Sub, Inc. and SeaStar Medical, Inc. pursuant to an Agreement and Plan of Merger.

The Company is a medical technology company developing a platform therapy to reduce the consequences of hyperinflammation on vital organs. In a normal inflammatory response, neutrophils are the first immune cells to arrive at the site and are key to the entire immune response that kills pathogens and promotes tissue repair. If the inflammatory response becomes excessive and dysregulated, normal neutrophil die off may be delayed, altering feedback mechanisms that regulate the immune system. This results in damaging hyperinflammation spreading uncontrollably to other parts of the body, often leading to acute chronic solid organ dysfunction or failure, including heart, lung, kidney and liver diseases. This hyperinflammatory response is also known as the cytokine storm, referring to the body's reaction to the category of small-secreted proteins released by hyperinflammatory cells that affect communication between cells. The cytokine storm, when left uncontrolled, can lead to organ damage and even death.

We are initially using our proprietary SCD technology platform to clinically validate several acute organ injury indications, including kidneys and lungs. Our investigational SCD is an extracorporeal synthetic membrane device designed to be easily integrated into existing CRRT systems that are commonly installed in hospitals, including in ICUs throughout the United States. Once approved and commercialized, the SCD would initially target acute kidney injury in both the pediatric CRRT population as well as adults on CRRT. In addition, we are developing our SCD to address inflammation associated with chronic dialysis and chronic heart failure.

We have incurred net losses in each year since our inception in 2007. As of December 31, 2022 and 2021, we had an accumulated deficit of \$99.3 million and \$76.3 million, respectively. Our net losses were \$23.0 million and \$4.6 million for the years ended December 31, 2022 and 2021, respectively. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. For the year ended December 31, 2022, additional losses were related to the Business Combination, including costs to obtain the forward contracts and the change in fair value of the forward option derivatives.

As of December 31, 2022 and 2021, we had cash of \$0.0 million and \$0.5 million, respectively.

Our accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and liabilities in the normal course of business. Our consolidated financial statements do not include any adjustments relating to the recoverability and classification of asset amounts or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

The recurring losses, working capital deficiency, the need for capital to fund our operations, including clinical trial and regulatory approval expenses, and the amount of cash reserve are factors that raise substantial doubt about our ability to continue as a going concern for the twelve-month period from the date the consolidated financial statements are made available. See Note 1 to our audited consolidated financial statements for the year ended December 31, 2022 included elsewhere in this prospectus for additional information on our assessment.

Our need for additional capital will depend in part on the scope and costs of our development activities. To date, we have not generated any significant revenue from the sale of commercialized products. Our ability to generate product revenue will depend on the successful development and eventual commercialization of our products. Until such time, if ever, we expect to finance our operations through the sale of equity or debt, borrowings under credit facilities, potential collaborations, other strategic transactions or government and other grants. Adequate capital may not be available to us when needed or on acceptable terms. If we are unable to raise capital, we could be forced to delay, reduce, suspend or cease our research and development programs or any future commercialization efforts, which would have a negative impact on our business, prospects, operating results and financial condition. See the section titled “Risk Factors” for additional information.

Key Components of Results of Operations

Revenue

To date, we have not generated any revenue from the sale of commercialized products. Revenue has been primarily derived from government and other grants. We may generate revenue in the future based on payments from future license or collaboration agreements and government and other grants, and, if our products receive regulatory approval for commercialization, from product sales. We expect that any revenue we generate will fluctuate from quarter to quarter. If we fail to complete the development of or obtain regulatory approval for commercialization of our products in a timely manner, our ability to generate future revenue and our results of operations and financial position, would be materially adversely affected.

Research and Development Expenses

Since our inception, we have focused our resources on our research and development activities, including conducting preclinical studies and clinical trials, and developing our process and activities related to regulatory filings for our products. Subject to the availability of additional funding, we plan to further increase our research and development expenses for the foreseeable future as we continue the development of our products.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive and finance roles, which also include stock-based compensation expenses and benefits for such employees.

Other significant general and administrative expenses include facilities costs, professional fees for accounting and legal services and expenses associated with obtaining and maintaining patents. As we continue to expand and grow our operations, we expect that our general and administrative expenses will increase, including for additional expenses relating to new hires, travel, a new enterprise resource planning platform, and branding.

Origination Cost of Forward Contracts

Origination cost of forward contracts consists primarily of consideration related to the forward purchase agreements.

Loss from Operations and Operating Margin

Loss from operations consists of the Company's gross profit less its operating expenses. Operating margin is loss from the Company's operations as a percentage of its net sales.

Other Income (Expense), Net

Total other income (expense), net primarily consists of interest expense relating to interest incurred on our convertible notes, gains from the forgiveness of Paycheck Protection Program ("PPP") loans under the Coronavirus Aid, Relief, and Economic Security ("CARES") Act, gains from early extinguishment of convertible notes changes in fair value of the derivative liability related to the conversion option of convertible notes and changes in fair value of the derivative liability related to the forward option on the prepaid forward agreements.

Net Loss

Net loss consists of the Company's loss from operations, less other expense.

Factors Affecting the Company's Operating Results

We believe that our performance and future success depend on a number of factors that present significant opportunities for us but also pose risks and challenges. Please see the factors discussed elsewhere in this prospectus, including those discussed in "Risk Factors" for additional information.

Results of Operations

Comparison of Year Ended December 31, 2022 to Year Ended December 31, 2021

The following table sets forth a summary of our results of operations. This information should be read together with our consolidated financial statements and related Notes included elsewhere in this prospectus.

(\$ in thousands)	Year Ended December 31,		Change	
	2022	2021	\$	%
Revenue	\$ —	\$ —	\$ —	—
Operating expenses				
Research and development	2,819	2,766	53	2%
General and administrative	6,600	1,683	4,917	292%
Origination cost of forward contracts	2,190	—	2,190	
Total operating expenses	11,609	4,449	7,160	161%
Loss from operations	(11,609)	(4,449)	(7,160)	161%
Total other income (expense)	(11,403)	(148)	(11,255)	7605%
Loss before income tax provision	(23,012)	(4,597)	(18,415)	401%
Income tax provision (benefit)	1	(1)	2	
Net loss	<u>\$(23,013)</u>	<u>\$(4,596)</u>	<u>\$(18,417)</u>	401%

Research and Development Expenses

The following table discloses the breakdown of research and development expenses:

(\$ in thousands)	Year Ended December 31,		Change	
	2022	2021	\$	%
Clinical trials	\$ —	\$ 989	\$(989)	(100)%
External services	1,997	1,278	719	56%
Payroll and personnel expenses	658	353	305	86%
Other research and development expenses	164	146	18	12%
	<u>\$2,819</u>	<u>\$2,766</u>	<u>\$ 53</u>	<u>2%</u>

General and Administrative Expenses

General and administrative expenses for the years ended December 31, 2022 and 2021 were \$6.6 million and \$1.7 million, respectively. The increase in general and administrative expenses of \$4.9 million, or 292%, was driven by an increase in payroll expense of \$1.9 million, commitment fees for equity line of credit of \$2.5 million, an increase in legal fees of \$0.2 million, and an increase in insurance of \$0.3 million.

Other Income (Expense)

Other income (expense) for the years ended December 31, 2022 and 2021 was expense of \$11.4 million and expense of \$0.2 million, respectively. The increase of \$11.2 million primarily resulted from a loss in change in fair value of forward option of \$10.2 million, a loss in change in fair value of convertible notes derivative liability of \$0.6 million, and an increase in interest expense of \$0.4 million.

Income Tax Provision (Benefit)

SeaStar Medical recorded a provision for income taxes of \$0.0 million for the year ended December 31, 2022, and an income tax benefit of \$0.0 million for the year ended December 31, 2021.

Under Accounting Standards Codification (“ASC”) 740-10-30-5, Income Taxes, deferred tax assets should be reduced by a valuation allowance if, based on the weight of available evidence, it is more-likely-than-not (i.e., a likelihood of more than 50%) that some portion or all of the deferred tax assets will not be realized. SeaStar Medical considers all positive and negative evidence available in determining the potential realization of deferred tax assets including, primarily, the recent history of taxable earnings or losses. Based on operating losses reported during 2022 and 2021, the Company concluded there was not sufficient positive evidence to overcome this recent operating history. As a result, we believe that a valuation allowance continues to be necessary based on the more-likely-than-not threshold noted above. A valuation allowance of \$23.8 million and \$18.2 million was recorded for the years ended December 31, 2022 and 2021, respectively.

Net Loss

During the year ended December 31, 2022, SeaStar Medical had a net loss of \$23.0 million compared to a net loss of \$4.6 million for the year ended December 31, 2021. The increased net loss of \$18.4 million primarily resulted from increases in general and administrative expenses of \$4.9 million, increases in research and development expenses of \$0.1 million, origination cost of forward contracts of \$2.2 million, and increases in other expense of \$11.2 million during the year ended December 31, 2022.

Liquidity and Capital Resources

Sources of Liquidity

To date, we have financed our operations primarily through the sale of equity securities and convertible debt and, to a lesser extent, through grants from governmental and other agencies. Since our inception, we have incurred significant operating losses and negative cash flows. As of December 31, 2022 and December 31, 2021, we had an accumulated deficit of \$99.3 million and \$76.3 million, respectively.

As of December 31, 2022 and December 31, 2021, we had cash of \$0.0 million and \$0.5 million, respectively. We expect that our existing cash will be insufficient to fund our operations, including clinical trial expenses and capital expenditure requirements. We believe that this raises doubt about our ability to continue as a going concern. To finance our operations beyond that point, we would need to raise additional capital, which cannot be assured. We have concluded that these circumstances raise doubt about our ability to continue as a going concern within one year after the issuance date of this prospectus. See Note 1 to our audited consolidated financial statements for the period ended December 31, 2022.

In April 2021 we received loan proceeds in the amount of \$0.1 million, under the PPP as established under the CARES Act. The loan and accrued interest were forgivable as long as we used the loan proceeds for eligible purposes, including payroll, employee benefits, rent and utilities, and maintained its payroll levels. During the year ended December 31, 2021, \$0.1 million of our PPP loan was forgiven.

During the year ended December 31, 2021, we issued convertible notes totaling \$2.9 million pursuant to certain note purchase agreements, including notes issued to our major stockholders, the Dow Pension Funds. During the year ended December 31, 2022, we issued convertible notes totaling \$1.7 million to certain existing holders of our issued and outstanding preferred stock, including six convertible notes in the aggregate principal amount of \$1.2 million to the Dow Pension Funds. The maturity dates for the convertible notes range from one to three years from their respective issuance dates. These notes are unsecured obligations of SeaStar Medical and borrowings on the convertible notes bear interest at 8.0%. Immediately prior to the Closing, all principal amounts and accrued interest under the convertible notes were converted into shares of our Common Stock at a conversion price of \$10.00 per share.

Upon consummation of the Business Combination, we received \$17.0 million in cash, primarily due to \$7.0 million in gross proceeds from the PIPE Investment and \$10.0 million in proceeds from the trust account, partially offset by cash payments that were disbursed at the closing of the Business Combination which included Maxim's deferred fee, professional service fees for the legal counsels, transfer agent, consultants, and auditors, a commitment fee, director and officer insurances, and prepayments to the forward purchase agreement sellers totaling approximately \$16.6 million.

In connection with the Business Combination, over 8 million shares were submitted for redemption for an aggregate redemption amount of approximately \$92.0 million. The proceeds we received in connection with the Business Combination were significantly less than the total potential proceeds of \$103.5 million (assuming no redemptions). The reduction in available cash upon the Closing due to share redemptions has negatively impacted our growth initiatives, our revenue and net loss projections prepared in connection with LMAO's evaluation of the Business Combination, and our liquidity, including the likelihood that holders of Listed Warrants will exercise their Listed Warrants and the Company will receive cash proceeds from the Listed Warrants.

Warrant Proceeds

We would receive the proceeds from any exercise of any Listed Warrants that are exercised for cash pursuant to their terms. Assuming the exercise in full of all of the Listed Warrants for cash, we would receive an aggregate of approximately \$185.0 million, but would not receive any proceeds from the sale of the shares of

Common Stock issuable upon such exercise. To the extent any Listed Warrants are issued on a “cashless basis,” the amount of cash we would receive from the exercise of the Listed Warrants will decrease. We would expect to use any such proceeds received from Listed Warrants that are exercised for cash in the future for general corporate and working capital purposes, which would increase our liquidity. However, we will only receive such proceeds if and when the warrant holders exercise the warrants. The exercise of the Listed Warrants, and any proceeds we may receive from their exercise, are highly dependent on the price of our Common Stock and the spread between the exercise price of the Listed Warrant and the price of our Common Stock at the time of exercise. There is no assurance that the warrant holders will elect to exercise for cash any or all of such warrants, and we believe that any such exercise currently is unlikely to occur as described below. As of the date of this prospectus, we have neither included nor intend to include any potential cash proceeds from the exercise of our Listed Warrants in our short-term or long-term liquidity projections. We will continue to evaluate the probability of warrant exercise over the life of our Listed Warrants and the merit of including potential cash proceeds from the exercise in our liquidity projections.

We do not expect to rely on the cash exercise of the Listed Warrants to fund our operations. Instead, we intend to rely on our primary sources of cash discussed elsewhere in this prospectus to continue to support our operations. The exercise price of the Listed Warrants is \$11.50 per share and the closing price of our Common Stock was \$1.932 as of April 10, 2023. Accordingly, we believe that it is currently unlikely that warrant holders will exercise their Listed Warrants. The likelihood that warrant holders will exercise the warrants, and therefore the amount of cash proceeds that we would receive, is dependent upon the trading price of our Common Stock. If the trading price for our Common Stock remains less than \$11.50 per share, we believe our warrant holders will be unlikely to exercise their Listed Warrants. There is no guarantee that the Listed Warrants will be in the money following the time they become exercisable and prior to their expiration, and as such, the Listed Warrants may expire worthless, and we may not receive any proceeds from the exercise of the warrants. To the extent that any of the Listed Warrants are exercised on a “cashless basis,” the amount of cash we would receive from the exercise of the warrants will decrease.

On March 15, 2023, the Company entered into a securities purchase agreement with an institutional investor, whereby the Company will issue a series of four senior unsecured convertible notes, with principal amounts totaling up to \$9.8 million, and Warrants to purchase shares of the Company’s Common Stock. On March 15, 2023, the Company issued the first senior unsecured convertible note in the amount of \$3.3 million and Warrants to purchase 328,352 shares of Common Stock. The senior unsecured convertible notes will be issued at an 8.0% discount and bear interest at 7.0% per annum and mature on June 15, 2024. The senior unsecured convertible notes are redeemable, in whole or in part, at any time at the discretion of the Company. The Warrants have an initial exercise price of \$2.97 per share of Common Stock, expire 5 years from their issuance date, and contain cashless exercise provisions.

At the second closing, the Company will issue and sell to the Purchaser (i) an additional Note in a principal amount of \$2.2 million and (ii) additional Warrants to purchase up to 218,901 shares of Common Stock. At each of the third and fourth closings, the Company may, at its option, issue and sell to the Purchaser (i) additional Notes, each in a principal amount of \$2.2 million and (ii) additional Warrants to purchase shares of Common Stock equal to 25% of the shares issuable upon conversion of the Notes on the applicable closing date. Pursuant to the Securities Purchase Agreement, the Company must satisfy certain additional conditions in order to sell and issue the additional Notes and additional Warrants at the second, third and fourth closings. Such additional conditions include, but are not limited to, the effectiveness of a registration statement to be filed by the Company with the SEC to register shares of Common Stock issuable upon conversion of the Notes and exercise of the Warrants, and for the third and fourth closings, the approval by stockholders of the Company to issue more than 19.99% of issued and outstanding shares pursuant to applicable Nasdaq Rules.

The Warrants have an initial exercise price of \$2.97 per share of Common Stock, are exercisable at any time before the close of business on the day five (5) years after their issuance and contain cashless exercise provisions.

On March 15, 2023, the Company amended its LMFA notes, LMFAO note and Maxim note, extending their maturity dates to June 15, 2024. In consideration for such extension, the Company agrees to pay the note holders an aggregate amount of \$0.1 million in cash upon receipt of proceeds from the issuance of the notes at the second closing under the securities purchase agreement.

On March 13, 2023, the Company entered into a \$0.1 million promissory note with LM Funding America Inc. with an interest rate of 7.0% per annum. The promissory note was payable on demand at any time after April 13, 2023 and had no prepayment penalty. The Company repaid the loan on March 24, 2023.

Future Funding Requirements

We expect to incur significant expenses in connection with our ongoing activities as we seek to (i) continue clinical development of our SCD product for FDA approval, and (ii) if regulatory approval is obtained, to launch and commercialize our product in the U.S. market, including subsequent launches in key international markets. We will need additional funding in connection with these activities. Our future funding requirements, both short-term and long-term, will depend on many factors, including:

- our ability to receive cash proceeds from our existing funding sources, including equity line of credit;
- the progress and results of our clinical trials and interpretation of those results by the FDA and other regulatory authorities;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the costs of operating as a public company, including hiring additional personnel as well as increased director and officer insurance premiums, audit and legal fees, investor relations fees and expenses related to compliance with public company reporting requirements under the Securities Exchange Act of 1934, as amended, and rules implemented by the SEC and Nasdaq.

Until such time, if ever, as we are able to successfully develop and commercialize our products, we expect to continue financing our operations through the sale of equity, debt, borrowings under credit facilities or through potential collaborations with other companies, other strategic transactions or government or other grants. Adequate capital may not be available to us when needed or on acceptable terms.

Based on our results of operations and liquidity as of December 31, 2022, we believe our cash and cash equivalents, including the cash we obtained from the Business Combination and the PIPE Investment, as well as potential proceeds available under the Purchase Agreement with Tumim and from the Forward Purchase Agreements ("FPA"), are not sufficient to meet our working capital and capital expenditure requirements for a period of at least twelve months from the date of our audited consolidated financial statements for the year ended December 31, 2022. In addition, we do not expect to receive any cash proceeds from the exercise of warrants in the near term, because the trading price of our Common Stock is currently below the exercise price of such warrants. We are seeking additional cash to fund our growth through future debt or equity financing transactions; however, there can be no assurance that we will be able to obtain additional capital on terms acceptable to us, if at all, or that we will generate sufficient future revenues and cash flows to fund our operations. Our estimates of our results of operations, working capital and capital expenditure requirements may be different than our actual needs, and those estimates may need to be revised if, for example, our actual revenue is lower, and our net operating losses are higher, than we project and our cash and cash equivalents position is reduced faster than anticipated. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures. Debt financing would also result in fixed

payment obligations. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, reduce, suspend or cease our research and development programs or any future commercialization efforts, which would have a negative impact on our business, prospects, operating results and financial condition. See the section titled “Risk Factors” for additional risks associated with our substantial capital requirements.

Cash Flows

The following table shows a summary of our cash flows for each of the periods shown below:

(\$ in thousands)	Year Ended December 31,	
	2022	2021
Statement of cash flow data:		
Total cash (used in)/provided by:		
Operating activities	\$ (7,794)	\$ (5,114)
Investing activities	—	—
Financing activities	7,331	2,817
	<u>\$ (463)</u>	<u>\$ (2,297)</u>

Cash Flow from Operating Activities

Net cash used in operating activities for the year ended December 31, 2022 was \$7.8 million compared to \$5.1 million for the year ended December 31, 2021. The increase in cash used for operating activities of \$2.7 million is primarily due to the increase of accounts payable and accrued expenses of as of December 31, 2022.

Cash Flow from Financing Activities

Net cash provided by financing activities for the year ended December 31, 2022 was \$7.3 million, primarily related to the Business Combination in the fourth quarter of 2022. Cash provided by financing activity for the year ended December 31, 2021 was \$2.8 million, primarily from the issuance of convertible notes.

Critical Accounting Policies and Estimates

The preparation of the consolidated financial statements and related disclosures in conformity with U.S. GAAP requires management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and income and expenses during the periods reported. Although actual results could materially differ from those estimates, such estimates are developed based on the best information available to management and management’s best judgments at the time.

Significant estimates include the valuation of the forward option on forward purchase agreement, derivative liability, warrants, and the amount of share-based compensation expense.

Forward Option on Forward Purchase Agreement

The forward option in the forward purchase agreements is remeasured each reporting period using a Monte-Carlo Simulation in a risk-neutral framework (a special case of the Income Approach). Specifically, the future stock price is simulated assuming a Geometric Brownian Motion (“GBM”). For each simulated path, the forward purchase value is calculated based on the contractual terms and then discounted at the term-matched risk-free rate. Finally, the value of the forward is calculated as the average present value over all simulated paths.

The convertible notes derivative liabilities are remeasured each reporting period using a probability-weighted model and assumption related to the conversion price and timing of conversion. The put option liability is valued based on the calculated returns as a result of the various discounts included in the Company's convertible notes and the related probability assessments of the various settlement scenarios. The convertible notes derivative liability was extinguished as of the Closing, as a result of the conversion of the convertible notes.

Share-Based Compensation Expense

The fair value of stock options granted is estimated on the date of grant using the Black-Scholes option-pricing model, which requires the use of the following assumptions:

The expected term is based on the "simplified method" described in the U.S. Securities and Exchange Commission's Staff Accounting Bulletin Topic 14 which is determined as the midpoint between the vesting date and the contractual end of the option grant. Stock Price volatility was estimated based on the estimated stock price volatility of a peer group of publicly traded companies over a similar term. The risk-free interest rate for periods within the contractual life of the option is based on the U.S. Treasury yield in effect at the time of grant. The dividend yield was zero as the Company has never declared or paid dividends and has no plans to do so in the foreseeable future.

The determination of fair value of restricted stock units is valued based on the value of the Company's Common Stock on the grant date.

Emerging Growth Company Status

We are an emerging growth company ("EGC"), as defined in the Jumpstart Our Business Startups ("JOBS") Act. The JOBS Act permits companies with EGC status to take advantage of an extended transition period to comply with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to use this extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with the new or revised accounting standards as of public company effective dates.

In addition, we intend to rely on the other exemptions and reduced reporting requirements provided by the JOBS Act. Since we intend to rely on such exemptions, we are not required to, among other things: (i) provide an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act; (ii) provide all of the compensation disclosure that may be required of non-emerging growth public companies under the Dodd-Frank Wall Street Reform and Consumer Protection Act; (iii) comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements (auditor discussion and analysis); and (iv) disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the Chief Executive Officer's compensation to median employee compensation.

We will remain an EGC under the JOBS Act until the earliest of (i) the last day of our first fiscal year following the fifth anniversary of the closing of this offering, (ii) the last date of our fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (iii) the date on which we are deemed to be a "large-accelerated filer" under the rules of the SEC with at least \$700.0 million of outstanding securities held by non-affiliates, or (iv) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the previous three-years.

Business Combination

On October 28, 2022, LMAO consummated a series of transactions that resulted in the combination of LMF Merger Sub, Inc. and SeaStar Medical, Inc. pursuant to an Agreement and Plan of Merger as described further in this prospectus. LMAO was renamed to “SeaStar Medical Holding Corporation.” The Business Combination was treated as the equivalent of SeaStar Medical, Inc. issuing shares for the net assets of LMAO, accompanied by a recapitalization. The net assets of LMAO were stated at historical cost. Operations prior to the Business Combination are those of SeaStar Medical, Inc.

The aggregate consideration payable to the stockholders of SeaStar Medical, Inc. at the Closing was \$85.4 million. The consideration consisted of \$85.0 million; minus any SeaStar Medical, Inc. indebtedness; minus SeaStar Medical, Inc. transaction expenses in excess of a cap of \$0.8 million; plus the aggregate exercise price of unexercised SeaStar Medical, Inc. warrants and options issued and outstanding immediately prior to the Closing; less the value of the shares of Common Stock underlying the assumed equity (the “Closing Consideration”). The Closing Consideration was payable solely in shares of LMAO Common Stock, par value \$0.0001 per share, valued at \$10.00 per share, resulting in the issuance of 8,540,552 shares of Common Stock to holders of stock of SeaStar Medical, Inc., immediately prior to the Closing. At the Closing, shares of class B Common Stock, par value \$0.001 per share, of LMAO (“Class B Common Stock”) automatically converted into shares of class A Common Stock, par value \$0.001 per share, of LMAO (“Class A Common Stock”) on a one-to-one basis, and pursuant to the charter of LMAO after the Business Combination, Class A and Class B Common Stock was reclassified as Common Stock.

At the Closing, each of SeaStar Medical, Inc.’s issued and outstanding convertible notes automatically converted into shares of SeaStar Medical Holding Corporation Common Stock. Immediately prior to the effectiveness of the Business Combination, each share of SeaStar Medical, Inc.’s issued and outstanding preferred stock automatically converted into shares of SeaStar Medical Holding Corporation Common Stock and those SeaStar Medical, Inc. warrants that would be exercised or exchanged in connection with the Business Combination were exercised for shares of SeaStar Medical, Inc. Common Stock. At Closing, the (i) SeaStar Medical, Inc. warrants that would not be exercised or exchanged in connection with the Business Combination were assumed by LMAO and converted into warrants to purchase Common Stock, (ii) outstanding options for shares of SeaStar Medical, Inc. Common Stock under SeaStar Medical, Inc.’s equity plan were assumed by LMAO and converted into options to purchase Common Stock, and (iii) issued and outstanding restricted stock unit awards under SeaStar Medical, Inc.’s current equity plan were assumed by LMAO and converted into LMAO restricted stock units.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations as of December 31, 2022:

(\$ in thousands)	Total	Less than 1 year	1- 3 years	3- 5 years	More than 5 years
Contractual Obligations:					
LMFA note payable	968	268	700	—	—
LMFAO note payable	2,785	0	2,785	—	—
Maxim note payable	4,167	—	4,167	—	—
Insurance Financing	910	910	—	—	—
Total contractual obligations	\$8,830	\$ 1,178	\$7,652	\$ —	\$ —

Forward Purchase Agreements

On October 17 and October 25, 2022, LMAO and SeaStar Medical, Inc. entered into forward purchase agreements (“FPA”) with Vellar Opportunity Fund SPV LLC—Series 4 (“Vellar”) and HB Strategies LLC (“HB Strategies” and together with Vellar, the “FPA Sellers”). According to the terms of the FPAs, the FPA Sellers

purchased, through a broker in the open market, shares of Class A Common Stock from holders other than LMAO or affiliates of LMAO, including from holders who had previously elected to redeem shares pursuant to the redemption rights in connection with the Business Combination (such purchased shares, the “Recycled Shares”).

The FPA Sellers were paid directly, from LMAO’s trust account, a cash amount (the “Prepayment Amount”) equal to the number of shares purchased multiplied by the per-share redemption price. In addition to the Prepayment Amount, the FPA Sellers were repaid, directly from LMAO’s trust account, for the purchase of 200,000 Shares of LMAO Common Stock bought from third parties in the open market, through a broker.

The FPA Sellers may in its discretion sell Recycled Shares they purchased, (the “Terminated Shares”). The Company is entitled to proceeds from sales of Terminated Shares equal to the number of Terminated Shares multiplied by the Reset Price (the “Reset Price”). Following the closing of the Business Combination (the “Closing”), the Reset Price will initially be \$10.00 per Share, but will be adjusted on the last scheduled trading day of each month commencing on the first calendar month following the Closing to the lowest of (a) the then-current Reset Price, (b) \$10.00 and (c) the volume weighted average price (“VWAP Price”) of the Shares of the last ten (10) trading days of the prior calendar month, but not lower than \$5.00.

The maturity date of the FPA (the “Maturity Date”) will be the earliest of (a) the third anniversary of the Closing, and (b) after any occurrence during any 30 consecutive trading-day period, the VWAP Price for 20 trading days is less than \$3.00 per Share, at the FPA Seller decision.

At the Maturity Date, the FPA Sellers will be entitled to retain a cash amount equal to the number of unsold Recycled Shares multiplied by \$2.50, and the FPA Sellers will deliver to the Company the unsold Recycled Shares.

As of December 31, 2022, the FPA Sellers have paid the Company proceeds from sales of Terminated Shares of \$0.0 million. While the Company may receive cash proceeds from sales of Terminated Shares by FPA Sellers, the FPA Sellers may not have any incentive to sell Terminated Shares unless the trading price of our Common Stock is above the Reset Price. The Reset Price on February 10, 2023 was \$5.00 per share, and there is no guarantee that the trading price of our Common Stock will equal or exceed the current Reset Price, or that the future trading price of our Common Stock may equal or exceed the Reset Price in subsequent applicable periods. In such a case, the FPA Sellers may not sell Terminated Shares, in which case we will not be able to receive any cash proceeds from the FPAs. In addition, if the FPA Sellers decide to sell their shares into the market, it may cause the trading price of our Common Stock to decline significantly.

Director Nomination Agreement

On October 28, 2022, the Sponsor and LMAO entered into the Director Nomination Agreement, providing the Sponsor certain director nomination rights, including the right to appoint or nominate for election to the Board, as applicable, two individuals, to serve as Class II directors of the Company, for a certain period following the Closing (the “Director Nomination Agreement”).

Equity Line of Credit

On August 23, 2022, SeaStar Medical, Inc., LMAO, and Tumim Stone Capital LLC (“Tumim”) entered into an equity line financing arrangement through a Common Stock Purchase Agreement providing the right to sell Tumim up to \$100 million worth of shares of Common Stock. The Common Stock Purchase Agreement is subject to certain limitations and conditions and provided for a \$2.5 million commitment fee payable to Tumim. The Company paid \$1.0 million of the commitment fee in cash at Closing. The Company has recorded an accrued expense for the remaining \$1.5 million of the commitment fee as of December 31, 2022, of which \$1.0 million will be paid in newly issued shares of Common Stock. The \$2.5 million commitment fee was recorded in general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2022.

LMFA Notes Payable

On September 9, 2022, SeaStar Medical, Inc. entered into a Credit Agreement (“LMFA Note”) with LM Funding America, Inc. (“LMFA”) whereby LMFA agreed to make advances to SeaStar Medical, Inc. of up to \$0.7 million for general corporate purposes at an interest rate of 15% per annum. All advances made to SeaStar Medical, Inc. under the LMFA Note and accrued interest were due and payable to LMFA on the maturity date, which is the earlier of (a) October 25, 2022, (b) the consummation of the Business Combination, and (c) the termination of the Merger agreement. As of December 31, 2022, the Company has borrowed \$0.7 million under the LMFA Note.

On October 28, 2022, SeaStar Medical Holding Corporation and LMFA entered into the First Amendment to Credit Agreement, dated September 9, 2022 between LMFA and SeaStar Medical Holding Corporation whereby (i) the maturity date of the loan under the LMFA Note was extended to October 30, 2023; (ii) the Company is required to use 5.0% of the gross cash proceeds received from any future debt and equity financing to pay outstanding balance of LMFA Note, provided that such repayment is not required for the first \$0.5 million of cash proceeds; (iii) the interest rate of the LMFA Note is reduced from 15% to 7% per annum; and (iv) the default interest rate is reduced from 18% to 15%. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the LMFA Note as long-term in the consolidated balance sheets as of December 31, 2022. The LMFA Note contains customary representations and warranties, affirmative and negative covenants and events of default.

In addition, on October 28, 2022, the parties entered into a security agreement, pursuant to which SeaStar Medical Holding Corporation granted LMFA a security interest in substantially all of the assets and property of the Company, subject to certain exceptions, as collateral under the amended LMFA Note. In addition, the Company entered into a guaranty, dated October 28, 2022, whereby SeaStar Medical Holding Corporation unconditionally guarantees and promises to pay to LMFA the outstanding principal amount under the LMFA Note.

On November 2, 2022, The Company entered into an additional promissory note in the amount of \$0.3 million with LMFA. The promissory note is noninterest bearing and is due on demand at any time on or after March 31, 2023. The note was paid in full in January 2023.

LMFAO Note Payable

On October 28, 2022, the Company entered into a consolidated amended and restated promissory note with LMFAO Sponsor, LLC, LMAO’s sponsor and the sole holder of founding shares as the lender, for an aggregate principal amount of \$2,785 (the “LMFAO Note”) to amend and restate in its entirety (i) the promissory note, dated July 29, 2022, for \$1,035 in aggregate principal amount issued by LMAO to the Sponsor and (ii) the Amended and Restated Promissory Note, dated July 28, 2022, for \$1,750 in aggregate principal amount, issued by LMAO to the Sponsor (collectively, the “Original Notes”). The LMFAO Note amended the Original Notes to: (i) extend maturity dates of the Original Notes to October 30, 2023; (ii) permit outstanding amount due under the LMFAO Note to be prepaid without premium or penalty; and (iii) require the Company to use 20.0% of the gross cash proceeds received from any future debt and equity financing to pay the outstanding balance of LMFAO Note, provided that such repayment is not required for the first \$500 of cash proceeds. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the LMFAO Note as long-term in the consolidated balance sheets as of December 31, 2022. The LMFAO Note carries an interest rate of 7% per annum and contains customary representations and warranties and affirmative and negative covenants.

The LMFAO Note is subject to events of default, which may result in the LMFAO Note becoming immediately due and payable, with interest of 15.0% per annum. In addition, on October 28, 2022, the parties entered into a security agreement whereby the Company granted the Sponsor a security interest in substantially all of the assets and property of the Company, subject to certain exceptions, as collateral to secure the Company’s obligations under the LMFAO Note.

Maxim Note Payable

On October 28, 2022, the Company entered into a promissory note with Maxim as the lender, for an aggregate principal amount of \$4.2 million (the "Maxim Note"). The Maxim Note had a maturity date of October 30, 2023 and any outstanding amount may be prepaid without premium or penalty. If the Company receives any cash proceeds from a debt or equity financing transaction prior to the maturity date, then the Company is required to prepay the indebtedness equal to 25.0% of the gross amount of the cash proceeds, provided that such repayment obligation does not apply to the first \$0.5 million of the cash proceeds received by the Company. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the Maxim Note as long-term in the consolidated balance sheets as of December 31, 2022. Interest on the Maxim Note is due at 7.0% per annum.

The Maxim Note contains customary representations and warranties, and affirmative and negative covenants. The Maxim Note is subject to events of default, which may result in the Maxim Note becoming immediately due and payable, with interest of 15.0% per annum.

Insurance Financing

In October 2022, the Company entered into a financing agreement with a lender to finance a portion of the annual premium of an insurance policy in the amount of \$0.9 million. Interest on the financing agreement is due at 7.35% per annum. The Company made payments of principal and interest of \$0.1 million and \$0.1 million in January 2023 and February 2023, respectively.

Intercreditor Agreement

On October 28, 2022, Maxim, LMFA, the Sponsor (collectively, the "Creditors"), SeaStar Medical, Inc. and the Company entered into the Intercreditor Agreement in order to set their relative rights under the LMFA Note, LMFAO Note and Maxim Note, including the payments of amounts by the Company upon an event of default under such notes. Each Creditor agrees and acknowledges that LMFA and the Sponsor have been granted liens on the collateral as set forth in the applicable LMFA security agreement and the sponsor security agreement. Each creditor also agrees and acknowledges that Maxim's indebtedness under the Maxim Note is unsecured.

Convertible Note Financing

On March 15, 2023, the Company entered into the Purchase Agreement with 3i, pursuant to which the Company agreed to sell and issue to 3i, in a series of up to four closings, senior unsecured convertible notes (the "Notes"), convertible into shares of the Company's Common Stock, par value \$0.0001 per share (the "Common Stock"), in a principal amount of up to approximately \$9.8 million and warrants (the "Warrants") to purchase shares of the Company's Common Stock. On March 15, 2023 (the "First Closing Date"), the Company issued a Note, convertible into 1,207,729 shares of Common Stock at an initial conversion price of \$2.70, in a principal amount of \$3,260,869.57, and a Warrant to purchase up to 328,352 shares of Common Stock.

At the second closing, the Company will issue and sell to 3i (i) an additional Note in a principal amount of \$2,173,913.04 and (ii) additional Warrants to purchase up to 218,901 shares of Common Stock. At each of the third and fourth closings, the Company may, at its option, issue and sell to 3i (i) additional Notes, each in a principal amount of \$2,173,913.04 and (ii) additional Warrants to purchase shares of Common Stock equal to 25% of 3i's shares of Common Stock issuable upon conversion of the Notes on the applicable closing date. Pursuant to the Purchase Agreement, the Company must satisfy certain additional conditions in order to sell and issue the additional Notes and additional Warrants at the second, third and fourth closings. Such additional conditions include, but are not limited to, the effectiveness of a registration statement to be filed by the Company with the SEC to register shares of Common Stock issuable upon conversion of the Notes and exercise of the Warrants, and for the third and fourth closings, the approval by stockholders of the Company to issue more than

19.99% of issued and outstanding shares pursuant to applicable Nasdaq Rules. If the third closing and fourth closing do not occur within the one-year anniversary of the First Closing Date, the Company's right to effect the third and fourth closings shall automatically terminate.

The Notes will be issued at an 8% original issue discount and bear an interest rate of 7%. The Notes mature fifteen (15) months after their issuance, or June 15, 2024 unless accelerated due to an event of default. The Notes are redeemable, in whole or in part, at any time at the discretion of the Company. At the First Closing Date, the Company received net proceeds, after the original issue discount and 3i's counsel fees, of \$2,370,000.00.

The Notes contain standard and customary covenants and events of default. Such events of default include, but are not limited to, failure to make payments when due, failure to observe or perform covenants or agreements contained in the Notes, the breach of any material representation or warranty contain therein, the bankruptcy or insolvency of the Company, the suspension of trading of Common Stock, and the Company's failure to file required reports with the SEC. If any such event of default occurs, subject to any cure period, 3i shall have the right to redeem any portion of the Note for a redemption price, with a certain dollar amount available for conversion, at 3i's option, into shares of Common Stock.

The Warrants have an initial exercise price of \$2.97 per share of Common Stock, are exercisable at any time before the close of business on the day five (5) years after their issuance and contain cashless exercise provisions.

The Notes, Warrants, and shares of Common Stock issuable upon conversion of the Notes and upon exercise of such Warrants (the "Underlying Securities"), have not been registered under the Securities Act of 1933, as amended (the "Securities Act") and were issued and sold to an accredited investor in reliance upon the exemption from registration contained in Regulation D promulgated under the Securities Act.

BUSINESS COMBINATION

This subsection describes the material provisions of certain agreements entered into in connection with the Business Combination, but does not purport to describe all of the terms of such agreements. The following summary is qualified in its entirety by reference to the complete text of such agreements, copies of which are included as exhibits to the registration statement of which this prospectus is a part.

Summary of the Business Combination

On the Closing Date, LMAO, consummated a series of transactions that resulted in the combination of Merger Sub and SeaStar Medical, pursuant to the Merger Agreement, by and among LMAO, Merger Sub and SeaStar Medical, as described further below. Pursuant to the terms of the Merger Agreement, a business combination between LMAO and SeaStar Medical was effected through the merger of Merger Sub with and into SeaStar Medical, with SeaStar Medical surviving the merger as a wholly-owned subsidiary of LMAO, following the approval by shareholders of LMAO at the Special Meeting. Following the consummation of the Business Combination, LMAO was renamed “SeaStar Medical Holding Corporation.”

The aggregate consideration payable to the stockholders of SeaStar Medical at the Closing was \$85,408,328, which consisted of an aggregate equity value of SeaStar Medical of \$85,000,000, minus deductions for indebtedness of SeaStar Medical and SeaStar Medical transaction expenses in excess of \$800,000, plus the aggregate exercise price of (1) SeaStar Medical warrants issued and outstanding immediately prior to the Closing and (2) SeaStar Medical options issued and outstanding immediately prior to the Closing, less the value of the shares of Common Stock underlying the Assumed Equity (as defined in the Merger Agreement). The Closing Merger Consideration was payable solely in shares of Common Stock, valued at \$10.00 per share, resulting in the issuance of 7,837,628 shares of common stock, par value \$0.0001 per share, of Common Stock to holders of stock of SeaStar Medical immediately prior to the Closing. At the Closing, shares of Class B Common Stock automatically converted into shares of Class A Common Stock on a one-to-one basis, and pursuant to the Charter, Class A Common Stock and Class B Common Stock was reclassified as Common Stock.

As of October 26, 2022, holders of an aggregate of 8,878,960 shares of Common Stock exercised their right to redeem their Shares, after giving effect to any redemption reversals requested by stockholders to reverse their election to have their shares redeemed.

On October 17 and October 25, 2022, LMAO and SeaStar Medical entered into certain prepaid forward agreements with two institutional investors.

Immediately prior to the Closing, each of SeaStar Medical’s issued and outstanding convertible notes automatically converted into shares of SeaStar Medical common stock. Immediately prior to the effectiveness of the Business Combination, each share of SeaStar Medical’s issued and outstanding preferred stock automatically converted into shares of SeaStar Medical common stock. At Closing, the (i) SeaStar Medical warrants that would not be exercised or exchanged in connection with the Business Combination were assumed by LMAO and converted into warrants to purchase Common Stock, (ii) outstanding options for shares of SeaStar Medical common stock under SeaStar Medical’s equity plan were assumed by LMAO and converted into options to purchase Common Stock, and (iii) issued and outstanding restricted stock unit awards under SeaStar Medical’s current equity plan were assumed by LMAO and converted into LMAO restricted stock units.

In connection with the Business Combination, we entered into certain related agreements including the Support Agreements, Subscription Agreements/PIPE Investment, Amended and Restated Registration Rights Agreement, Director Nomination Agreement, Letter Agreement, Amendment to Credit Agreement with LM Funding America, Inc. and Amended Promissory Note, Sponsor Promissory Note, Maxim Promissory Note, Intercreditor Agreement and Equity Line Financing Agreements (each of which is described below).

Related Agreements

Support Agreements

In connection with the execution of the Merger Agreement, the Sponsor entered into the Sponsor Support Agreement with LMAO and SeaStar Medical pursuant to which the Sponsor has agreed, among other things, to vote or cause to be voted (or express consent or dissent in writing, as applicable) all its shares of Common Stock that are entitled to vote to approve and adopt the Merger Agreement and the Business Combination.

In addition, in connection with the execution of the Merger Agreement, the Requisite Stockholders entered into the Support Agreements with LMAO and SeaStar Medical pursuant to which the Requisite Stockholders agreed to, among other things, (i) consent to, and vote to approve and adopt, the Merger Agreement and the Business Combination, (ii) waive any dissenters' or approval rights under applicable law in connection with the Business Combination, and (iii) not transfer, subject to certain permitted exceptions, any of such Requisite Stockholder's SeaStar Medical shares until expiration of the Support Agreements.

Subscription Agreements/PIPE Investment

On August 23, 2022, LMAO entered into Subscription Agreements with the PIPE Investors pursuant to which the PIPE Investors have agreed to purchase, and LMAO has agreed to issue and sell, an aggregate of 700,000 shares of Common Stock at \$10.00 per share and the PIPE Warrants for an aggregate purchase price of \$7,000,000. The obligations to consummate the transaction contemplated by the Subscription Agreements are conditioned upon, among other things, customary closing conditions and the consummation of the transactions contemplated by the Merger Agreement. The transactions contemplated by the Subscription Agreements were consummated immediately after the Closing.

Amended and Restated Registration Rights Agreement

As previously disclosed, on April 21, 2022 and in connection with the execution of the Merger Agreement, certain stockholders of SeaStar Medical and LMAO entered into the Amended and Restated Registration Rights Agreement, pursuant to which the Company is required to file, not later than 30 days after the Closing, a registration statement covering the shares of Common Stock issued or issuable to the Registration Rights Stockholders. In addition, the Amended and Restated Registration Rights Agreement imposes certain lock-up restrictions on shares of Common Stock held by Registration Rights Stockholders following the consummation of the Business Combination.

On October 25, 2022, LMAO and SeaStar Medical agreed to waive the lock-up restrictions with respect to shares of Common Stock held by two Registration Rights Stockholders, Mr. David Humes and Mr. Michael Humes ("Humes Lock-up Release"). Also on October 25, 2022, LMAO and Registration Rights Stockholders entered into an Amendment No. 1 to Amended and Restated Registration Rights Agreement and Waiver of Lock-Up Period (the "Lock-Up Waiver"), pursuant to which, among other things, LMAO and certain Registration Rights Stockholders agreed to waive their right to require the Company to the release of their lock-up restrictions as a result of the Humes Lock-up Release.

Director Nomination Agreement

On the Closing Date, the Sponsor and LMAO entered into the Director Nomination Agreement, providing the Sponsor with certain director nomination rights, including the right to appoint or nominate for election to the Board, as applicable, two individuals, to serve as Class II directors of the Company, for a certain period following the Closing.

Letter Agreement

On October 28, 2022, LMAO, SeaStar Medical, and Tumim entered into the Tumim Letter Agreement to amend certain terms of the Purchase Agreement, by and among Tumim, LMAO, and SeaStar Medical following the consummation of the Business Combination. Pursuant to the Tumim Letter Agreement, among other things, the parties agreed to the following amendments with respect to the Commitment Fee and Commitment Shares (each as defined in the Purchase Agreement): (a) LMAO, or the Company from and after the Closing Date, was required to pay to Tumim \$1,000,000 of the Commitment Fee in cash on the Closing Date; (b) the Company is required to pay to Tumim \$500,000 of the Commitment Fee in cash no later than the earliest of (i) the 30th calendar day immediately following the Effective Date of the Initial Registration Statement (each as defined in the Purchase Agreement), (ii) the 30th calendar day immediately following the Effectiveness Deadline (as defined in the Purchase Agreement) of the Initial Registration Statement, and (iii) not later than the second trading date immediately after the date on which written notice of termination is delivered by the Company or Tumim pursuant to the terms of the Purchase Agreement; and (c) the Company shall pay to Tumim the balance of the Commitment Fee, or \$1,000,000, as Commitment Shares as set forth under the terms in the Purchase Agreement.

Amendment to Credit Agreement with LMFA and Amended Promissory Note

On October 28, 2022, SeaStar Medical and LMFA entered into the First Amendment to Credit Agreement, pursuant to which the parties amended the Credit Agreement and entered into the LMFA Note to (i) extend the maturity date of the loan under the Credit Agreement to October 30, 2023; (ii) permit the LMFA Note be prepaid without premium or penalty; (iii) require the Company to use 5.0% of the gross cash proceeds received from any future debt and equity financing to pay outstanding balance of LMFA Note, provided that such repayment is not required for the first \$500,000 of cash proceeds; (iv) reduce the interest rate of the LMFA Note from 15% to 7% per annum; and (v) reduce the default interest rate from 18% to 15%. The LMFA Note contains customary representations and warranties, affirmative and negative covenants and events of default. In addition, on October 28, 2022, the parties entered into the LMFA Security Agreement, pursuant to which the Company and SeaStar Medical granted LMFA a security interest in substantially all of the assets and property of the Company and SeaStar Medical, subject to certain exceptions, as collateral to secure the Company's obligations under the amended Credit Agreement. In addition, SeaStar Medical entered into the LMFA Guaranty, pursuant to which SeaStar Medical unconditionally guarantees and promises to pay to Sponsor the outstanding principal amount under the LMFA Note.

Sponsor Promissory Note

On October 28, 2022, the Company entered into the Sponsor Note with Sponsor as the lender, for an aggregate principal amount of \$2,785,000 to amend and restate in their entirety the Original Notes. The Sponsor Note amended and consolidated the Original Notes to: (i) extend maturity dates of the Original Notes to October 30, 2023; (ii) permit outstanding amounts due under the Sponsor Note to be prepaid without premium or penalty; and (iii) require the Company to use 5.0% of the gross cash proceeds received from any future debt and equity financing to pay outstanding balance of Sponsor Note, provided that such repayment is not required for the first \$500,000 of cash proceeds. The Sponsor Note carries an interest rate of 7% per annum and contains customary representations and warranties and affirmative and negative covenants. The Sponsor Note is also subject to customary events of default, the occurrence of which may result in the Sponsor Promissory Note then outstanding becoming immediately due and payable, with interest being increased to 15.0% per annum. In addition, on October 28, 2022, the parties entered into the Sponsor Security Agreement, pursuant to which the Company and SeaStar Medical granted Sponsor a security interest in substantially all of the assets and property of the Company and SeaStar Medical, subject to certain exceptions, as collateral to secure the Company's obligations under the Sponsor Note. In addition, SeaStar Medical entered into the Sponsor Guaranty, pursuant to which SeaStar Medical unconditionally guarantees and promises to pay to Sponsor the outstanding principal amount under the LMFA Note.

Maxim Promissory Note

Pursuant to an engagement letter between SeaStar Medical and Maxim dated October 28, 2022, SeaStar Medical, or the Company following the consummation of the Business Combination, was required to pay Maxim, as its financial advisor and/or placement agent, certain professional fees. Upon the Closing, the parties agreed that \$4,182,353 of such amount would be paid in the form of a promissory note. Accordingly, on October 28, 2022, the Company entered into the Maxim Note for an aggregate principal amount of \$4,182,353. The Maxim Note has a maturity date of October 30, 2023 and outstanding amount may be prepaid without premium or penalty. If the Company receives any cash proceeds from a debt or equity financing transaction prior to the maturity date, then the Company is required to prepay the indebtedness equal to 25.0% of the gross amount of the cash proceeds, provided that such repayment obligation shall not apply to the first \$500,000 of the cash proceeds received by the Company. Interest on the Maxim Note is due at 7.0% per annum. The Maxim Note contains customary representations and warranties, and affirmative and negative covenants. The Maxim Note is also subject to customary events of default, the occurrence of which may result in the Maxim Note then outstanding becoming immediately due and payable, with interest being increased to 15.0% per annum.

Intercreditor Agreement

On October 28, 2022, the Creditors, SeaStar Medical and the Company entered into the Intercreditor Agreement in order to set forth their relative rights under the LMFA Note, Sponsor Note and Maxim Note, including the payments of amounts by the Company upon an event of default under such notes. Pursuant to the Intercreditor Agreement, each Creditor agrees and acknowledges that LMFA and Sponsor have been granted liens on the collateral as set forth in the applicable LMFA Security Agreement and Sponsor Security Agreement. Each Creditor also agrees and acknowledges that Maxim's indebtedness under the Maxim Promissory Note is unsecured.

Equity Line Financing Agreements

On August 23, 2022, SeaStar Medical and LMAO entered into the Purchase Agreement with Tumim. Pursuant to the Purchase Agreement and subject to the satisfaction of the conditions set forth in the Purchase Agreement, the Company has the right, after the Closing Date from time to time, to sell to Tumim up to \$100.0 million worth of shares of Common Stock subject to certain limitations and conditions set forth in the Purchase Agreement. SeaStar Medical, LMAO and Tumim also simultaneously entered into a registration rights agreement, pursuant to which, within 30 days following the Closing Date, the Company is obligated to file the Initial Registration Statement (as defined in the Amended and Restated Registration Rights Agreement) with the SEC under the Securities Act to register the resale by Tumim of the Commitment Shares and the shares of Common Stock that may be sold to it by the Company under the Purchase Agreement. The Purchase Agreement provides for a Commitment Fee in the amount of \$2.5 million payable to Tumim, and such Commitment Fee shall be paid in the form of the Commitment Shares.

On November 9, 2022, the Company, SeaStar, and Tumim entered into Amendment No. 1 to the Common Stock Purchase Agreement (the "Purchase Agreement Amendment"), pursuant to which, among other things, the parties agreed to the following with respect to the Company's obligation to pay Tumim a \$2.5 million commitment fee, as follows: (a) the Company would have paid Tumim \$1,000,000 of the commitment fee in cash on the Business Combination Closing Date (as defined in the Purchase Agreement), which amount was paid on such day on October 28, 2022; (b) the Company will pay Tumim \$500,000 of the commitment fee in cash no later than the earliest of (i) the 30th calendar day immediately following the Effective Date of the Initial Registration Statement (each as defined in the Registration Rights Agreement), (ii) the 30th calendar day immediately following the Effectiveness Deadline (as defined in the Registration Rights Agreement) of the Initial Registration Statement, and (iii) not later than the second trading date immediately after the date on which written notice of termination is delivered by the Company or Tumim pursuant to the terms of the Purchase Agreement; and (c) the Company will pay Tumim the balance of the commitment fee, or \$1,000,000, in newly

issued shares of common stock, the per share value of which will be determined by reference to the volume weighted average prices of the common stock immediately prior to the filing of the Initial Registration Statement. In addition, the Purchase Agreement Amendment provided certain price and share information and amended certain definitions in the Purchase Agreement to include certain information that was not available at the time when the Purchase Agreement was executed on August 23, 2022, including the definitions of “Base Price,” “Commitment Fee,” “Commitment Shares,” “Common Stock,” “Minimum Price,” “VWAP Purchase Maximum Amount,” and “VWAP Purchase Price”.

Unless the context otherwise requires, all references in this subsection to the “Company,” “we,” “us” or “our” refer to SeaStar Medical Holding Corporation and its consolidated subsidiaries following the Business Combination, other than certain historical information that refers to the business of SeaStar Medical prior to the consummation of the Business Combination.

Overview

We are a medical technology company developing a platform therapy to reduce the consequences of hyperinflammation on vital organs. The inflammatory response is critical to fend off infections and repair damaged tissue in the body. Central to inflammation are the cells within blood and lymph circulatory systems, called white blood cells (primarily neutrophils and monocytes) or also referred to commonly as “pus” cells. In a normal inflammatory response, neutrophils are the first immune cells to arrive at the site and are key to the entire immune response that kills pathogens and promotes tissue repair. These inflammatory cells release chemicals (cytokines) which trigger the immune system to eliminate the foreign pathogens or damaged tissue, enhancing the immune response. If the inflammatory response becomes excessive and dysregulated (referred as proinflammatory), normal neutrophils die off (“apoptosis”) may be delayed, allowing the inflammatory cells to continue to produce cytokines further enhancing the dysregulated immune response, altering feedback mechanisms that regulate the immune system. This results in damaging hyperinflammation spreading uncontrollably to other parts of the body, often leading to acute chronic solid organ dysfunction or failure, including heart, lung, kidney and liver diseases. This hyperinflammatory response is also known as the “cytokine storm,” referring to the body’s reaction to the category of small-secreted proteins released by hyperinflammatory cells that affect communication between cells. The cytokine storm, when left uncontrolled, can lead to organ damage and even death.

Based on clinical and preclinical studies conducted over the last 15 years, the Company’s technology has shown promise in modulating the degree of activity of proinflammatory cells to help reduce tissue damage and speed the repair and recovery of organ function. We believe this approach, if successful, will transform the ability of clinicians to treat acute organ failure in the intensive care unit (“ICU”) and to improve organ function in hospitalized patients. Currently few therapeutics are available to clinicians to address the issue of hyperinflammation and for those options that do exist, such options are either immunosuppressive or only target one cytokine. We believe our technology has the potential to overcome limitations in existing anti-inflammatory treatments and address the challenge in selectively targeting activated neutrophils and monocytes. We are leveraging our patent protected and scalable technology platform to develop proprietary therapies that are organ agnostic and target both acute and chronic indications.

We are using our proprietary Selective Cytopheretic Device (“SCD”) technology platform initially to clinically validate several acute organ injury indications, including kidneys and lungs. Our investigational SCD is an extracorporeal synthetic membrane device designed to be easily integrated into existing continuous renal replacement therapy (“CRRT”) systems that are commonly installed in hospitals, including in ICUs throughout the United States. Once approved and commercialized, our SCD would initially target acute kidney injury in both the pediatric CRRT population as well as adults on CRRT. In addition, we are developing our SCD to address inflammation associated with chronic dialysis and chronic heart failure.

Preclinically, our SCD was tested in various animal models, which include acute myocardial infarction, intracranial hemorrhage, chronic heart failure, sepsis and acute respiratory distress syndrome. The animal models showed the inflammatory response and how it was modified by our SCD. We will continue to explore the application of our SCD technology across a broad range of markets and indications where proinflammatory activated neutrophils and monocytes may contribute to disease progression or severity in both acute and chronic indications.

There is substantial clinical demand for safe and effective control of hyperinflammation. Existing treatment options in hyperinflammation include the use of corticosteroids (immunosuppression) and absorbent technologies that either directly absorb cytokines, viruses, bacteria or endotoxins and pharmaceuticals that target cytokines and the immune cascade. None selectively addresses activated neutrophils or monocytes. The use of our SCD to reverse the cytokine storm in pediatric and adult patients with acute kidney injury on CRRT in clinical studies with more than 140 patients reduced mortality rates by 50%, and, of those patients who survive 60 days, none have required dialysis.

The unique mechanism of action (modulation of neutrophils and monocytes) has exhibited consistent clinical outcomes in both adults as well as children. Given the clinical advantages of our SCD, we believe our SCD has the potential to become a preferred course of treatment by clinicians for hyperinflammatory indications based on its potential to improve patient outcomes, increase survival rates, reduce dialysis dependence, and ultimately lower healthcare costs.

As of December 31, 2022, our SCD has been used in approximately 170 adult and pediatric patients on an investigational basis. In June 2022, we submitted a humanitarian device exemption (“HDE”) application with the U.S. Food & Drug Administration (“FDA”) for pediatric patients with acute kidney injury (“AKI”) on CRRT. Based on the current timeline of the HDE application, we expect the FDA to complete its substantive review of our HDE application during the first half of 2023; however, there is no guarantee that the FDA will approve our HDE application. In addition, on February 9, 2023, we received approval from the FDA of our investigational device exemption (“IDE”) application to conduct a pivotal study evaluating the effectiveness of SCD in reducing hyperinflammation in adults with AKI requiring CRRT. The Company plans to begin enrollment in March 2023 and expect to generate interim study results during the fourth quarter of 2023 and topline study results and submission of a Pre-market Approval (“PMA”) application in the second half of 2024. On April 29, 2022, we received a Breakthrough Device Designation (“BDD”) for the use of our SCD in the treatment of immunomodulatory dysregulation in adult patients (18 and older) with AKI, which is expected to accelerate the regulatory approval process for such trial. There is no guarantee that we will complete the AKI adult trial in a timely manner, or at all, nor will there be any assurance that positive data will be generated from such trial. Even if we are able to generate positive results from these trials, the FDA may require us to conduct additional trials to support the study, or disagree with the design of the trials and request changes or improvements to such design.

We believe that our novel therapeutic device is readily applicable for use in other indications, which will require additional clinical studies and FDA approval. As we continue our work to expand indications, we believe we will have the ability to take advantage of economies of scale to reduce costs of production. We believe our scalable manufacturing process demonstrates a significant competitive advantage in the hyperinflammatory market.

We have pursued patent protection for our SCD technology as well as other technologies, which consists of 40 patents and 10 pending patent applications in the U.S. and certain foreign jurisdictions. Of these patents and patent applications 33 are owned exclusively by us, and 17 are co-owned with the University of Michigan (“UOM”). UOM has granted to us an exclusive worldwide, royalty bearing license to UOM’s interest in all of the co-owned patents and applications. This license permits us to commercialize our SCD in all human therapeutic indications. For more information, see “—*Intellectual Property*” below.

We intend to continue to shape our commercial and distribution strategy by expanding indications and pursue collaborations with partners in markets where such partners provide strategic capabilities in launching our product candidates and enabling access to specific patient populations. On December 27, 2022, we entered into a license and distribution agreement (the “Distribution Agreement”) with Nuwellis, Inc. (“Nuwellis”), pursuant to which we appointed Nuwellis as our exclusive distributor for the sale and distribution of SCD product throughout the United States once we receive from the FDA a written authorization to market such product for pediatric use pursuant to our HDE application. Pursuant to the Distribution Agreement, we received an upfront payment, and will receive milestone payments upon achievement of certain milestones and royalties on gross sales of the SCD product. The Distribution Agreement has an initial term commencing on December 27, 2022 and shall end on the

three (3) year anniversary from the date that is the earlier of (a) ninety (90) days after we receive FDA authorization to market such SCD product for pediatric use and (b) the first commercial sale of the SCD product. The term of the Distribution Agreement may be automatically extended for additional terms of one (1) year and for a total of two (2) extensions. Each party has the right to terminate the Distribution Agreement for material breach if such breach is not cured within ninety (90) days after written notice and we have additional rights to terminate the Distribution Agreement in accordance with other terms set forth in the Distribution Agreement.

Our senior management team and Board have an average of more than 19 years of experience in the healthcare industry, including expertise in medical affairs, commercialization and distribution in our initial therapeutic priority areas. We are also supported by a group of well-respected scientific advisors who are experts in the development of our technology and products.

Corporate History

SeaStar Medical, Inc. was initially incorporated under the name Nephron, Inc. on June 6, 2007. On August 3, 2007, we amended our corporate name to CytoPherx, Inc. On June 19, 2019, we amended our corporate name to SeaStar Medical, Inc.

On October 28, 2022, LMF Acquisition Opportunities, Inc. (“LMAO”), a Delaware corporation, consummated a series of transactions that resulted in the combination of LMF Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of LMAO (“Merger Sub”), and SeaStar Medical, Inc., a Delaware corporation, pursuant to an Agreement and Plan of Merger, dated April 21, 2022 (the “Merger Agreement”), by and among LMAO, Merger Sub and SeaStar Medical, Inc. (the “Closing”). Pursuant to the terms of the Merger Agreement, a business combination between LMAO and SeaStar Medical, Inc. was effected through the merger of Merger Sub with and into SeaStar Medical, Inc., with SeaStar Medical, Inc. surviving the merger as a wholly-owned subsidiary of LMAO (the “Business Combination”). Following the consummation of the Business Combination, LMAO was renamed “SeaStar Medical Holding Corporation” (the “Company”).

Our Approach

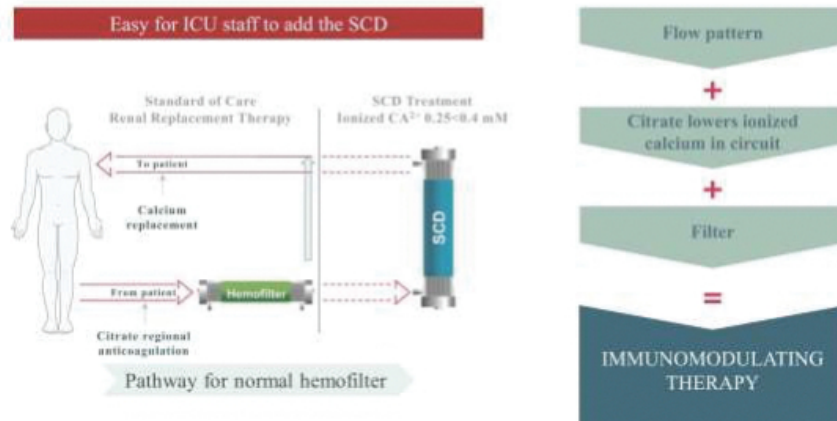
The acute inflammatory response occurs in a well-defined coordinated sequential response. Neutrophils are the first responders followed by monocytes. The monocytes, as they egress into tissue also follow another sequence of differentiation into tissue macrophages. The first are proinflammatory macrophages, followed by patrolling, reparative macrophages.

This complex, tightly coordinated process is critical for host defense and tissue repair but needs to be tightly regulated by the body’s inflammatory signaling and cellular apoptosis. If not, further tissue destruction may occur when uncontrolled hyperinflammation leads to degradative reparative processes with worsening tissue or organ function. If this excessive systemic inflammation is severe and prolonged, multi-organ failure, including cardiovascular, respiratory, kidney, liver and neurologic dysfunction may occur, resulting in poor clinical outcomes. Prior therapeutic approaches to block soluble mediator targets, such as cytokines or free radicals have not proven successful. We believe that our SCD approach, which targets activated cells, is a potentially transformative, if not disruptive, therapeutic approach to a range of acute and chronic inflammatory disorders.

Our SCD is an extracorporeal synthetic membrane device designed to bind activated leukocytes (neutrophils and monocytes) as part of a CRRT extracorporeal circuit. When added to the circuit and release of a standard CRRT system (using regional citrate anticoagulation) immediately following a standard hemofilter cartridge, blood within the standard hemofilter cartridge enters our SCD and disperses among the fibers of the device. Upon exiting our SCD under a low calcium environment, the blood is returned to the patient’s body.



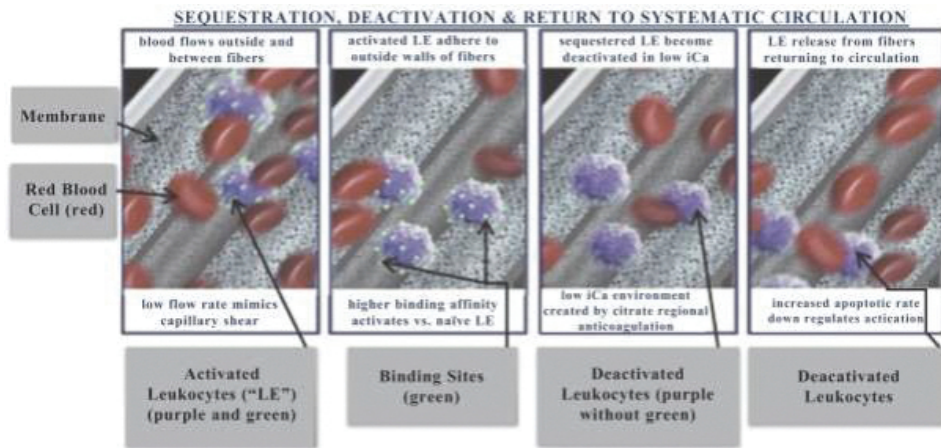
SeaStar Medical's Selective Cytopheretic Device (SCD) Consists of Three Key Components and Leverages Current Installed Base of CRRT Systems



Our SCD delivers its therapeutic benefit by attenuating the excessive inflammatory response of activated neutrophils and monocytes. Uninterrupted, the excessive inflammatory response progresses to multi-organ failure (“MOF”), with documented increases in both morbidity and mortality in critically ill patients. Our initial lead product is focused on critically-ill AKI pediatric and adult patients on CRRT. Our SCD leverages the existing footprint of CRRT pump systems in ICUs today, as well as the growing use and adoption of regional citrate as an anticoagulant. Citrate is used to bind the free ionized calcium within the extracorporeal circuit which is needed to impact the neutrophils and monocytes. A recent study in the Journal of the American Medical Association in 2020 demonstrated that while the use of regional citrate anticoagulation has the same mortality profile as heparin, regional citrate anticoagulation now showed to be more effective in preserving filter life as used to create the low calcium environment for our SCD, which impacts the white cells interaction with the SCD membrane leading to the reduction in inflammation.

Mechanism of Action

The mechanism of action of our SCD consists of two steps: 1) binding activated neutrophils and monocytes on our SCD biomimetic membrane and 2) deactivating the activated neutrophils by maintaining a specified ionized calcium level within our SCD. Our SCD utilizes clinically approved regional citrate anticoagulation protocols to lower the ionized calcium level, which prevents blood clotting within the circuit and immuno-modulates the activated neutrophils, which are then returned to the patient. Calcium is then infused into the blood returning to the patient from the SCD, thereby maintaining normal calcium levels in the patient throughout the process.



Our SCD and Neutrophils

Calcium plays a critical role in many biological processes. In the case of neutrophils, calcium can have a profound effect on their activity. It has been shown that lowering calcium levels in neutrophils can lead to higher levels of neutrophil apoptosis (deactivation). Our SCD is designed to selectively bind the most highly activated neutrophils (associated with hyperinflammation) and in a low iCa environment, the activated neutrophils are deactivated, which has the effect of reducing hyperinflammation. When neutrophils are in homeostasis, the normal half-life is six to eight hours, but in a hyperinflammatory state, neutrophil apoptosis is delayed leading to increased numbers of activated neutrophils in circulation. Through clinical and preclinical studies, our SCD has been shown to selectively sequester and deactivate the most highly activated neutrophils, allowing the body to restore neutrophil homeostasis.

Our SCD and Monocytes

We believe the role of circulating monocytes in systemic inflammation and organ specific injury is becoming more appreciated by healthcare professionals. Calcium also has an important influence on monocyte activity. A high percentage of the circulating monocyte subtypes (M1 proinflammatory versus M2 patrolling, reparative) has been shown to influence the degree of acute organ injury and chronic organ dysfunction. In vitro, our SCD membranes in a low iCa perfusion circuit binds the proinflammatory monocytes within the blood more selectively. This selective binding has been shown in clinical trials and results in less proinflammatory circulating monocytes in inflammatory disorders. It is important to note that our SCD does not sequester 100% of these monocytes as they are important to maintaining immune homeostasis.

Microscopy of our SCD after being used for patient treatment demonstrated the binding of leukocytes on the outer surface of the membranes of the cartridge along the blood flow path within the extracorporeal circuit. The bound leukocytes were dominated by neutrophils and monocytes (see Figure 1 below).

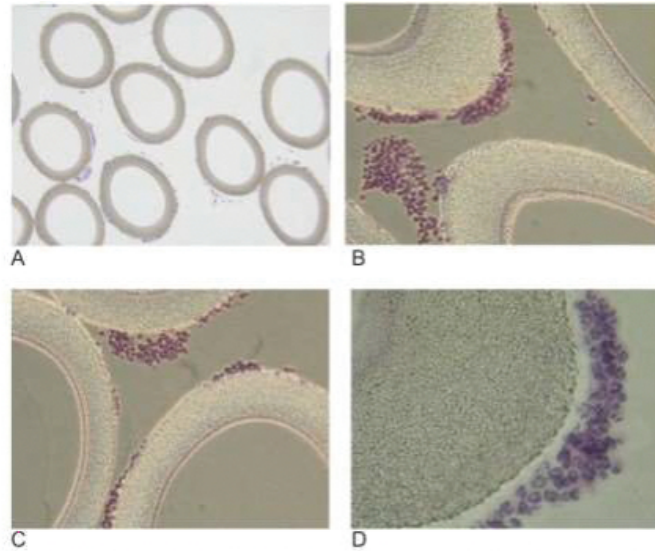
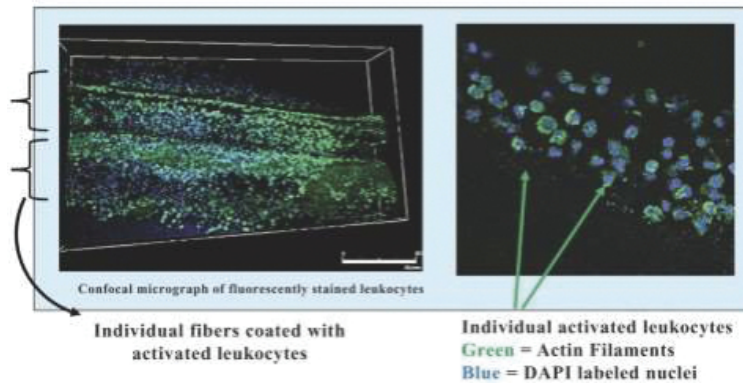


Figure 1: Activated Leukocytes adherence to the membrane. Light micrograph stained with Hematoxylin and Eosin (H&E). Panel A: Low-power micrograph showing adherent cells around each fiber (160x). Panel B and C: Higher-power micrographs showing the clustering of bound leukocytes (400x). Panel D: High-power micrograph displaying predominance of neutrophils and monocytes in the adherent cell clusters (1600x).

The ability of neutrophils and monocytes to bind to the outer walls of the hollow fiber membranes (figure below) rather than the inner walls, which is the conventional blood flow path, is due to the difference in shear forces of blood flow. The sheer force of our SCD is similar to capillary flow providing a microenvironment for the neutrophils and monocytes, enabling the cells to catch and release.

Activated Leukocytes Adhere To Surface of Fibers In SCD



Our Market Opportunity

We are a therapeutic medical device company with clinical data collected and available to support a HDE submission to the FDA to request the use of our SCD in pediatric patients with AKI and additional clinical data intended to support the initiation of a pivotal PMA study in adult AKI. In the long term, we intend to pursue the application of our SCD technology to additional indications, including, but not limited to, acute respiratory distress syndrome, chronic dialysis, cardiorenal syndrome and hepatorenal syndrome.

Our Initial Market Opportunity in Acute Kidney Injury

We believe AKI has increasingly received the attention of healthcare professionals and academic publications that reveal the devastating clinical and financial impact of what is most-often a multi-organ syndrome. A 2017 study by Samuel A. Silver and Glenn M Chertow titled “The Economic Consequences of Acute Kidney Injury” stated hospital costs associated with AKI in the U.S. are between \$5.4 billion and \$20 billion per year.

The kidneys are a silent killer within medical triage. They do not present clear symptoms or tell the body they are suffering like other major organs such as the heart or lungs. For example, one does not feel pain with a “kidney attack” and symptoms are delayed until irreversible damage may have already occurred. Kidneys also refrain from revealing the impact to the rest of body and organs (and vice-versa) and often are not considered systemically for co-treatment.

Globally consistent criteria for diagnosing AKI has recently emerged with Risk, Injury, Failure, Loss of kidney function, and End-stage kidney disease (“RIFLE”), an international consensus classification for AKI staging and diagnosing guidelines introduced in 2004, the Acute Kidney Injury Network (“AKIN”) staging system in 2007, and finally the Kidney Disease: Improving Global Outcomes, AKI Staging and Diagnosing Guidelines published in 2012. These sources have helped clinicians to both improve recognition, staging, diagnosing and subsequent documentation of less obvious cases of AKI secondary diagnoses. While our initial market is focused on AKI patients on CRRT, future indications will likely benefit from improved characterization and diagnosis of patients.

As a result, demand for ICU renal replacement therapy is growing. CRRT is the newest of AKI dialysis modality in the market, first becoming available in 1997, and according to Fortune Business Insights, it is

estimated that it has grown to a \$986 million global market (\$354 million market in the U.S.) as of 2019. The two largest operators in the CRRT market by revenue are Fresenius Medical Care Holdings, Inc. and Baxter International, which represent over 80% of the market today in the U.S.

Since 2010, a significant amount of data has been published to quantify the clinical and financial impact of AKI, resulting in a broadening AKI treatment “boom” beyond dialysis to areas of diagnostics, complimentary therapies, and pharmacologics. As hospital administrators and government officials’ understanding of the impact and burden of AKI increases, we believe that attention will only continue to grow. According to Hobson in his article titled “Cost and Mortality Associated with Postoperative Acute Kidney Injury,” a 2015 study of 50,314 patients (over 11 years) found that upon greater scrutiny, AKI was found in 39% of post-surgical patients, and 19% of patients had stage 2 or 3 AKI with an average incremental cost of \$29,800 per patient. Additionally, with historical mortality rates approximately 50%, treating AKI is increasingly of interest to clinicians, hospitals, and product manufacturers alike.

The AKI patient population is growing on average 6.9% per year according to the Healthcare Cost and Utilization Project commissioned by the Agency for Healthcare Research and Quality, a U.S. federal agency. According to Massicotte and Azamiouch in their 2015 work titled “Acute Kidney Injury in the Intensive Care Unit: Risk Factors and Outcomes of Physician Recognition Compared with KDIGO Classification,” around 80% of moderate or severe cases of AKI are not diagnosed and documented, suggesting the U.S. AKI patient population is higher than the estimated 6 million patients annually. The pediatric population for AKI patients on CRRT is estimated to be less than 8,000 patients per year, which is a substantially small sub-set of the 6 million AKI patient population.

The AKI market needs new and effective solutions, and hospitals continue to search and evaluate new products. For a product to succeed in the AKI space, it must demonstrate and achieve clear and significant clinical benefit to patients, while providing positive financial incentives for hospitals to generate revenue and profitability.

Our Growth Strategies

Key elements of our growth strategy include innovating and expand our applications through clinical trials; differentiation through medical education; business development and out-licensing activities and scaling production with manufacturing partners. We expect to employ several core growth strategies:

- **Execute on the clinical plan through key relationships:** Our initial focus on the treatment of AKI in adults and pediatrics is supported by our long and established relationship with UOM, which licenses to us certain key technology underpinning our novel immunomodulatory therapy, as well as other leading academic hospitals and institutions throughout the U.S. Such relationships enable us to expand and refine the design and execution of our clinical plans with a more targeted outcome and objectives. In addition, we have submitted the HDE for the pediatric AKI indication in June 2022. In February 2023, the Company received FDA IDE approval for the adult AKI indication. This indication has received the FDA BDD for our SCD therapy targeting AKI adult patients, is expected to accelerate and streamline the regulatory approval process prior to the commercial launch of our product candidates.
- **Differentiation through medical education:** We intend to dedicate resources to educate physicians, hospital clinicians and other decision makers in the medical communities on the role of neutrophils and monocytes in both acute and chronic indications, and therapeutic benefit of controlling and modulating excessive inflammatory response. We intend to focus our marketing strategies not only on the therapeutic capabilities of our technology, but also the economic consequences of hyper-inflammation in the current standard of care and treatment infrastructure and highlight the differentiating factors of our SCD product candidates that can provide a cost effective solution.
- **Business development and out-licensing activities:** We intend to explore and pursue business development opportunities with major medical and pharmaceutical companies to establish partnerships,

including outbound licensing arrangements. We believe that our clinical experience and depth, combined with our understanding of the scientific mechanism of our SCD and our regulatory submissions around the world, can drive value for our partners and reduce their market risk. We believe our partners will benefit from insight in other SCD trials around the world as well as data generation that is being conducted by our trials. We believe that our SCD therapy has the potential to apply to multiple indications. By pursuing and establishing business relationships with partners who may have strong capabilities beyond AKI, such as the markets for respiratory distress syndrome, we may be able to expand our solutions to the chronic disease setting.

- **Scaling production with manufacturing partners:** As we progress through our planned clinical trials and anticipate the potential commercial launch of our SCD product candidates if FDA approval is received, we are focused on identifying and securing various suppliers and manufacturing partners to scale production in response to the expected demand for our solutions. We continue to negotiate with suppliers of raw materials, including filters, tubing and other components, to establish redundancies and alternative sources to mitigate interruptions in the supply chain in the future. In addition, we may also explore strategic relationships with partners who can provide sources of raw materials while collaborating with us on the marketing and distribution of our product candidates.

Our Clinical Stage Product Candidates

The following disclosure summarizes our SCD product candidates in clinical stages and other clinical studies. All trials and studies below are conducted under IDEs approved by the FDA.

We submitted an HDE application for SCD for the treatment of pediatric patients with acute kidney injury undergoing CRRT with the FDA in June 2022. We expect the FDA to complete substantive review of the HDE application by the first half of 2023.

Clinical Progression

SCD 006 Pivotal Study (“SCD 006”) Design

We are in the process of initiating a pivotal clinical trial of the SCD for the treatment of AKI in adults under the recent grant of Breakthrough Device Designation by the FDA. This trial (“SCD 006”) is a 200 patient, pivotal, prospective, multi-center, open label, randomized, two-arm comparative study conducted in the United States. The SCD 006 trial is designed to assess a composite endpoint of both mortality and dialysis dependency at Day 60. Our target population will be adults with AKI in ICUs in hospital settings and has an estimated 60-day mortality rate of 40% to 50% and for those who survive, the probability of requiring dialysis at Day 60 will be 25%.

Current Trial Status

We submitted the SCD 006 IDE Protocol to the FDA on January 6, 2023. We anticipate the trial to begin enrollment late in the first quarter of 2023 and is anticipated to complete enrollment in 15 to 18 months. On April 29, 2022, we received a breakthrough device designation for the use of our SCD in the treatment of immunomodulatory dysregulation in adult patients (18 and older) with AKI, which should accelerate the regulatory review and approval process for such trial. We currently anticipate generating interim results from this trial in late 2023 and topline study results and submission of a PMA application in the second half of 2024.

Additional clinical studies under IDEs include cardiorenal syndrome in congested heart failure, myocardial stunning in end-stage renal disease, and hepatorenal syndrome. We are conducting exploratory clinical research at the University of Michigan to define the patient population for potential treatment with SCD product candidates, and any future studies will be based upon initial clinical data collected in these studies.

Clinical Studies

With the exception of our SCD 003, all of our clinical studies to date have not had a randomized control arm. AKI Safety, Mortality and Device Integrity Study (CHINA) (ASAIO Journal 57:426-432,2011) (January 2009 to April 2010)

A study of the SCD was conducted by SeaStar Medical in collaboration with Huashan Hospital in Shanghai, China titled: *An Exploratory Clinical Study to Assess Safety and Efficacy of the Double Hemofiltration Cartridge Device (DCD) in Patients with Acute Renal Failure*. This study was a prospective, non-randomized, interventional study designed to evaluate the effect of treatment with the SCD on in-hospital mortality in the acute renal failure population being treated with CRRT with regional citrate anticoagulation ("RCA"). Up to seven days of therapy were allowed. All subjects received standard intensive care treatment for patients undergoing CRRT in addition to the SCD treatment.

In this nine-patient study, the SCD treatment was demonstrated to reduce the mortality rates of ICU patients with AKI in hospitals compared with case-matched controls from a national dataset, based on deaths resulting from all causes in the hospital setting. The study showed a 22% mortality rates in the SCD treatment arm versus a mortality rate of 78% in the case-matched control group. This improved survival rate was demonstrated to be independent of age and Sequential Organ Failure Assessment ("SOFA") Score, which is a scoring system used to predict ICU mortality based on lab results and clinical data. The results from this study indicated that treatment with SCD was well tolerated, without significant effects on hematological parameters, including white blood cell and platelet counts, and with an adverse event profile that was expected for a seriously ill population in the ICU with AKI.

In the nine subjects analyzed on SCD treatment, no neutropenic events were reported, and no serious adverse events ("SAEs") were reported. Adverse events noted included hypercalcemia (8), hypocalcemia (1), hypophosphatemia (2), hyponatremia (1) and thrombocytopenia (1).

A multi-center pilot study to assess the safety and efficacy of a SCD in Patients with Acute Renal Failure (ARF 002) (Seminars in Dialysis Vol 26, Issue 5 :616-623,2013) (May 2010 to January 2011)

This pilot study of the SCD device (ARF-002 Clinical Trial) was sponsored by SeaStar Medical with the support of a third-party contract research organization. The study was designed to evaluate the safety and efficacy of the SCD treatment after up to seven consecutive 24-hour SCD treatments. Outcomes were compared to historical data on in-hospital mortality based on all causes of deaths at day 28 and day 60 in the AKI population being treated with CRRT with RCA.

The study enrolled 35 adult subjects. The mean age was 56.3 and 71.4% of the subjects were Caucasian, 22.9% were Black and 5.7% were Hispanic. The average SOFA score was 11.3. The mortality rate from any cause at Day 60 was 31.4% with SCD versus 50% with the historical standard of care based on literature. Renal recovery, defined as dialysis independence, was observed in all of the surviving subjects at Day 60. Based on the significantly lower mortality rate, the results of this pilot study indicate a potential for a substantial improvement in patient outcomes over historical standard of care therapy.

A total of 199 adverse events ("AEs") were observed in 33 of the 35 subjects. Of these 199 AEs, 12 were deemed to be possibly related and one was deemed related (as determined by the investigator) to the study therapy. These included a worsening coagulation defect, hypotension, neutropenia, disseminated intravascular coagulation ("DIC"), thrombocytopenia, recurrent renal failure, hypophosphatemia, hypercalcemia, anemia and cardiogenic shock. Of the 199 total adverse events, 34.7% were deemed to be mild and were experienced by 60% of the subjects, 51.8% were moderate and experienced by 71% of the subjects and 13.6% were severe, experienced by 54% of the subjects. The AEs observed were those that were expected for a critically ill patient population with acute renal failure and/or in an ICU setting. Twenty-eight SAEs were observed in 23 subjects (which included death). There were no unanticipated adverse device effects. Of these 28 SAEs, two were deemed

to be possibly related to treatment (i.e., DIC and cardiogenic shock) and were severe in intensity. Of the SAEs, seven of the 28, or 25%, were deemed to be moderate and were experienced by 20% of the 35 subjects, and 21 (75%) were deemed to be severe, experienced by 51% of the 35 subjects. The following table lists all SAEs encountered during the study by category and the assessment of each SAE:

List of Serious Adverse Events	Study Related			Definitely Not
	Definitely	Probably	Possibly	
Blood and lymphatic system disorders			1	2
Cardiac Disorders			1	1
Gastrointestinal Disorders				1
General disorders and administration site conditions				
Infections and infestations				5
Injury, poisoning and procedural complications				3
Metabolism and nutrition disorders				2
Musculoskeletal and connective tissue disorders				
Nervous system disorders				1
Other				3
Renal and Urinary Disorders				
Respiratory, thoracic and mediastinal disorders				8
Vascular Disorders				
Total	0	0	2	26

This was a controlled, randomized and multicenter clinical trial that was initiated in September 2011 and terminated in September 2013 under an FDA approved IDE. For this trial, the control group received standard CRRT with RCA and the SCD-treated group received up to seven days of SCD therapy. The study was sponsored by SeaStar Medical with the support of a third-party contract research organization.

The primary objective of the study was to determine if the SCD, when used in conjunction with CRRT, results in clinical and statistical improvement in mortality rate based on all causes through Day 60. Secondary objectives included an assessment of renal replacement therapy dependency at Day 60, mortality at Day 28, the number of ventilator free days at Day 28, and the mortality of the subset of patients with severe sepsis at Day 60.

A total of 134 patients were enrolled in 21 United States medical centers. Patients receiving care in the ICU of each participating hospital were randomized to intensive care treatment for patients undergoing CRRT or CRRT + SCD. Each participating clinical site used their established RCA protocol for the CRRT + SCD circuits (treatment group) and for the CRRT only (control group). The recommended calcium (iCa) level (measured post SCD) in the CRRT and SCD blood circuit was specified to be between 0.25 and 0.4 mmol/L. Inclusion and exclusion criteria were similar to the previous IDE multicenter pilot clinical study except for an age range of 8-80 years and body weight of over 135 kilograms. Once the patient met all eligibility criteria, including being on CRRT for a minimum of four hours, but no longer than 24 hours, and had signed an informed consent, the subject was randomized in a 1:1 allocation utilizing a random permuted block design into either the control or treatment group, stratified by study center and the presence of severe sepsis. An overall two-sided 0.05 level of significance at 80% power was used to calculate a sample size of 344 patients, assuming a mortality rate of 50% for the control group and 35% for the treatment group. Adaptive design and interim analysis were planned at the mid-point of enrollment (i.e., 172 patients). Several exploratory biomarkers were also compared between the control and treatment groups, including urine output, serum levels of elastase, cytokines, and total absolute white blood cell, neutrophil and platelet counts throughout treatment.

During the second quarter of the enrollment period, a national calcium shortage occurred in the United States due to certain FDA-related quality manufacturing issues at major U.S. suppliers. Due to the reliance of the SCD on a narrow intra-circuit iCa range for functional efficacy and the concern that patients randomized to the

SCD were not receiving effective therapy due to insufficient iCa levels, the interim analysis was performed early after enrollment of 134 patients. Enrollment was paused on May 24, 2013 to assess the clinical impact of the calcium shortage on study endpoints. The shortage of calcium infusion solutions resulted in a tendency to minimize citrate infusion rates. Accordingly, the iCa levels within the blood circuit tended to be above the recommended range of 0.25 to 0.40 mmol/L. No significant differences were noted between the control and treatment groups in terms of baseline characteristics. Of the 134 patients in the analysis, 69 received CRRT alone and 65 received SCD therapy. No statistically significant difference was found between the treated and control patients with a 60-day mortality of 39% (27/69) and 36% (21/59), respectively. No statistically significant difference was found between the SAEs of the control and treatment groups. Furthermore, none of the SAEs were considered 'definitely' device related per the principal investigator. The amount of time patients in both the control and treatment group were maintained in the recommended iCa range (0.23 - 0.40 mmol/L), as specified in the study protocol, was substantially lower than expected. Of the 134 patients enrolled in the SCD-003 protocol at the time of the interim analysis, 19 SCD patients (CRRT + SCD) and 31 control patients (CRRT alone) were maintained in the protocol's recommended range for greater or equal to 90% of the therapy time. The study was subsequently terminated.

No statistically significant difference was found between the SAEs of the control and treatment groups. The study reported 71 SAEs in the control group (40 of the 63 patients) and 80 SAEs in the SCD treatment group (45 of the 69 patients). The most frequent categories of SAEs were infections and infestations as well as cardiac, respiratory, thoracic and mediastinal disorders. Furthermore, none of the SAEs were considered "definitely" related to the SCD device per the principal investigator. Overall adverse events did not differ between the treatment and control groups in the intent to treat analysis. The following table lists all SAEs encountered during the study by category and the assessment of each SAE:

List of Serious Adverse Events	Study Related			Definitely Not
	Definitely	Probably	Possibly	
Blood and lymphatic system disorders			9	
Cardiac Disorders			15	
Gastrointestinal Disorders			5	
General disorders and administration site conditions			4	
Infections and infestations			14	
Injury, poisoning and procedural complications			1	
Metabolism and nutrition disorders			2	
Musculoskeletal and connective tissue disorders			1	
Nervous system disorders			6	
Other			2	
Renal and Urinary Disorders			1	
Respiratory, thoracic and mediastinal disorders			13	
Vascular Disorders			7	
Total	0	0	80	0

When the iCa treated and control subgroups were compared for a composite index of 60-day mortality and dialysis dependency, the percentage of the SCD treated subjects was 16% versus 58% in the control subjects. The incidence of serious adverse events did not differ between the treated and control groups.

A new IDE was FDA approved on February 12, 2014 for a pivotal trial of 122 patients in up to 30 sites utilizing this primary composite endpoint. If this trial met safety and effectiveness criteria, the FDA stated that a premarket approval and clearance was supportable. This clinical trial was not initiated in 2014 due to continuing injectable calcium shortages, and the company limited the clinical focus to the pediatric indications, where less calcium was needed due to size of study (pediatric study had 15% of the patients compared to pivotal trial of 122 patients).

A multi-center, prospective pilot study was undertaken to assess the safety and efficacy of our SCD in pediatric patients with AKI being treated with continuous kidney replacement therapy with RCA. The primary objective of the study was to evaluate the safety of up to seven consecutive 24-hour treatments of our SCD. The secondary objective was to evaluate the efficacy of up to seven consecutive 24-hour SCD treatments on all-cause mortality and dialysis dependency at day 28 and day 60. This study was sponsored by SeaStar Medical with the support of a third-party contract research organization.

Sixteen patients (eight male and eight female) were enrolled in the study at four United States pediatric medical centers, which ran from December 2016 through February 2020. The most common diagnosis leading to ICU admission was septic shock followed by, in diminishing order, pneumonia, rhabdomyolysis, pulmonary hypertension, hemolytic uremic syndrome, encephalomyelitis, disseminated adenoviral infection, cardiac arrest, acute respiratory failure and acute liver failure.

Twelve of the 16 patients survived (75%) to hospital discharge (versus historical control of 50%) and none of the 12 patients required dialysis at 60 days (versus historical control of 15% to 20%). There were 14 SAEs that occurred in fourteen patients in the study. None of the SAEs were device related. There were 47 adverse events that occurred in 14 subjects in the study. The following table lists all SAEs encountered during the study by category and the assessment of each SAE:

List of Serious Adverse Events	Study Related			Definitely Not
	Definitely	Probably	Possibly	
Cardiac Disorders				4
Gastrointestinal Disorders				1
Infections and infestations				1
Metabolism and nutrition disorders				1
Nervous system disorders				1
Renal and Urinary Disorders				1
Respiratory, thoracic and mediastinal disorders				2
Surgical and medical procedures				1
Vascular Disorders				2
Total	0	0	0	14

A Multi-Center Pilot Study to Assess the Safety and Efficacy of a Selective Cytopheretic Device in Patients Developing AKI or Acute Respiratory Distress Syndrome Associated with COVID-19

(September 2020 to July 2021). Publication: *Critical Care Exploration*

Twenty-two subjects were enrolled in this pilot study at two leading medical centers. All enrolled patients were treated with corticosteroids, either dexamethasone or hydrocortisone. The majority of enrolled patients also received remdesivir. Sixteen patients were included in the contemporaneous control. Sixteen of the intent to treat (“ITT”) patients received greater than 96 hours of our SCD treatment per protocol (“PP”) since the inclusion criteria required an intent to treat for at least 96 hours. This study was sponsored by SeaStar Medical with the support of a third-party contract research organization.

The mortality rate of the ITT group at 60 days post-initiation of our SCD treatment was 50% and was 31% for the PP group. The control group had a mortality rate of 81%, which was higher than both the ITT and PP treated groups. The patients in the control group on Extracorporeal Membrane Oxygenation treatment did not survive, while 44% survived in the ITT group. For dialysis dependency at 60 days, 60% of the survivors had not recovered renal function in the ITT group; however, a post-hoc follow up at 90 days demonstrated that only 30% of the survivors still required dialytic support.

Fifty SAEs occurred in 18 subjects. Of note, 22 nosocomial and opportunistic infections were reported in 12 subjects during the entire 60 day follow-up period. Sixteen of the 22 infections occurred after SCD treatment.

None of these SAEs were device-related as determined by the site clinical investigators and the independent safety review committee. No RCA-related adverse events were observed with greater than 90% of measured circuit ionized calcium (iCa) values less than 0.4 mmol/L. Systemic iCa values were within the normal ranges required by the clinical protocol. Two circuit clotting events were reported; clotting was initiated in the hemodialysis catheter in one instance and in the hemofilter in the other. No SCD clotting episodes were reported. No episodes of thrombocytopenia, neutropenia, or leukopenia were observed. The following table lists all SAEs encountered during the study by category and the assessment of each SAE:

<u>List of Serious Adverse Events</u>	<u>Study Related</u>			<u>Definitely Not</u>
	<u>Definitely</u>	<u>Probably</u>	<u>Possibly</u>	
Blood and lymphatic system disorders				1
Cardiac Disorders				9
Gastrointestinal Disorders				1
General disorders and administration site conditions				3
Hepatobiliary disorders				2
Infections and infestations				22
Injury, poisoning and procedural complications				
Metabolism and nutrition disorders				1
Musculoskeletal and connective tissue disorders				
Nervous system disorders				
Other				
Renal and Urinary Disorders				
Respiratory, thoracic and mediastinal disorders				8
Vascular Disorders				3
Total	0	0	0	50

SeaStar Medical and the principal investigators of SCD-005 COVID-19 clinical study have recently been accepted and were recently published in Critical Care Exploration; a peer reviewed academic journal.

Chronic Applications

Pilot Feasibility Trial of SCD Therapy in ESRD Patients (May 2012 to April 2013)

Our SCD therapy was evaluated in a more stable end stage renal disease (“ESRD”) patient cohort on chronic hemodialysis. Fifteen ESRD patients were enrolled to assess the safety and early efficacy signals on inflammatory biomarkers. Our SCD therapy promoted a monocyte shift from predominant proinflammatory to reparative phenotype.

Very few adverse events or SAEs were observed during SCD treatment and RCA. SCD treatment and RCA was associated with adverse events in four of the 13 patients. The adverse events were comprised of one episode each of fever, chills, headache, itching, coughing, dizziness, muscle cramps, nausea, vomiting, and chest pain. These adverse events are frequently experienced by patients undergoing standard hemodialysis treatment. No adverse events were definitively related to SCD therapy. SCD treatment and heparin anticoagulation, however, resulted in symptomatic and biochemical events. The initial two patients (Pt1 and Pt2) of this cohort, treated with SCD and heparin anticoagulation, demonstrated a large rise in C-reactive protein levels from 22 to 38 (Pt1) and 51–132 (Pt2) mg/L after four hours of SCD treatment. C-reactive protein levels continued to be elevated at 93 (Pt1) and 147 (Pt2) mg/L on day 1 post-SCD treatment. Because of these events, no further patients were recruited for SCD treatment and heparin anticoagulation. The following table lists all SAEs encountered during the study by category and the assessment of each SAE:

<u>List of Serious Adverse Events</u>	<u>Study Related</u>			<u>Definitely Not</u>
	<u>Definitely</u>	<u>Probably</u>	<u>Possibly</u>	
General disorders and administration site conditions			1	2
Total	0	0	1	2

Additional Indications with Preclinical Data

The initial research and translation of our SCD into clinical studies was targeted to treat the acute dysregulated systemic inflammation associated with AKI and MOF. Due to the broad applications of immunomodulatory therapy, preclinical models were developed to evaluate the efficacy of our SCD to ameliorate single organ tissue injury.

A Multi-Center, Randomized, Controlled, Pivotal Study to Assess the Safety and Efficacy of A Selective Cytopheretic Device in Patients with Acute Kidney Injury (SCD-003 – IDEG090189) (September 2011 to May 2013)

Clinical Studies

Additional Indications with Preclinical Data

The initial research and translation of our SCD into clinical studies was targeted to treat the acute dysregulated systemic inflammation associated with AKI and Multi Organ Failure. Due to the broad applications of immunomodulatory therapy, preclinical models were developed to evaluate the efficacy of our SCD to ameliorate single organ tissue injury.

Chronic Inflammatory Disorders

Chronic Heart Failure

Prior preclinical and clinical evaluations of our SCD therapy have focused on acute inflammatory conditions related to organ dysfunction and failure. Extensions of the immunomodulatory approach to improve organ dysfunction related to chronic inflammation would be transformative. Over the past decade, a number of novel pharmacologic approaches have failed to prove clinical efficacy, accentuating the need to discover new, safe approaches to treat chronic heart failure (“CHF”). In this regard, our SCD was evaluated in a preclinical model of CHF to dampen the cardio-depressant effects of the chronic proinflammatory state of CHF. Chronic heart failure and acute decompensated heart failure have been increasingly recognized as associated with chronic systemic inflammation. Monocytes have been identified as critical sources of systemic inflammation in CHF and may cause a decrease in cardiac myocyte contractility.

Cardiorenal Syndrome

Cardiorenal syndrome (“CRS”) is a clinical disorder in which therapy to relieve the congestive symptoms of chronic heart failure is limited by a decline in renal function. Up to one-third of patients with acute decompensated chronic heart failure present with this disorder; this condition is increasing in incidence with an estimated one million hospital admissions annually in the United States. Once hospitalized, these patients are treated with high dose intravenous diuretics to relieve the persistent congestion. The use of diuretics, however, frequently results in worsening renal function, progression of heart failure and death. Immune dysregulation plays a key role in cardiorenal syndrome.

Myocardial Ischemia in End-Stage Renal Disease Patients on Chronic Hemodialysis

A major cause of death in patients on chronic dialysis is due to cardiovascular disease. Novel interventions need to be identified and tested to ameliorate the high morbidity and mortality of myocardial disease in these patients. Multiple hemodynamic and inflammatory factors contribute to the elevated risk of cardiac disease in the chronic hemodialysis patient populations. Hemodialysis treatment is associated with repetitive ischemic events, or myocardial stunning, and is identified with regional wall motion abnormalities on echocardiograms. This repetitive ischemic stress results in progressive damage resulting in declines in left ventricular ejection fraction and risk for sudden cardiac death. Both acute and chronic inflammation and its cellular immunologic effector, the activated monocyte, are central to the accelerated cardiovascular disease in patients with chronic end-stage renal disease.

Cardiorenal Syndrome Clinical Trial

The CRS clinical trial is a safety and efficacy dose escalation study in 10 patients that was designed to evaluate whether ultrafiltration therapy in CRS, a disease with a dismal prognosis and currently ineffective therapy, with use of the SCD therapy will improve cardiac and renal (production of urine) functions. In the study, an improvement of cardiac function is measured by the rate of ejection fraction, which is the percentage of blood leaving the heart each time it contracts. An improvement of renal function is measured by the serum creatinine and blood urine nitrogen (two common biomarkers to assess renal function). In addition, a variety of other biomarkers will also be measured. The successful completion of this study is expected to demonstrate proof-of-concept for an innovative approach to the treatment of CRS. Initial results will provide important feasibility data for a follow-on study to undertake a controlled randomized clinical trial to evaluate the clinical efficacy of our SCD in CRS patients that have failed ultrafiltration therapy.

Myocardial Ischemia in End-Stage Renal Disease Patients on Chronic Hemodialysis Clinical Trial

Pilot safety and efficacy study in 10 patients to evaluate the reduction in myocardial stunning events in hemodialysis patients. The primary outcome will measure the change in regional wall abnormalities identified on an echocardiogram. Initial results will provide important feasibility data for a follow-on study to undertake a controlled randomized clinical trial to evaluate the clinical efficacy of the SCD in myocardial stunning hemodialysis patients.

Clinical Study

Product Development

Our first generation SCD has been based upon the design of a synthetic hemofilter due to the reduced regulatory risk of an FDA approved polysulfone hollow fiber cartridge. Second generation prototypes will include flat end caps to allow consistent implementation of the therapy, which we expect is more suitable as we scale up our operations.

We are currently evaluating altered configuration for differing clinical indication, so that pricing decisions can be made based upon unmet medical need and product specifications.

Suppliers

We source critical components from vendors that have been approved and qualified through our vendor management program. Fresenius Medical Care North America (“FMCNA”) is the current supplier of the filter used in our pediatric acute kidney injury indication. In March 2022, we entered into a supply agreement (the “Supply Agreement”) with an FMCNA affiliate, Fresenius USA Marketing, Inc. (“FUSA”), to supply certain filters at an agreed amount per case for use in our SCD product in our upcoming clinical trial and any additional clinical trials. We may resell the filters as part of the SCD system in both an Emergency Use Authorization application as well as a future PMA-approved product. The initial term of the Supply Agreement is for three years commencing on March 31, 2022. Either party may terminate the Supply Agreement for uncured material breach or for the insolvency of the other party. In addition, either party may terminate the Supply Agreement if in the reasonable opinion of legal counsel for either party, any future changes in federal or state law or regulations make any portion of the Supply Agreement invalid or illegal and the parties are not able to agree on mutually acceptable addendum to the Supply Agreement. We have agreed to indemnify FUSA against certain third-party claims.

We are in the process of developing a second source for the adult and pediatric filters, which will enable us to better manage any supply disruptions. In addition, we have secured a supplier to provide the tubing set required to assemble the SCD device, although we are able to identify and secure additional sources of supplies for the tubing set as it is readily available in the market.

Distribution

The Supply Agreement contains a provision granting FUSA a first right of refusal for the first three years after regulatory approval of our SCD product candidate to distribute the pediatric and adult products in the United States. If during such period, SeaStar Medical elects to promote and sell the SCD through distributors, SeaStar Medical will be required to provide FUSA with a right of first refusal to be SeaStar Medical's exclusive distributor of the SCD in the United States and its territories, provided that the SCD is not promoted or sold in a manner that is incompatible with any devices manufactured and/or sold by FUSA or its affiliates. On December 27, 2022, we entered into a license and distribution agreement with Nuwellis. We appointed Nuwellis as our exclusive distributor for the sale and distribution of SCD product throughout the United States once we receive written authorization from the FDA to market our SCD for pediatric use pursuant to our HDE application.

Third-Party Reimbursement

We anticipate that coverage and reimbursement by Centers for Medicare and Medicaid Services ("CMS") and private payors will be essential for most patients and health care providers to afford our treatments, particularly in the applications of continuous renal replacement therapy for dialysis access and the treatment of hyperinflammatory conditions, including AKI. Accordingly, future sales of our products will depend substantially, both domestically and abroad, on reimbursement by government authorities, private health coverage insurers and other third-party payors. Our strategy around reimbursement focuses on achieving alignment and agreement from CMS on coding and payment pathways; both are critical to influencing and achieving optimal reimbursement payment from private payor sources. Therefore, we continue to develop a comprehensive reimbursement strategy including CMS, private payors and other key stakeholders to ensure a clear and sustainable reimbursement path for all SCD product opportunities.

We are pursuing a regulatory reimbursement strategy to ensure separate Medicare payment for our SCD at an appropriate price. The regulatory strategy includes engaging CMS political and career staff directly on coverage, payment and coding followed by submission of formal applications in these areas once FDA approval is obtained. It is difficult to predict what CMS will decide with respect to coverage and reimbursement for fundamentally novel products. See "*Risk Factors—Risks Related to the Company's Business Operations—Should the Company's products be approved for commercialization, lack of third-party coverage and reimbursement for the Company's devices could delay or limit their adoption.*"

Intellectual Property

We strive to protect the proprietary technologies that we believe are important to our business. We have and will continue to seek patent protection for our SCD product and related technologies, as well for any future products. In addition to seeking patent protection, we also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We also rely on know-how, confidentiality agreements, license agreements and other agreements to establish and protect our proprietary rights. Our success depends in large part on our ability to protect our proprietary technology, including our SCD technologies, and to operate without infringing the proprietary rights of third parties.

The term of individual patents depends on the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office in granting a patent. A U.S. patent term may be shortened, if a patent is terminally disclaimed by its owner, over another patent.

The Company currently has 18 issued U.S. patents and 5 pending U.S. patent applications. The Company also has 22 issued foreign patents and has 5 pending foreign patent applications. The Company's issued patents begin to expire in 2028, with the last of these patents expiring in 2034, although terminal disclaimers, patent term extension or patent term adjustment can shorten or lengthen the patent term.

The following table summarizes the number of our patents and patent applications as of December 31, 2022:

	Granted Patents		Pending Applications	
	US	Foreign	US	Foreign
SCD Technology (Patent Families 1-5)	16	22	2	5
Other Technology (Patent Families 6-10)	2	0	3	0
Total	18	22	5	5

With respect to our SCD technologies, we own patents and patent applications in five patent families. The patents and applications in Patent Family 1 are co-owned by the Company and UOM. The patents and applications in Patent Families 2-5 are solely owned by the Company. The inventions disclosed in Patent Families 1-4 were developed with U.S. government funding and are subject to the obligations under the Bayh-Dole Act.

Patent Family 1 contains nine U.S. patents and one pending U.S. patent application directed to systems and methods for processing leukocytes and for treating subjects with various inflammatory conditions using a SCD cartridge, and to a SCD cartridge. These patents will expire from 2028-2031, and the pending application, if granted, will expire in 2028, assuming that the required maintenance fees are paid. We also co-own with UOM counterpart patents granted in Canada, Japan and New Zealand, and one patent application pending in Europe. These counterpart patents, and applications, if granted, will expire in 2028, assuming that the required maintenance fees are paid. The patents and applications in Patent Family 1 are as follows:

Patent Family 1†

Jurisdiction	Status	Expiration Date	Subject Matter
United States	Granted	2031	Methods for processing leukocytes and methods for treating subjects having inflammatory conditions using such methods
United States	Granted	2029	Methods for treating subjects undergoing a cardiopulmonary bypass
United States	Granted	2029	Methods for treating subjects with end-stage renal disease
United States	Granted	2029	Methods for treating subjects with acute renal failure
United States	Granted	2029	Methods for treating subject with sepsis
United States	Granted	2031	A device that processes activated leukocytes and platelets
United States	Granted	2029	Methods for treating acute lung injury and acute respiratory distress syndrome
United States	Granted	2029	Systems for treating activated platelets
United States	Granted	2028	Systems for treating activated leukocytes
United States	Pending	2028*	Systems for treating leukocytes and platelets and methods for treating subject having inflammatory conditions by processing leukocytes
Canada	Granted	2028	Systems and methods for processing leukocytes and platelets and systems for treating inflammatory conditions
Canada	Granted	2028	A device for processing activated leukocytes and platelets
Japan	Granted	2028	A device and methods for treating leukocytes
Japan	Granted	2028	A device for processing activated leukocytes
New Zealand	Granted	2028	Systems and methods for processing leukocytes and platelets and for treating inflammatory conditions
Europe	Pending	2028*	A device that processes platelets or leukocytes
Hong Kong	Pending	2028*	A device that processes platelets or leukocytes

* Expiration date if application is granted.

† This patent family was developed with U.S. federal government funding and is subject to obligations under the Bayh-Dole Act.

Pursuant to a license agreement with UOM (as amended, the “UOM License Agreement”), UOM has granted us a worldwide, royalty bearing, exclusive license to their interest in the co-owned patents and applications in Patent Family 1 in the field of medical devices for human therapeutics for certain technologies used in the SCD technology platform, including composition of matter and methods of use patents. In consideration for such exclusive license, during the term of the UOM License Agreement, we agreed to pay UOM a royalty fee equal to 1% of net sales and reimbursement of patent costs. To date, we have not paid and do not owe any royalty payments under the UOM License Agreement. We have paid approximately \$124 thousand in patent costs reimbursement since January 1, 2020. The UOM License Agreement also imposes certain diligence obligations on us and requires us to achieve specified milestone events by a certain date. Under the UOM License Agreement, UOM’s liability is limited and we agreed to indemnify and hold UOM harmless in connection with the use of the licensed technology and activities related to the products created using such licensed patents and/or technology. The UOM License Agreement will remain in effect, unless earlier terminated, until the latter of (i) the expiration of all licensed patents, (ii) the tenth anniversary of the Effective Date (as defined therein) or (iii) the seventh anniversary of the date of the First Commercial Sale (as defined therein). Either party may terminate the UOM License Agreement for the other party’s material breach of any covenant or promise therein that remains uncured for 90 days. We may also terminate the agreement by giving UOM 90-day advanced notice.

In addition to the co-owned patents and patent applications in Family 1, we also solely own four additional patent families (Families 2-5). Patent Family 2 includes one U.S. patent and one pending U.S. patent application directed to a second generation of the SCD cartridge and methods for using our SCD cartridge to process leukocytes. The patent will expire in 2032, and the application, if granted, will expire in 2031, assuming that the required maintenance fees are paid. Counterpart patents have been granted in Australia, Europe, and Japan with the European patent having been validated in France, Germany, Italy, Spain, and the United Kingdom, and a patent application is pending in Canada. These patents, and the application, if granted, will expire in 2031, assuming that the required maintenance fees are paid. The patents and the application in Patent Family 2 are as follows:

Patent Family 2†

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2031	Cartridge for treating leukocytes or platelets
United States	Pending	2031*	Methods for processing leukocytes or platelets and for treating a subject with an inflammatory condition
Australia	Granted	2031	Cartridge for treating leukocytes or platelets and methods for treating a subject with an inflammatory condition
France, Germany, Italy, Spain, & UK	Granted	2031	Cartridge for sequestering leukocytes or platelets
Canada	Pending	2031*	Cartridge for processing leukocytes or platelets
Japan	Granted	2031	Cartridge for treating leukocytes or platelets
Japan	Granted	2031	Cartridge for treating leukocytes or platelets

* Expiration date if application is granted.

† This patent family was developed with U.S. federal government funding and is subject to obligations under the Bayh-Dole Act.

Patent Family 3 includes one U.S. patent directed to methods of treating chronic heart failure using a SCD cartridge, which will expire in 2032, assuming that the required maintenance fees are paid. A counterpart patent has been granted in Japan, that will expire in 2032, assuming that the required maintenance fees are paid. The patents and applications in Patent Family 3 are as follows:

Patent Family 3†

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2032	Methods for treating chronic heart failure
Japan	Granted	2032	Device for use in treating chronic heart failure

† This patent family was developed with U.S. federal government funding and is subject to obligations under the Bayh-Dole Act.

Patent Family 4 includes two U.S. patents directed to methods of treating chronic heart failure and acute decompensated heart failure using a SCD cartridge. These patents will expire in 2032, assuming that the required maintenance fees are paid. Counterpart patents have been granted in Australia, and patent applications are pending in Canada and Europe. These patents, and patent applications, if granted, will expire in 2032, assuming that the required maintenance fees are paid. The patents and applications in Patent Family 4 are as follows:

Patent Family 4†

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2032	Methods for increasing myocardial function in subject with acute decompensated heart failure
United States	Granted	2032	Methods for increasing myocardial function in subject with chronic heart failure
Australia	Granted	2032	Methods for increasing myocardial function in a subject with acute chronic heart failure or chronic heart failure
Australia	Granted	2032	Methods, cartridges, and systems for improving myocardial function and treating inflammation associated with acute decompensated heart failure and chronic heart failure
Canada	Pending	2032*	Devices for use in treating subjects with chronic heart failure and acute decompensated heart failure
Europe	Pending	2032*	Devices for use in treating subjects with chronic heart failure or acute decompensated heart failure

* Expiration date if application is granted.

† This patent family was developed with U.S. federal government funding and is subject to obligations under the Bayh-Dole Act.

Patent Family 5 includes three U.S. design patents, three European Community design patents, and three United Kingdom design patents directed to a medical device connector as follows:

Patent Family 5

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2025	Design patent directed to a medical device connector
United States	Granted	2024	Design patent directed to a medical device connector
United States	Granted	2025	Design patent directed to a medical device connector
United Kingdom	Granted	2034	Design patent directed to a medical device connector
United Kingdom	Granted	2034	Design patent directed to a medical device connector
United Kingdom	Granted	2034	Design patent directed to a medical device connector
European Community	Granted	2034	Design patent directed to a medical device connector
European Community	Granted	2034	Design patent directed to a medical device connector
European Community	Granted	2034	Design patent directed to a medical device connector

With respect to our other technologies, we solely own patents and patent applications in five additional patent families (Patent Families 6-10) which are summarized as follows:

Patent Family 6

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Pending	2040*	Devices and methods for preparing a donor organ for transplantation

* Expiration date if application is granted.

Patent Family 7

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Pending	2040*	Device and methods for reducing rejection of a transplanted organ in a recipient

* Expiration date if application is granted.

Patent Family 8

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
PCT	Pending	2041*	Devices and methods for treating cytokine release syndrome and tumor lysis syndrome

* Expiration date if application is granted.

Patent Family 9

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2027	Extracorporeal cell-based therapeutic device and delivery system for renal cells

Patent Family 10

<u>Jurisdiction</u>	<u>Status</u>	<u>Expiration Date</u>	<u>Subject Matter</u>
United States	Granted	2031	Methods for enhanced propagation of renal cells

In addition to seeking patent protection, we also rely on trade secrets and other confidential information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

Competition

The industry for treating inflammation is extremely competitive, and companies developing new treatment procedures face significant capital and regulatory challenges. As our SCD product is a clinical-stage device, we

have the additional challenge of establishing medical industry support, which will be driven by treatment data resulting from human clinical studies. Should our device become market cleared by the FDA or the regulatory body of another country, we may face significant competition from well-funded pharmaceutical and medical device companies. Additionally, we would likely need to establish large-scale production of our device in order to be competitive. We believe that our SCD is able to compete effectively in the market and we are not aware of any similar device that has completed regulatory approval in any country for the treatment of adults or children with acute kidney injury requiring continuous renal replacement therapy.

In both the United States and international markets, the use of medical devices is dependent in part on the availability of reimbursement from third-party payors, such as government and private insurance plans. Healthcare providers that use medical devices generally rely on third-party payors to pay for all or part of the costs and fees associated with the medical procedures being performed or to compensate them for their patient care services. Lack of third-party coverage and reimbursement for the Company's devices could delay or limit their adoption, and as such harm our competitive advantage in the market.

Sales and Marketing

While currently we do not have a significant sales and marketing capability, we are actively pursuing resources and support for commercialization efforts in anticipation of obtaining the relevant regulatory approval from the FDA, including for the HDE application for pediatric AKI indications that was submitted in June 2022. On December 29, 2022, we entered into a U.S. License and Distribution Agreement with Nuwellis, for the pediatric SCD that is under HDE review. We will leverage their existing sales team that has similar call points to those needed for the pediatric SCD. We intend to build or contract for medical education as well as clinical training and support.

Government Regulation

Our SCD product is subject to regulation by numerous regulatory bodies, primarily the FDA, and comparable international regulatory agencies. These agencies require manufacturers of medical devices to comply with applicable laws and regulations governing the development, testing, manufacturing, labeling, marketing, storage, distribution, advertising and promotion, and post-marketing surveillance reporting of medical devices. The SCD includes a system of cartridges to interact with the patient's hyperinflammatory cells to allow them to become deactivated prior to their return to the patient. As the primary therapeutic mode of action of our SCD is attributable to the device's impact on these autologous cells and their timely return to patients, FDA's Center for Biological Evaluation and Research has primary jurisdiction over its premarket development, review and approval of our SCD as a medical device. Failure to comply with applicable requirements may subject a device and/or its manufacturer to a variety of administrative sanctions, such as issuance of warning letters, import detentions, mandatory safety notifications, repair/replace/refund actions, or recalls, civil monetary penalties and/or judicial sanctions, such as product seizures, injunctions and criminal prosecution.

FDA's Pre-market Clearance and Approval Requirements

Each medical device we seek to commercially distribute in the United States will require either a prior 510(k) clearance, unless it is exempt, a de novo request or a PMA from the FDA. Generally, if a new device has a predicate that is already on the market under a 510(k) clearance, the FDA will allow that new device to be marketed under a 510(k) clearance; otherwise, a de novo or PMA is required. Medical devices are classified into one of three classes—Class I, Class II or Class III—depending on the degree of risk associated with each medical device and the extent of control needed to provide reasonable assurance of safety and effectiveness. Class I devices are deemed to be low risk and are subject to the general controls of the Federal Food, Drug, and Cosmetic Act ("FD&C Act"), such as provisions that relate to: adulteration; misbranding; registration and listing; notification, including repair, replacement, or refund; records and reports; and good manufacturing practices. Most Class I devices are classified as exempt from pre-market notification under section 510(k) of the FD&C

Act, and therefore may be commercially distributed without obtaining 510(k) clearance from the FDA. Class II devices are subject to both general controls and special controls to provide reasonable assurance of safety and effectiveness. Special controls may include performance standards, post market surveillance, patient registries, and/or guidance documents. Most Class II devices require the manufacturer to submit to the FDA a pre-market notification requesting permission to commercially distribute the devices. Devices deemed by the FDA to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices, are placed in Class III. In addition, novel devices that have not been previously classified by the FDA or that have deemed not substantially equivalent to a previously cleared 510(k) device are considered Class III by default, unless and until they are down-classified by the FDA (e.g., via the de novo request process). High risk devices formally classified as Class III by regulation or administrative order cannot be marketed in the U.S. unless the FDA approves the device after submission of a PMA. Novel devices that are Class III by default may be eligible for down-classification through the de novo request process, if the device manufacturer can demonstrate that the device is lower risk and should therefore be classified as Class I or Class II. The FDA can also impose post-market sales, marketing or other restrictions on devices in order to assure that they are used in a safe and effective manner. We believe that SCD will be classified as a Class III device and as such will be subject to PMA submission and approval.

In accordance with the Orphan Drug Act of 1984, a rare disease is defined as a disease or condition that affects fewer than 200,000 people in the U.S. Currently, in the U.S., only a portion of the 7,000 known rare diseases have approved treatments. By definition, rare diseases or conditions occur in a small number of patients. As a result, it has been difficult to gather enough clinical evidence to meet the FDA standard of reasonable assurance of safety and effectiveness.

In order to address this challenge, Congress included a provision in the Safe Medical Devices Act of 1990 to create a new regulatory pathway for products intended for diseases or conditions that affect small (i.e., rare) populations, which is the Human Device Exemption program.

A Humanitarian Use Device (“HUD”) is a medical device intended to benefit patients in the treatment or diagnosis of a disease or condition that affects or is manifested in not more than 8,000 individuals in the U.S. per year.

The HDE is a marketing application for an HUD under Section 520(m) of the FD&C Act. An HDE is exempt from the effectiveness requirements of Sections 514 and 515 of the FD&C Act and is subject to certain profit and use restrictions.

Under section 520(m)(6)(A)(i) of the FD&C Act, an HUD is only eligible to be sold for profit after receiving an HDE approval if the device is intended for the treatment or diagnosis of a disease or condition that either:

- occurs in pediatric patients or in a pediatric subpopulation, and such device is labeled for use in pediatric patients or in a pediatric subpopulation in which the disease or condition occurs, or
- occurs in adult patients and does not occur in pediatric patients or occurs in pediatric patients in such numbers that the development of the device for such patients is impossible, highly impracticable, or unsafe.

HDE applicants whose devices meet one of the eligibility criteria and wish to sell their HUD for profit should provide adequate supporting documentation to FDA in the original HDE application. HDE holders who wish to sell their devices for profit and who did not submit the request in the original HDE application may submit a supplement and provide adequate supporting documentation to demonstrate that the HUD meets the eligibility criteria.

The number of HDE devices that may be sold for profit is limited to a quantity known as the Annual Distribution Number (“ADN”). If the FDA determines that an HDE holder is eligible to sell the device for profit, the FDA will determine the ADN and notify the HDE holder.

The ADN is calculated by taking the number of devices reasonably necessary to treat or diagnose an individual per year and multiplying it by 8000. For example, if the typical course of treatment using an HDE device, in accordance with its intended use, requires the use of two devices per patient per year, then the ADN for that HDE device would be 16,000 (i.e., 2 x 8000).

If the number of devices distributed in a year exceeds the ADN, the sponsor can continue to sell the device but cannot earn a profit for the remainder of the year.

We believe our SCD will be eligible to sell for a profit because we are pursuing an HDE for the pediatric population.

Pre-market Approval Pathway

A pre-market approval application must be submitted to the FDA for Class III devices for which the FDA has required a PMA. The pre-market approval application process is more extensive than the 510(k) pre-market notification and de novo request processes. A PMA application must be supported by extensive data, including but not limited to technical, preclinical, clinical trials, manufacturing and labeling to demonstrate to the FDA's satisfaction reasonable evidence of safety and effectiveness of the device.

After a pre-market approval application is submitted, the FDA has 45 days to determine whether the application is sufficiently complete to permit a substantive review and thus whether the FDA will file the application for review. The FDA has 180 days of FDA review time to review a filed pre-market approval application, although the review of an application generally occurs over a significantly longer period of time due to hold periods during which the submitting sponsor (the company) gathers information to address FDA requests for additional information. The total review process is highly variable and can take up to several years. During this review period, the FDA may request additional information or clarification of the information already provided. Also, an advisory panel of experts from outside the FDA may be convened to review and evaluate the application and provide recommendations to the FDA as to the approvability of the device.

Although the FDA is not bound by the advisory panel decision, the panel's recommendations are important to the FDA's overall decision-making process. In addition, the FDA generally conducts a preapproval inspection of the manufacturing facilities to ensure compliance with the Quality System Regulation ("QSR"). The agency also may inspect one or more clinical sites to assure compliance with FDA's regulations.

Upon completion of the PMA review, the FDA may: (i) approve the PMA that authorizes commercial marketing with specific prescribing information for one or more indications, which can be more limited than those originally sought; (ii) issue an approvable letter that indicates the FDA's belief that the PMA is approvable and states what additional information the FDA requires, or the post-approval commitments that must be agreed to prior to approval; (iii) issue a not approvable letter that outlines steps required for approval, but which are typically more onerous than those in an approvable letter, and may require additional clinical trials that are often expensive and time consuming and can delay approval for months or even years; or (iv) deny the application. If the FDA issues an approvable or not approvable letter, the applicant has 180 days to respond, after which the FDA's review clock is reset.

Clinical Trials

Clinical trials are almost always required to support pre-market approval and are sometimes required for 510(k) clearance. In the U.S., for significant risk devices, these trials require submission of an application for an IDE to the FDA. The IDE application must be supported by appropriate data, such as animal and laboratory testing results, showing it is safe to test the device in humans and that the testing protocol is scientifically sound. The IDE must be approved in advance by the FDA for a specific number of patients at specified study sites. During the trial, the sponsor must comply with the FDA's IDE requirements for investigator selection, trial

monitoring, reporting and recordkeeping. The investigators must obtain patient informed consent, rigorously follow the investigational plan and study protocol, control the disposition of investigational devices and comply with all reporting and recordkeeping requirements. Clinical trials for significant risk devices may not begin until the IDE application is approved by the FDA and the appropriate institutional review boards (“IRBs”) at the clinical trial sites. An IRB is an appropriately constituted group that has been formally designated to review and monitor medical research involving subjects and which has the authority to approve, require modifications in, or disapprove research to protect the rights, safety and welfare of human research subjects. The FDA or the IRB at each site at which a clinical trial is being performed may withdraw approval of a clinical trial at any time for various reasons, including a belief that the risks to study subjects outweigh the benefits or a failure to comply with FDA or IRB requirements. Even if a trial is completed, the results of clinical testing may not demonstrate the safety and effectiveness of the device, may be equivocal or may otherwise not be sufficient to obtain approval or clearance of the product.

Ongoing Regulation by the FDA

Even after a device receives clearance or approval and is placed on the market, numerous regulatory requirements apply. These include:

- establishment registration and device listing;
- the QSR, which requires manufacturers, including third-party manufacturers, to follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the manufacturing process;
- labeling regulations and the FDA prohibitions against the promotion of products for uncleared, unapproved or “off-label” uses and other requirements related to promotional activities;
- medical device reporting regulations, which require that manufactures report to the FDA if their device may have caused or contributed to a death or serious injury, or if their device malfunctioned and the device or a similar device marketed by the manufacturer would be likely to cause or contribute to a death or serious injury if the malfunction were to recur; and
- corrections and removal reporting regulations, which require that manufactures report to the FDA field corrections or removals if undertaken to reduce a risk to health posed by a device or to remedy a violation of the FD&C Act that may present a risk to health.

Some changes to an approved PMA device, including changes in indications, labeling or manufacturing processes or facilities, require submission and FDA approval of a new PMA or PMA supplement, as appropriate, before the change can be implemented. Supplements to a PMA often require the submission of the same type of information required for an original PMA, except that the supplement is generally limited to that information needed to support the proposed change from the device covered by the original PMA. The FDA uses the same procedures and actions in reviewing PMA supplements as it does in reviewing original PMAs. PMA supplements also require the submission of a user fee, which varies depending on the type of supplement.

Failure by us or by our suppliers to comply with applicable regulatory requirements can result in enforcement action by the FDA or state authorities, which may include any of the following sanctions:

- warning or untitled letters, fines, injunctions, consent decrees and civil penalties;
- customer notifications, voluntary or mandatory recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production;
- delay in processing submissions or applications for new products or modifications to existing products;
- withdrawing approvals that have already been granted; and
- criminal prosecution.

In addition, the FDA imposes requirements on labeling and promotion, including requirements that all statements be truthful, accurate, not misleading, adequately substantiated, and fairly balanced and prohibits an approved device from being marketed for off-label use. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including substantial monetary penalties and criminal prosecution.

Newly discovered or developed safety or effectiveness data may require changes to a product's labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory clearance or approval of our products under development.

Healthcare Regulation

In addition to the FDA's restrictions on marketing of pharmaceutical products, the United States healthcare laws and regulations that may affect our ability to operate include: the federal fraud and abuse laws, including the federal anti-kickback and false claims laws, federal data privacy and security laws, and federal transparency laws related to payments and/or other transfers of value made to physicians and other healthcare professionals and teaching hospitals. Many states have similar laws and regulations that may differ from each other and federal law in significant ways, thus complicating compliance efforts. For example, states have anti-kickback and false claims laws that may be broader in scope than analogous federal laws and may apply regardless of payer. In addition, state data privacy laws that protect the security of health information may differ from each other and may not be preempted by federal law. Moreover, several states have enacted legislation requiring pharmaceutical manufacturers to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales and marketing activities, report information related to drug pricing, require the registration of sales representatives, and prohibit certain other sales and marketing practices. These laws may adversely affect our sales, marketing and other activities with respect to any product candidate for which we receive approval to market in the United States by imposing administrative and compliance burdens on us.

Because of the breadth of these laws and the narrowness of available statutory exceptions and regulatory safe harbors, it is possible that some of our business activities, particularly any sales and marketing activities after a product candidate has been approved for marketing in the United States, could be subject to legal challenge and enforcement actions. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to significant civil, criminal, and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulatory approval, manufacture and marketing of regulated products or the reimbursement thereof. For example, in the U.S., the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, among other things, reduced and/or limited Medicare reimbursement to certain providers and imposed an annual excise tax of 2.3% on any entity that manufactures or imports medical devices offered for sale in the United States, with limited exceptions. The Further Consolidated Appropriations Act, signed into law on December 20, 2019, has now permanently repealed the medical device excise tax. In addition, the Budget Control Act of 2011, as amended by subsequent legislation, further reduces Medicare's payments to providers by two percent through fiscal year 2027. These reductions may reduce providers' revenues or profits, which could affect their ability to purchase new technologies. Furthermore, the

healthcare industry in the United States has experienced a trend toward cost containment as government and private insurers seek to control healthcare costs by imposing lower payment rates and negotiating reduced contract rates with service providers. Legislation could be adopted in the future that limits payments for our products from governmental payors.

Coverage and Reimbursement

In both the United States and international markets, the use of medical devices is dependent in part on the availability of reimbursement from third-party payors, such as government and private insurance plans. Healthcare providers that use medical devices generally rely on third-party payors to pay for all or part of the costs and fees associated with the medical procedures being performed or to compensate them for their patient care services. Should our products under development be approved for commercialization by the FDA, any such products may not be considered cost-effective, reimbursement may not be available in the United States or other countries, if approved, and reimbursement may not be sufficient to allow sales of our future products on a profitable basis. The coverage decisions of third-party payors will be significantly influenced by the assessment of our future products by health technology assessment bodies. If approved for use in the United States, we expect that any products that we develop will be purchased primarily by medical institutions, which will in turn bill various third-party payors for the health care services provided to patients at their facility. Payors may include CMS, which administers the Medicare program and works in partnership with state governments to administer Medicaid, other government programs and private insurance plans. The process involved in applying for coverage and reimbursement from CMS is lengthy and expensive. Further, Medicare coverage is based on our ability to demonstrate that the treatment is “reasonable and necessary” for Medicare beneficiaries. Even if products utilizing our technology receive FDA and other regulatory clearance or approval, they may not be granted coverage and reimbursement by any payor, including by CMS. Many private payors use coverage decisions and payment amounts determined by CMS as guidelines in setting their coverage and reimbursement policies and amounts. However, no uniform policy for coverage and reimbursement for medical devices exists among third-party payors in the United States. Therefore, coverage and reimbursement can differ significantly from payor to payor.

Employees

As of April 18, 2023, we had 11 full-time employees. None of our employees are represented by labor unions or covered by collective bargaining agreements.

Facilities

We lease our headquarters located at 3513 Brighton Boulevard, Suite #410, Denver, Colorado 80216 pursuant to a lease agreement on a month-to-month basis. We believe that our location at Brighton Boulevard satisfies our current office needs.

Legal Proceedings

From time to time, we may become involved in various claims and legal proceedings. We are not currently a party to any legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business, financial condition or results of operations. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT AND BOARD OF DIRECTORS

Management and Board of Directors

The following table sets forth, as of April 18, 2023, the ages and positions of our executive officers and directors.

Name	Age	Position
Eric Schlorff	50	Chief Executive Officer and Class III Director
Caryl Baron	55	Interim Chief Financial Officer
Kevin Chung	50	Chief Medical Officer
Kenneth Van Heel	58	Class III Director
Rick Barnett	63	Class I Director and Chairman of the Board
Andres Lobo	56	Class I Director
Allan Collins, MD	75	Class II Director
Bruce Rodgers	58	Class II Director
Richard Russell	62	Class II Director

Directors

Eric Schlorff has served as a Director and the Chief Executive Officer of SeaStar Medical since July 2019 and as Chief Operating Officer from March 2019 to July 2019. Mr. Schlorff also previously served as a Director of SeaStar Medical from June 2016 to May 2019. From 1999 to 2019, Mr. Schlorff served in multiple roles at the Dow Chemical Company in Midland, Michigan and Indianapolis, Indiana. From June 2016 to February 2019, Mr. Schlorff served as Global Director of Alternative Investments for the Dow Chemical Pension Plan, and Global Finance Leader for Crop Protection & Seeds at Dow AgroSciences from June 2013 to June 2016. Additional leadership positions held by Mr. Schlorff include the Global Market Intelligence Leader at Dow AgroSciences, Global Financial Manager of Royalties at Dow AgroSciences, Senior Investment Manager of Alternative Investments at Dow Chemical Company, New Business Development of Pharmaceuticals at Dow Chemical Company, Global Financial Analyst within the New Businesses division at Dow Chemical Company, and Global Financial Analyst within Dow AgroSciences at Dow Chemical Company.

Kenneth Van Heel has served as a Director of SeaStar Medical since 2021 and previously served as a Director from 2011 to 2015. Mr. Van Heel has also served as Chief Executive Officer at Motorcity Systems, a software provider in the trucking and transportation industry, since November 2021. Since June 2012, Mr. Van Heel has also served as a Director and Advisor at Gantec, Inc., a biotechnology company for agricultural products. From June 2019 to June 2021, Mr. Van Heel served as an Advisor at Motorcity Systems. Prior to joining Motorcity Systems, Mr. Van Heel served in various roles at the Dow Chemical Company. At the Dow Chemical Company, from 2016 to 2021, Mr. Van Heel served as the Global Director of Strategic Planning; from 2012 to 2016, Mr. Van Heel served as the Director of Alternative Investments and CIO Canadian Pension Plan; from 2006 to 2016, Mr. Van Heel served as Director of Alternative Investments; from 2003 to 2006, Mr. Van Heel served as the Senior Manager of Private Equity; from 2000 to 2003, Mr. Van Heel served as the Manager of Dow Corporate Venture Capital; and from 1986 to 2000, Mr. Van Heel held various positions within the Ventures and Business Development division.

Rick Barnett has received the Corporate Director certification from NACD in 2021 and has served as a Director of the SeaStar Medical since January 2021. Mr. Barnett served as President, Chief Executive Officer and Board Member of Satellite Healthcare, Inc. from 2014 to February 2021. Satellite Healthcare is Mr. Barnett has served as the Chairman of the Strategic Planning Committee, as well as a member of the Finance, Quality, Risk/Compliance, and Governance/Compensation committees for Satellite Healthcare, Inc. Mr. Barnett currently serves on the CutisCare, Inc. Board of Directors since 2021 and is a member of the Strategy and Audit Committee. CutisCare Inc. focuses on innovative approaches to wound care. Mr. Barnett has served a term as Chair of the Board of Directors of the National Kidney Foundation—Northern California & Pacific Northwest,

and a Board Member since 2018, where he served as a member of the Nominating, Strategic Partnerships, and Membership committees. He also served as Chair of the Board of Directors for the West Coast Sourcing Solutions, a product procurement company, from 2011 to 2014. From 2009 to 2014, Mr. Barnett served as a Senior Vice President of VHA, Inc., a purchasing cooperative for community-owned, nonprofit healthcare institutions. From 2006 to 2008, Mr. Barnett served as General Partner & Board Member of North State Surgery Centers, LLC, an ambulatory surgical clinic center. From 2005 to 2009, Mr. Barnett served as Chair of the Board of Directors of the Hospital Council of Northern California—Northern Sierra Section, a non-profit hospital and health systems trade association.

Andres Lobo has served as a Director of SeaStar Medical since May 2019. Since 1994, Mr. Lobo has served in various roles at the Dow Chemical Company. At the Dow Chemical Company, since 2019, Mr. Lobo has served as the Risk Seeking Assets Director; from 2016 to 2019, Mr. Lobo served as the Corporate Real Estate Director; and from 2006 to 2016, Mr. Lobo served as a Customer Financial Services Portfolio Manager. At Dow Brasil S.A., a subsidiary of the Dow Chemical Company, from 2003 to 2006, Mr. Lobo served as a Senior Finance Manager; from 1999 to 2003, Mr. Lobo served as a Customer Financial Services Manager for Brazil and Latin America; from 1997 to 1999, Mr. Lobo served as a Customer Financial Services Manager for Argentina and Southern Cone; and from 1994 to 1997, Mr. Lobo served as a Credit & Collection Manager. From 1993 to 1994, Mr. Lobo served as a Corporate Account Manager at Leasing Andino S.A., a commercial leasing company, in Santiago, Chile.

Allan Collins, MD has served as a Director of SeaStar Medical since January 2021. Mr. Collins has served as the Chief Medical Officer at NxStage Medical, a medical device company for the treatment of kidneys since 2017. Since 1999, Mr. Collins has also served as the Executive Director of the Kidney Care Initiative at the Chronic Disease Research Group, a non-profit organization that focuses on answering questions on patient experiences with chronic diseases and a division of the Hennepin Healthcare Research Institute, in Minneapolis, Minnesota. From 1999 to 2014, Mr. Collins served as a Director within the United States Renal Data System, a national data system that analyzes information about chronic kidney disease. From 1990 to 2017, Mr. Collins worked for the Hennepin Faculty Associates, an independent medical group at the Hennepin County Medical Center in Minneapolis, Minnesota. From 1980 to 1990, Mr. Collins served as faculty at the Minneapolis Medical Research Foundation, a medical research non-profit organization, and the University of Minnesota School of Medicine.

Bruce Rodgers served as LMAO's Chief Executive Officer and President and was Chairman of its Board of Directors. Since completion of its initial public offering in October 2015, Mr. Rodgers has served as Chairman, Chief Executive Officer, and President of LMFA, an affiliate of the Sponsor and publicly traded company on the Nasdaq Capital Market. LMFA is a specialty finance company that provides funding to nonprofit community associations primarily located in the state of Florida and mines for Bitcoin. Mr. Rodgers was instrumental in developing LMFA's business model prior to its inception and was one of its primary investors. As LMFA's Chief Executive Officer, Mr. Rodgers has guided LMFA through its initial public offering, subsequent public offerings, and acquisitions of complementary businesses. Mr. Rodgers is a former business transactions attorney counseling numerous businesses with respect to mergers, acquisitions and capital raising transactions. In this capacity, Mr. Rodgers was an associate of Macfarlane, Ferguson, & McMullen, P.A. from 1991 to 1995 and a partner from 1995-1998 and was an equity partner of Foley & Lardner LLP from 1998 to 2003. Originally from Bowling Green, Kentucky, Mr. Rodgers holds an Engineering degree from Vanderbilt University (1985) and a Juris Doctor, with honors, from the University of Florida (1991). Mr. Rodgers also served as an officer in the United States Navy from 1985-1989 rising to the rank of Lieutenant, Surface Warfare Officer. Mr. Rodgers is a member of the Florida Bar and holds an AV-Preeminent rating from Martindale Hubbell.

Richard Russell served as LMAO's Chief Financial Officer, Treasurer, Secretary and Director. Mr. Russell has also served as Chief Financial Officer of LMFA, an affiliate of the Sponsor and publicly traded company on the Nasdaq Capital Market since 2017. Since 2016, he has provided financial and accounting consulting services with a focus on technical and external reporting, internal auditing, mergers & acquisitions, risk management, and

CFO and controller services. Mr. Russell also served as Chief Financial Officer for Mission Health Communities, offering management services for nursing and post-acute care facilities, from 2013 to 2016 and, before that, Mr. Russell served in a variety of roles for Cott Corporation, an American-Canadian beverage and food service company, from 2007 to 2013, including Senior Director Finance, Senior Director of Internal Auditing, and Assistant Corporate Controller. Mr. Russell's extensive professional experience with public companies includes his position as Director of Financial Reporting for Quality Distribution, a transportation and logistics company, from 2004 to 2007, and as Director of Financial Reporting for Danka Business Systems PLC, a supplier of photocopiers and office imaging equipment, from 2001 to 2004. Mr. Russell also served as Chief Financial Officer of Generation Income Properties, Inc., which is a real estate investment company that is publicly traded on the Nasdaq, a position he held from December 2019 to February 2022. Mr. Russell earned his Bachelor of Science in Accounting and a Master's in Tax Accounting from the University of Alabama, a Bachelor of Arts in International Studies from the University of South Florida, and a Master's in Business Administration from the University of Tampa. On March 1, 2020, Mr. Russell was appointed to the board of directors for TDNT, a publicly held consumer products company that has been trading on the OTCQB Venture Market since April 2015. Mr. Russell was also Chairman of the Hillsborough County Internal Audit Committee from January 2020 to April 2021 and has been a board member since August 2016.

Executive Officers

Eric Schlorff See “—Directors” for the biography of Eric Schlorff who serves as the Chief Executive Officer and a Class III Director.

Caryl Baron has served as the Finance Controller of SeaStar Medical since 2020 and as our Interim Chief Financial Officer since October 28, 2022. Since 2013, Ms. Baron has also served as the Founder of Baroness Financial Consulting, an accounting consulting firm, in New York, New York. From 2011 to 2013, Ms. Baron served as the Controller of Rubenstein Public Relations, Inc., a full-service communications agency, in New York, New York. From 2008 to 2010, Ms. Baron served as the Vice President and Finance Director of Omnicon Health Group, a healthcare marketing and communications group, in New York, New York. From 2006 to 2008, Ms. Baron served as the Finance Manager of IMG, a global sports, events and talent management company, in New York, New York. From 2004 to 2006, Ms. Baron served as the Controller of Cornelia Day Resort, a luxury spa, in New York, New York. From 1996 to 2004, Ms. Baron served as the Financial Operations Manager of Tiffany & Co., a luxury jewelry and specialty retailer, in New York, New York. From 1992 to 1996, Ms. Baron served as the Assistant Controller for WPP, a multinational communications, advertising, public relations, and technology company, in New York, New York.

Kevin Chung has served as the Chief Medical Officer of SeaStar Medical since July 1, 2022. Dr. Chung served as a professor in the Department of Medicine at the Uniformed Services University of the Health Sciences from 2016 to 2022, and as Chair of the Department of Medicine since 2018. From 2014 to 2020, Dr. Chung served as Critical Care Consultant to the U.S. Surgeon General. From 2016 to 2018, Dr. Chung served as Department of Medicine Chief at the Brooke Army Medical Center. From 2015 to 2016, Dr. Chung served as Director of Research at the US Army Institute of Surgical Research, and as Task Area Manager, Clinical Trial from 2012 to 2015. From 2006 to 2013, Dr. Chung served as Medical Director, Burn Intensive Care Unit at the US Army Burn Center. Dr. Chung is a retired army colonel and holds medical licenses in Texas and Maryland.

Family Relationships

There are no family relationships among any of the individuals who serve as our directors or executive officers.

Classified Board of Directors

In accordance with the Charter, our Board is divided into three classes with only one class of directors being elected at each annual meeting of the stockholders and each director serving a three-year term. Each of our

Class I Directors has a term that expires at the next annual meeting of stockholders following the effectiveness of the Charter, each of our Class II Directors has a term that expires at the second annual meeting of stockholders following the effectiveness of the Charter and each of our Class III Directors has a term that expires at the third annual meeting of stockholders following the effectiveness of the Charter, or, in each case, when their respective successors are elected and qualified, or upon their earlier death, resignation, retirement or removal. As discussed above, Andre Lobo and Rick Barnett serve as Class I Directors, Bruce Rodgers, Richard Russell and Alan Collins serve as Class II Directors and Eric Schlorff and Kenneth Van Heel serve as Class III Directors.

Director Independence

In connection with the consummation of the Business Combination, the Board determined that each of the directors, other than Mr. Schlorff, qualify as an independent director, as defined under the listing rules of Nasdaq, and our Board will consist of a majority of “independent directors,” as defined under the rules of the SEC and Nasdaq listing rules relating to director independence requirements. In addition, we are subject to the rules of the SEC and Nasdaq relating to the membership, qualifications, and operations of the audit committee, as discussed below.

Committees of the Board of Directors

The Company’s Board will direct the management of its business and affairs, as provided by Delaware law, and will conduct its business through meetings of the Board and its standing committees. The Company will have a standing audit committee, compensation committee, and nominating and corporate governance committee, each of which will operate under a written charter.

In addition, from time to time, special committees may be established under the direction of the Company’s Board when it deems it necessary or advisable to address specific issues. Current copies of the Company’s committee charters will be available on the Company’s website as required by applicable SEC and Nasdaq rules. The information on or available through such website is not deemed incorporated in this prospectus and does not form part of this prospectus.

Audit Committee

Our audit committee will be responsible for, among other things:

- retaining, overseeing and evaluating the independence and performance of our independent auditor;
- reviewing and discussing with our independent auditor their annual audit, including the timing and scope of audit activities;
- pre-approving audit services;
- overseeing the financial reporting process and discussing with management and our independent registered public accounting firm the quarterly and annual financial statements that we file with the SEC;
- reviewing the adequacy and effectiveness of our accounting and internal controls over financial reporting, disclosure controls and policies and procedures;
- reviewing and discussing guidelines and policies governing the process by which our senior management assesses and manages our exposure to risk;
- reviewing, and if appropriate, approving or ratifying any related party transactions and other significant conflicts of interest;
- establishing procedures for the receipt, retention and treatment of complaints received by us and the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;

- reviewing our program to monitor compliance with our code of ethics; and
- overseeing significant deficiencies and material weaknesses in the design or operation of our internal controls over financial reporting.

Our audit committee consists of Kenneth Van Heel, Rick Barnett and Allan Collins, with Mr. Van Heel serving as chair. Rule 10A-3 of the Exchange Act and Nasdaq rules require that our audit committee must be composed entirely of independent members. Each of Kenneth Van Heel, Allan Collins and Rick Barnett meet the definition of “independent director” for purposes of serving on the audit committee under Rule 10A-3 of the Exchange Act and Nasdaq rules. Each member of our audit committee also meets the financial literacy requirements of the Nasdaq listing standards. In addition, the Board determined that Kenneth Van Heel qualifies as an “audit committee financial expert,” as such term is defined in Item 407(d)(5) of Regulation S-K. The Board adopted a written charter for the audit committee, which is available on our corporate website. The information on our websites is deemed not to be incorporated in this prospectus or to be part of this prospectus.

Compensation Committee

Our compensation committee will be responsible for, among other things:

- evaluating, determining, and recommending to our Board, the compensation of our executive officers;
- administering and recommending to our Board the compensation of our directors;
- reviewing and approving our executive compensation plan and recommending that our Board amend these plans if deemed appropriate;
- administering our general compensation plan and other employee benefit plans, including incentive compensation and equity-based plans and recommending that our Board amend these plans if deemed appropriate;
- reviewing and approving any severance or termination arrangements to be made with any of our executive officers; and
- reviewing and approving at least annually the corporate goals and objectives relevant to the compensation of our Chief Executive Officer and other executive officers.

Our Compensation Committee consists of Rick Barnett, Allan Collins and Richard Russell, with Mr. Barnett serving as the chair of the Compensation Committee. Each member of the committee is a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act. The Board adopted a written charter for the compensation committee, which is available on our corporate website. The information on our websites is deemed not to be incorporated in this prospectus or to be part of this prospectus.

Compensation Committee Interlocks and Insider Participation

None of our executive officers currently serve, and in the past year have not served, as a member of the board of directors or compensation committee (or other committee performing equivalent functions) of any entity that has one or more executive officers serving on our Board or compensation committee.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee will be responsible for, among other things:

- identifying, screening and recommending to our Board director candidates for election (or re-election);
- overseeing the policies and procedures with respect to the consideration of director candidates recommended by stockholders;

- reviewing and recommending to our Board for approval, as appropriate, disclosures concerning our policies and procedures for identifying and screening Board nominee candidates, the criteria used to evaluate Board membership and director independence as well as any policies regarding Board diversity;
- reviewing independence qualifications of directors under the applicable Nasdaq rules;
- developing and coordinating with management on appropriate director orientation programs; and
- reviewing our stockholder engagement plan, if any, and overseeing relations with stockholders.

Our Nominating and Corporate Governance Committee consists of Andres Lobo, Bruce Rodgers and Kenneth Van Heel, with Mr. Rodgers serving as the chair of the committee. The Board adopted a written charter for the nominating and corporate governance committee, which is available on our corporate website. The information on any of our websites is deemed not to be incorporated in this prospectus or to be part of this prospectus.

Limitation on Liability and Indemnification of Directors and Officers

Our Charter limits the liability for directors to the fullest extent permitted under the DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for a breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- for any unlawful payment of dividends or redemption of shares; or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the directors will be further eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Delaware law and the Bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to advancement, direct payment, or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe these provisions in the Charter and Bylaws are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, or control persons, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Board Leadership Structure

The Board has not implemented a policy requiring the positions of the Chairman of the Board and Chief Executive Officer to be separate or held by the same individual. Any further determination to create such a policy is expected to be based on circumstances existing from time to time, based on criteria that are in the Company's best interests and the best interests of its stockholders, including the composition, skills and experience of the Board and its members, specific challenges faced by the Company or the industry in which we operate, and

governance efficiency. Historically Mr. Schlorff served as both the Chairman and Chief Executive Officer because Mr. Schlorff's strategic vision for the business, his in-depth knowledge of the Company's operations, and his experience serving as the Chief Executive Officer of SeaStar Medical make him well qualified to serve as both Chairman of the Board and Chief Executive Officer of the Company. However, effective as of the Closing, the Board determined that it is in the best interest of the Company and its stockholders to separate the roles of Chairman and Chief Executive Officer and elected Mr. Barnett as the Chairman of the Board. The Board believes that having an independent director serving as the Chairman provides better and effective oversight and management of the Company as a publicly traded company, which also improves management efficiency as the Chief Executive Officer can focus on day-to-day operations of the Company. If the Board convenes for a meeting, the non-management directors will meet in one or more executive sessions, if the circumstances warrant it. The Board may also consider appointing a lead independent director, if the circumstances warrant it. In addition, the Board has granted Dr. David Humes, a previously a director of SeaStar Medical, certain rights to attend regularly scheduled meetings of the Board as an observer without any voting or other substantive rights provided to directors.

Risk Oversight

The Board will administer the risk oversight function directly through the Board as a whole, as well as through its committees, where applicable, monitoring and assessing strategic risk exposure, enterprise risk, and governance risks. The audit committee will be responsible for considering and discussing our major financial risk exposures and the steps our management has taken to monitor and control these exposures. The compensation committee will be responsible for reviewing and assessing the risks associated with the compensation arrangements of executive management, including the lack of alignment between the incentives of management and the interests of stockholders. The allocation of risk oversight responsibility may change, from time to time, based on the evolving needs of the Company.

Code of Business Conduct and Ethics

We have adopted a Code of Ethics applicable to our directors, executive officers and employees that complies with the rules and regulations of the Nasdaq and the SEC. The Code of Ethics codifies the business and ethical principles that govern all aspects of our business. You may review a copy of our code of ethics on our website at seastarmedical.com. All legally required disclosures regarding amendments to, or waivers of, provisions of our code of ethics are available on our website. The information on or available through our website is not deemed incorporated in this prospectus and does not form part of this prospectus.

Compensation of Executive Officers and Directors of Company

The Company's compensation committee is responsible for developing our compensation philosophy, structuring our compensation and benefits programs, and determining appropriate payments and awards to our named executive officers and directors. The Company's compensation committee intends to engage a compensation consultant to provide advice on executive and director compensation matters, including providing a recommendation on the compensation level of each executive officer and director of the Company.

EXECUTIVE AND DIRECTOR COMPENSATION

The discussion in this section contains forward-looking statements that are based on our current considerations and expectations relating to our executive compensation programs and philosophy. As our business and our needs evolve, the actual amount and form of compensation and the compensation programs that we adopt may differ materially from current or planned programs as summarized in this section. All share counts, exercise price amounts, and stock price achievement levels in this section are shown on a pre-Business Combination basis.

Overview

This section discusses the material components of the executive compensation program for SeaStar Medical's executive officers who are named below. As an emerging growth company, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies" as such term is defined in the rules promulgated under the Securities Act, which require compensation disclosure for our principal executive officer and our two other most highly compensated executive officers.

In 2022, SeaStar Medical's chief executive officer and its two other executive officers, referred to collectively as SeaStar Medical's "named executive officers," were as follows:

- Eric Schlorff, Chief Executive Officer
- Caryl Baron, Financial Controller
- Kevin Chung, Chief Medical Officer

2022 Compensation of Named Executive Officers

Base Salary

Base salaries are intended to provide a level of compensation sufficient to attract and retain an effective management team, when considered in combination with the other components of the executive compensation program. In general, SeaStar Medical seeks to provide a base salary level designed to reflect each executive officer's scope of responsibility and accountability. Please see the "Salary" column in the "Summary Compensation Table for Fiscal Years 2021 and 2022" below for the base salary amounts received by the named executive officers in fiscal 2021 and 2022.

Long-Term Equity Incentive Awards

To further focus SeaStar Medical's named executive officers on its long-term performance, SeaStar Medical historically has granted equity compensation in the form of stock options for SeaStar Medical capital stock that are subject to time-based and performance vesting requirements and restricted stock units that are subject to time-based vesting requirements. Restricted stock units were granted to Mr. Schlorff and Ms. Baron in 2022. For more information, see "Summary Compensation Table for Fiscal Years 2021 and 2022," "Outstanding Equity Awards at December 31, 2022," and "Employee Benefit and Equity Compensation Plans" below.

Incentive Compensation

SeaStar Medical periodically uses bonuses to incentivize and retain its employees, including its named executive officers. Please see the "Bonus" column in the "Summary Compensation Table for Fiscal Years 2021 and 2022" below for the bonus amounts received by the named executive officers in fiscal 2022.

SeaStar Medical periodically enters into agreements to grant short- and long-term cash incentive awards to its employees including its named executive officers to encourage achievement of certain performance goals. This includes incentive awards based on the achievement of certain business development, financing milestone, and exit event goals. In addition, SeaStar Medical periodically awards its named executive officers annual

bonuses from a discretionary bonus pool. However, no such incentive awards were earned by SeaStar Medical's named executive officers during fiscal 2022.

Summary Compensation Table for Fiscal Years 2021 and 2022

The following table sets forth information for the years ended December 31, 2021 and 2022, regarding compensation awarded to or earned by SeaStar Medical's named executive officers.

Name and Principal Position	Year	Salary (\$)	Bonus ⁽¹⁾ (\$)	Stock Awards ⁽²⁾ (\$)	Option Awards ⁽³⁾ (\$)	Non-Equity Incentive Plan Compensation ⁽⁴⁾	Total (\$)
Eric Schlorff <i>Chief Executive Officer</i>	2021	\$300,000	\$22,500	\$ —	\$ —	\$ —	\$ 322,500
	2022	\$420,000	\$ —	\$ 1,655,260	\$ —	\$ 270,000	\$ 2,345,260
Caryl Baron <i>Interim Chief Financial Officer</i>	2021	\$150,000	\$56,000	\$ —	\$6,594	\$ —	\$ 212,594
	2022	\$210,000	\$ —	\$ 351,110	\$ —	\$ 15,000	\$ 576,110
Kevin Chung ⁽⁵⁾ <i>Chief Medical Officer</i>	2021	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
	2022	\$350,000	\$25,000	\$ —	\$ —	\$ —	\$ 375,000

(1) Amounts reflect annual bonuses for 2021, which were paid in September 2021, as well as a one-time \$50,000 cash retention bonus to Ms. Baron and a one-time \$25,000 signing bonus to Mr. Chung.

(2) Amounts reflect the grant date fair value of restricted stock units granted to SeaStar Medical's named executive officers calculated in accordance with FASB ASC Topic 718. For information regarding assumptions underlying the valuation of equity awards, see Note 2 to SeaStar Medical's audited financial statements appearing in this prospectus. Mr. Schlorff and Ms. Baron received awards of 198,526 and 42,111 restricted stock units, respectively, during fiscal year 2022, after applying the conversion rate of 1.203 in connection with the Business Combination. The restricted stock units vest with respect to (i) fifty percent (50%) of the units upon completion of one (1) year of service measured from April 21, 2022, and (ii) the balance of the units vest in a series of twenty-four (24) successive equal monthly installments upon completion of each additional month of service over the twenty-four (24) month period measured from April 21, 2022, subject to the terms of the award agreement.

(3) Amounts reflect the grant date fair value of options granted to SeaStar Medical's named executive officers calculated in accordance with FASB ASC Topic 718. SeaStar Medical's named executive officers will only have a benefit to the extent the fair market value of its common stock is greater than the exercise price of such stock options. For information regarding assumptions underlying the valuation of equity awards, see Note 2 to SeaStar Medical's audited financial statements appearing in this prospectus. Ms. Baron received a stock option to purchase 16,361 shares of common stock under the 2019 Stock Incentive Plan during fiscal year 2021. The option is exercisable immediately subject to a repurchase right in favor of the Company which lapses as the option vests. The option vests with respect to (i) twenty-five percent (25%) of the shares upon completion of one (1) year of service measured from January 1, 2021, and (ii) the balance of the shares subject to the option in a series of thirty-six (36) successive equal monthly installments upon completion of each additional month of service over the thirty-six (36)-month period measured from January 1, 2022, and expires January 1, 2031, subject to the terms of the award agreement.

(4) Amounts reflect the exit event bonus that was earned in connection with the Business Combination under the terms of the transaction bonus agreements. See "Cash Incentive Compensation".

(5) Mr. Chung commenced his employment with SeaStar Medical on July 1, 2022.

Narrative to Summary Compensation Table

Employment Agreements

The terms of the employment arrangements with each named executive officer are as follows:

Eric Schlorff

Mr. Schlorff's employment agreement, which was amended and restated immediately prior to the closing of the Business Combination, governs the terms and conditions of his employment as the Chief Executive Officer of the Company. Mr. Schlorff's employment agreement entitles him to an annual base salary of \$420,000 and the opportunity to participate in the executive bonus plan approved by the Compensation Committee. Mr. Schlorff also will be eligible to participate in the benefit plans that are generally available to all Company employees.

Under the amended employment agreement, if Mr. Schlorff is terminated by the Company without cause, he is entitled to receive continued base salary and health benefits continuation for up to twelve (12) months, offset by any compensation and benefits received from any subsequent employer during such period, subject to Mr. Schlorff executing a general release. For purposes of Mr. Schlorff's employment agreement, "cause" means (i) executive's commission of any act of fraud, embezzlement, dishonesty, or sexual harassment, (ii) executive's refusal or failure to comply in any material respect with our written policies and procedures, (iii) executive's unauthorized use or disclosure of our confidential information or trade secrets, or (iv) executive's gross negligence or misconduct adversely affecting our business or affairs in a material manner.

Under his amended employment agreement, Mr. Schlorff will be granted an option following the Closing Date to purchase a number of shares of the Common Stock that, together with his existing equity (including restricted stock units covering shares of Common Stock and options to purchase shares of Common Stock) in the Company, would equal 1.5% of the outstanding capital stock of the Company, determined on a fully-diluted basis, on the Closing Date, at an exercise price equal to the fair market value of the Company's stock on the date of grant. Such options will vest with respect to twenty-five percent (25%) of the option shares after twelve (12) months of service from the Closing Date and for the remaining option shares, on a pro rata basis over the following thirty-six (36) months of service. The employment agreement provides that upon a "Change in Control" (as defined in the agreement), all outstanding stock options will vest. All vested and outstanding stock options will remain exercisable for up to twelve months following a termination of Mr. Schlorff's employment, other than for cause.

Caryl Baron

Ms. Baron's employment agreement, which was amended and restated immediately prior to the closing of the Business Combination, governs the terms and conditions of her employment as the Interim Chief Financial Officer of the Company. Ms. Baron's amended employment agreement entitles her to an annual base salary of \$210,000 and the opportunity to participate in the executive bonus plan approved by the Compensation Committee. Ms. Baron also will be eligible to participate in the benefit plans that are generally available to all Company employees.

Under the amended employment agreement, if Ms. Baron is terminated by the Company without cause, she is entitled to receive continued base salary and health benefits continuation for up to nine (9) months, offset by any compensation and benefits received from any subsequent employer during such period, subject to Ms. Baron executing a general release. For purposes of Ms. Baron's employment agreement, "cause" means (i) executive's commission of any act of fraud, embezzlement, dishonesty, or sexual harassment, (ii) executive's refusal or failure to comply in any material respect with our written policies or procedures, (iii) executive's unauthorized use or disclosure of our confidential information or trade secrets, or (iv) executive's gross negligence or misconduct adversely affecting our business or affairs in a material manner.

Under her amended employment agreement, Ms. Baron will be granted an option following the Closing Date to purchase shares of the Common Stock that, together with her existing equity (including restricted stock units covering shares of Common Stock and options to purchase shares of Common Stock) in the Company, would equal 0.25% of the outstanding capital stock of the Company, determined on a fully-diluted basis, on the Closing Date, at an exercise price equal to the fair market value of the Company's stock on the date of grant. Such option vest with respect to twenty-five percent (25%) of the option shares after twelve (12) months of service from the Closing Date and for the remaining options shares, on a pro rata basis over the following thirty-six (36) months of service. The employment agreement provides that upon a "Change in Control" (as defined in the agreement), all outstanding stock options will vest. All vested and outstanding stock options will remain exercisable for up to twelve months following a termination of Ms. Baron's employment, other than for cause.

Kevin Chung

On May 18, 2022, SeaStar Medical entered into an employment agreement with Dr. Chung to serve as its Chief Medical Officer, commencing on July 1, 2022. Dr. Chung is entitled to receive an annual base salary of \$350,000 and received a signing bonus of \$25,000, payable on July 31, 2022. In addition, Dr. Chung will be eligible to receive an annual discretionary bonus of up to a maximum amount of 40% of his base salary, with the actual amount (if any) to be determined in the sole discretion of the Board based on a combination of factors, including the performance of the Company and Dr. Chung individually. Dr. Chung received no compensation from SeaStar Medical in 2021. Mr. Chung's current employment agreement continued under the same terms following the Closing Date.

Cash Incentive Compensation

SeaStar Medical awards both short-term and long-term cash incentive compensation to its named executive officers. In December 2021, SeaStar Medical entered into transaction bonus agreements with its named executive officers and certain of its directors, which provide for two long-term incentive bonuses: a business development bonus and an exit bonus.

The business development bonus is designed to drive SeaStar Medical's performance through certain business development activities with third parties, such as licensing, collaboration, partnership, or strategic arrangements resulting in cash payments to SeaStar Medical. The business development bonus payable under the transaction bonus agreements is based on the amount of cash received by SeaStar Medical, with a threshold amount of \$112,500 and \$6,250 payable to Mr. Schlorff and Ms. Baron, respectively, if cash payments exceed a specified threshold, prior to December 31, 2022. If the amount of business development proceeds falls below a threshold set forth in the agreements, then twenty-five percent (25%) of the business development bonus will become payable on each of the six (6) month anniversaries of SeaStar Medical receiving a specified minimum amount of proceeds, provided that such payment will immediately accelerate in full if the amount of such proceeds exceeds a specified multiple of the minimum amount or SeaStar Medical experiences an exit event.

The exit event bonus is designed to drive SeaStar Medical's performance through certain merger transactions resulting in an acquisition of SeaStar Medical, its post-merger securities being publicly-traded, or an initial public offering (an "exit event"). The calculation of the bonus varies based on the exit event. The bonus is based on a percentage of the gross cash proceeds exceeding a specified threshold for an acquisition by way of merger, consolidation, reorganization, or other transaction (or series of transactions) resulting in SeaStar Medical stockholders owning less than 50% of the voting interests in the surviving entity, a sale, lease, exclusive license, or other disposition of substantially all of SeaStar Medical's assets, or any person or group becoming the beneficial owner of more than 50% of SeaStar Medical's outstanding voting securities having the right to vote for members of SeaStar Medical's board of directors. A \$270,000 and \$15,000 bonus is payable to Mr. Schlorff and Ms. Baron, respectively, in connection with an initial public offering or other business combination of a minimum threshold value resulting in SeaStar Medical's post-merger securities being publicly-traded. Should the named executive officer terminate employment with SeaStar Medical prior to the exit event, no exit event bonus

will be payable. The exit event bonus is anticipated to be paid in connection with the Business Combination under the terms of the transaction bonus agreements, and in December 2022, the Board determined that the exit event bonuses would be payable in connection with the Business Combination.

Outstanding Equity Awards at December 31, 2022

The following table presents information regarding outstanding equity awards held by SeaStar Medical's named executive officers as of December 31, 2022. All awards were granted under SeaStar Medical's 2019 Stock Incentive Plan.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Option Awards ⁽¹⁾			Stock Awards ⁽²⁾	
		Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration	Number of Shares or Units of Stock that have not Vested (#)	Market Value of Shares or Units of Stock that have not Vested (\$)
Eric Schlorff	14,014 ⁽³⁾	935	\$ 10.00	3/1/2029	198,526	\$ 1,655,260
<i>Chief Executive Officer</i>	49,442 ⁽⁴⁾	20,359	\$ 0.53	2/20/2030	—	\$ —
Caryl Baron	2,740 ⁽⁵⁾	1,246	\$ 10.00	3/20/2030	42,111	\$ 351,110
<i>Interim Chief Financial Officer</i>	7,839 ⁽⁶⁾	8,522	\$ 0.55	1/1/2031	—	\$ —
Kevin Chung	—	—	\$ —	—	—	\$ —
<i>Chief Medical Officer</i>	—	—	\$ —	—	—	\$ —

- (1) This table provides information pertaining to all outstanding equity awards held by our named executive officers as of December 31, 2022. Stock options granted prior to 2021 are exercisable upon completion of six (6) months of service following the date of grant, subject to a repurchase right in favor of the Company which lapses as the option vests. Stock options granted in 2021 are exercisable immediately, subject to a repurchase right in favor of the Company which lapses as the option vests. Accordingly, the columns and footnotes below reflect the extent to which stock options held by our named executive officers were vested (as opposed to exercisable) as of December 31, 2022.
- (2) This table provides information pertaining to restricted stock units held by our named executive officers as of December 31, 2022. The restricted stock units were granted on April 4, 2022 and converted at a conversion rate of 1.203 in connection with the Business Combination, and vest with respect to (i) fifty percent (50%) of the units upon completion of one (1) year of service measured from April 21, 2022, and (ii) the balance of the units vest in a series of twenty-four (24) successive equal monthly installments upon completion of each additional month of service over the twenty-four (24) month period measured from April 21, 2022, subject to the terms of the award agreement.
- (3) The option was granted on February 8, 2019 and vests with respect to (i) twenty-five percent (25%) of the shares upon completion of one (1) year of service measured from March 1, 2019 and (ii) the balance of the shares subject to the option in a series of thirty-six (36) successive equal monthly installments upon completion of each additional month of service over the thirty-six (36)-month period measured from March 1, 2019.
- (4) The option was granted on August 13, 2020 and vests with respect to (i) twenty-five percent (25%) of the shares upon completion of one (1) year of service measured from February 20, 2020 and (ii) the balance of the shares subject to the option in a series of thirty-six (36) successive equal monthly installments upon completion of each additional month of service over the thirty-six (36)-month period measured from February 20, 2020.
- (5) The option was granted on March 30, 2020 and vests with respect to (i) twenty-five percent (25%) of the shares upon completion of one (1) year of service measured from March 30, 2020 and (ii) the balance of the shares subject to the option in a series of thirty-six (36) successive equal monthly installments upon completion of each additional month of service over the thirty-six (36)-month period measured from March 30, 2020.

- (6) The option was granted on January 1, 2021 and vests with respect to (i) twenty-five percent (25%) of the shares upon completion of one (1) year of service measured from January 1, 2021 and (ii) the balance of the shares subject to the option in a series of thirty-six (36) successive equal monthly installments upon completion of each additional month of service over the thirty-six (36)-month period measured from January 1, 2021.

Employee Benefit and Equity Compensation Plans

The principal features of SeaStar Medical's existing employee benefit and equity incentive plans are summarized below. The summaries of the equity incentive plans are qualified in their entirety by reference to the actual text of the plans, which are filed as exhibits to this registration statement.

Equity Incentive Plans

2019 Stock Incentive Plan

The 2019 Stock Incentive Plan was adopted by SeaStar Medical's board of directors and approved by its stockholders on November 27, 2019. The 2019 Stock Incentive Plan permits the grant of options, stock awards, and restricted stock unit awards. The maximum aggregate number of shares of SeaStar Medical Common Stock that may be issued under the 2019 Stock Incentive Plan is 900,000 shares, subject to adjustment as provided therein.

The 2019 Stock Incentive Plan was terminated upon the closing of the Business Combination and the Company will not grant any further awards under such plan. However, the outstanding awards under the 2019 Stock Incentive Plan will be assumed and continued in connection with the Business Combination. Our Board administers SeaStar Medical's 2019 Stock Incentive Plan and has the authority, among other matters, to construe and interpret the terms of the 2019 Stock Incentive Plan and awards granted thereunder. It is our intent to file a registration statement on Form S-8 to register the shares granted under the 2019 Stock Incentive Plan, at which time we will issue all such vested shares.

2022 Incentive Plan

In connection with the Business Combination, we adopted a new equity compensation plan that became effective upon the Closing and replaced the existing 2019 Stock Incentive Plan. The following types of awards may be granted under the 2022 Incentive Plan: options, stock appreciation rights, stock awards, restricted stock units, dividend equivalent rights and other awards. Subject to the capitalization adjustments and the add back provisions related to outstanding awards, an aggregate of up to 1,270,000 shares shall initially be reserved for issuance under the 2022 Incentive Plan.

The Compensation Committee has the exclusive authority to administer the 2022 Incentive Plan with respect to awards made to our executive officers and non-employee directors and has the authority to make awards under the 2022 Incentive Plan to all other eligible individuals. However, our Board may at any time appoint a secondary committee of one (1) or more members of the Board to have separate but concurrent authority with the Compensation Committee to make awards under the 2022 Incentive Plan to individuals other than executive officers and non-employee directors. The Board or the Compensation Committee may also delegate authority to administer the 2022 Incentive Plan with respect to such individuals to one or more of our officers.

Change in Control. In the event we should experience a change in control, the following provisions are in effect for all outstanding awards under the 2022 Incentive Plan, unless provided otherwise in an award agreement entered into with the participant:

- Each outstanding award may be assumed, substituted, replaced with a cash retention program that preserves the intrinsic value of the award and provides for subsequent payout in accordance with the same vesting schedule applicable to the award or otherwise continued in effect by the successor corporation.

- To the extent an award is not so assumed, substituted, replaced, or continued, the award will automatically accelerate in full (with vesting of performance-based awards to be determined with reference to actual performance attained as of the change in control or based on target level), unless the acceleration of such award is precluded by other limitations imposed in the applicable award agreement.
- The plan administrator has complete discretion to grant one or more awards which will vest in the event the individual's service with us or the successor entity is terminated within a designated period following a change in control transaction in which those awards are assumed or otherwise continued in effect.
- Unless the plan administrator establishes a different definition for one or more awards, a change in control will be deemed to occur for purposes of the 2022 Incentive Plan in the event (a) a merger or asset sale or (b) there occurs any transaction pursuant to which any person or group of related persons becomes directly or indirectly the beneficial owner of securities possessing 50% or more of the total combined voting power of our outstanding securities or (c) there is a change in the majority of the Board effected through one or more contested elections for board membership.

ESPP

In connection with the Business Combination, we adopted the LMF Acquisition Opportunities, Inc. 2022 Employee Stock Purchase Plan (the "ESPP") that became effective upon the Closing. The ESPP is broad-based and allows us to provide an incentive to attract, retain and reward our eligible employees and those of any participating subsidiary companies (whether now existing or subsequently established) with the opportunity to periodically purchase shares of our Common Stock at a discount through their accumulated periodic payroll deductions. The ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code of 1986, as amended ("Section 423"). Favorable tax treatment is available for United States tax residents participating in a Section 423 plan. The ESPP also authorizes the grant of rights to purchase shares that do not qualify under Section 423 pursuant to rules, procedures or sub-plans adopted by the plan administrator to achieve tax, securities law, or other compliance objectives in particular locations outside of the United States. Up to 380,000 shares of Common Stock will be available for issuance under the ESPP (subject to adjustments).

Subject to the terms of the ESPP, a committee of two or more Board members appointed by the Board, in its role as plan administrator, has the authority to interpret and construe any provision of the ESPP, establish rules and regulations relating to administering the ESPP, and make all other determinations necessary or advisable for the administration of the ESPP. To the extent applicable law permits, the plan administrator may, to the extent it deems appropriate, delegate, administrative duties.

Change in Control. In the event of a change in control (as defined in the ESPP), the plan administrator may take such action as deemed appropriate including (i) having the successor entity (or its parent or subsidiary corporation) assume our obligations under the ESPP and the outstanding purchase rights, (ii) accelerating the next purchase date in the then current offering period to a date immediately before the closing date of the change in control, and applying the accumulated payroll deductions to the purchase of shares of our Common Stock at the purchase price in effect for that offering period or (iii) terminating all outstanding purchase rights and refunding all accumulated payroll deductions.

Health and Welfare Plans

All of the Company's full-time employees, including its named executive officers, are eligible to participate in its health and welfare plans, including medical, dental, vision, voluntary life insurance, voluntary short-term and long-term disability insurance, and employee assistance program benefits made available to its employees.

Non-Employee Director Compensation

For 2022, members of SeaStar Medical's board of directors earned cash director fees for services rendered as such. For more information, see "Fees Earned or Paid in Cash" below.

In addition, from time to time, certain members of SeaStar Medical’s board of directors who are not employees of SeaStar Medical received stock options to purchase shares of common stock and restricted stock units, each under the 2019 Stock Incentive Plan. The table below shows the aggregate grant date fair market value of restricted stock units and stock options granted for the year ended December 31, 2022, to each non-employee director.

In addition, certain members of SeaStar Medical’s board of directors who are not employees of SeaStar Medical have entered into consulting agreements to provide SeaStar Medical certain non-director services. The table below shows the consulting fees earned from or paid or payable by SeaStar Medical for the year ended December 31, 2022, to each non-employee director.

Name	Fees Earned or Paid in Cash ⁽¹⁾ (\$)	Stock Awards ⁽²⁾ (\$)	Option Awards ⁽³⁾ (\$)	All Other Compensation (\$)	Total (\$)
Richard Barnett	\$ 17,667	\$ 70,220 ⁽⁴⁾	\$ 8,143	\$ —	\$ 96,030
Ray Chow	\$ —	\$ 70,220 ⁽⁵⁾	\$ 19,079	\$ 400,000 ⁽⁶⁾	\$ 489,299
Allan Collins	\$ 9,000	\$ 70,220 ⁽⁴⁾	\$ 8,143	\$ —	\$ 87,363
David Humes	\$ —	\$ 70,220 ⁽⁷⁾	\$ 6,170	\$ 135,713	\$ 211,883
Andres Lobo	\$ 7,667	\$ —	\$ —	\$ —	\$ 7,667
Ken Van Heel	\$ 10,333	\$ 70,220 ⁽⁴⁾	\$ 8,207	\$ —	\$ 88,760
Bruce Rodgers	\$ 8,667	\$ —	\$ —	\$ —	\$ 8,667
Richard Russell	\$ 7,667	\$ —	\$ —	\$ —	\$ 7,667

(1) Amounts reflect the director fees earned for attendance at the November 2022 Board meeting.

(2) Amounts reflect the grant date fair value of restricted stock units held by our non-employee directors calculated in accordance with FASB ASC Topic 718. For information regarding assumptions underlying the valuation of equity awards, see Note 2 to our audited financial statements incorporated by reference into this prospectus.

(3) Amounts reflect the grant date fair value of options granted to our non-employee directors calculated in accordance with FASB ASC Topic 718. For information regarding assumptions underlying the valuation of equity awards, see Note 2 to our audited financial statements incorporated by reference into this prospectus.

(4) The restricted stock units were granted on April 4, 2022 and vest with respect to (i) fifty percent (50%) of the units upon completion of one (1) year of service measured from April 21, 2022, and (ii) the balance of the units vest in a series of twelve (12) successive equal monthly installments upon completion of each additional month of service over the twelve (12) month period measured from April 21, 2022, subject to the terms of the award agreement.

(5) The restricted stock units were granted on April 4, 2022 and vest with respect to one hundred percent (100%) of the units upon completion of one (1) year of service measured from April 21, 2022, subject to the terms of the award agreement. As a result of Mr. Chow’s death on November 24, 2022, all units under the award forfeited.

(6) Represents cash compensation of \$250,000 paid to Mr. Chow during fiscal 2022 for consulting services and \$150,000 transaction bonus in connection with the Business Combination. See “SeaStar Medical Related Party Transactions.”

(7) The restricted stock units were granted on April 4, 2022 and vest with respect to one hundred percent (100%) of the units upon completion of one (1) year of service measured from April 21, 2022, subject to the terms of the award agreement.

(8) Represent payments to Mr. Humes and Innovative BioTherapies, Inc., an entity controlled and wholly-owned by Dr. Humes, pursuant to a consulting agreement and research service agreement, respectively, during fiscal year 2022. See “SeaStar Medical Related Party Transactions.”

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Convertible Note Financings

On June 10, 2021, SeaStar Medical entered into a Convertible Note Purchase Agreement with the Dow Pension Funds for the issuance and sale of convertible promissory notes (the “June 2021 Notes”) with a total principal amount of \$500,000 at an interest rate of 8% per year. The June 2021 Notes were initially scheduled to mature on June 10, 2022, which was subsequently extended to December 10, 2022.

On September 10, 2021, SeaStar Medical entered into a Convertible Note Purchase Agreement with the Dow Pension Funds for the issuance and sale of convertible promissory notes (the “September 2021 Notes”) with a total principal amount of \$2.6 million at an interest of 8% per year based on four separate closings on September 10, 2021, October 15, 2021, November 15, 2021, and December 15, 2021, respectively. The convertible note purchase agreements were subsequently amended to provide that the final December 15, 2021 closing was to be split into two separate closings of equal amounts on March 16, 2022 and April 18, 2022, respectively. The maturity dates of the September 2021 Notes range from one to three years from the date of issuance.

On December 31, 2021, SeaStar Medical entered into a Convertible Note Purchase Agreement with certain purchasers named therein, pursuant to which SeaStar Medical issued and sold an aggregate principal amount of \$217,715 in convertible promissory notes (the “December 2021 Notes”) and offered to exchange shares of Series A-2 Preferred Stock held by holders of December 2021 Notes with such number of shares of Series B Preferred Stock equal to (i) the purchase price of the December 2021 Notes purchased by such investors divided by (ii) \$12.34 per share (the “Note Financing and Exchange”). Additionally, upon a liquidation event (the Business Combination does not constitute a liquidation event under the December 2021 Notes), repayment under the December 2021 Notes would require repayment equal to twice their outstanding balance. On February 8, 2022, SeaStar Medical and the Dow Pension Funds amended the September 2021 Notes so they have identical terms and conditions to the December 2021 Notes. In connection with such amendment, all shares of Series A-2 Preferred Stock held by the Dow Pension Funds were exchanged for such number of shares of Series B Preferred Stock equal to the purchase price of the September 2021 Notes divided by \$12.34.

On April 12, 2022, SeaStar Medical entered into a Convertible Bridge Loan Note Purchase Agreement with the Dow Pension Funds for the issuance and sale of convertible promissory notes with a total principal amount of \$800,000 at an interest rate of 8% per year (the “Dow April 2022 Bridge Notes”). The Dow April 2022 Bridge Notes are scheduled to mature on April 12, 2025. In connection with the Dow April 2022 Bridge Notes, SeaStar Medical agreed with the Dow Pension Funds that, upon the filing of SeaStar Medical’s Ninth Amended and Restated Certificate of Incorporation and immediately prior to the effective date of the Business Combination, SeaStar Medical will convert or exchange each share of Series A-1 Preferred Stock held by the Dow Pension Funds into three shares of common stock of SeaStar Medical. All of SeaStar Medical’s outstanding convertible promissory notes were converted into shares of common stock of SeaStar Medical at a conversion price equal to \$10.00 per share, subject to certain adjustments, immediately prior to the effective date of the Business Combination.

A summary of the convertible notes issued to the Dow Pension Funds is set forth below:

<u>Date of Issuance</u>	<u>Principal Amount</u>	<u>Maturity Date</u>	<u>Interest Rate Per Annum</u>
June 10, 2021	\$ 500,000	December 10, 2022	8%
September 10, 2021 (in five tranches)			
Tranche 1—September 10, 2021	\$ 1,400,000	December 31, 2024	8%
Tranche 2—October 15, 2021	\$ 400,000	December 31, 2024	8%
Tranche 3—November 15, 2021	\$ 400,000	December 31, 2024	8%
Tranche 4—March 16, 2022	\$ 200,000	March 16, 2024	8%
Tranche 5—April 18, 2022	\$ 200,000	April 18, 2025	8%
April 12, 2022	\$ 800,000	April 12, 2025	8%

Humes Consulting Agreement

On January 9, 2020, SeaStar Medical entered into a consulting agreement with Dr. H. David Humes (the “Humes Consulting Agreement”), a director of SeaStar Medical, pursuant to which Dr. Humes agreed to provide certain consulting services for SeaStar Medical as a scientific advisor with respect to the execution of the SCD pediatric testing and trials, patent work related to the SCD, due diligence activity for investors and FDA communications. Pursuant to the Humes Consulting Agreement, Dr. Humes is entitled to compensation of \$175 per hour, up to 15 hours per week unless otherwise mutually agreed upon between the parties. Additionally, pursuant to the Humes Consulting Agreement, SeaStar Medical granted Dr. Humes options to purchase of 20,357 shares of common stock of SeaStar Medical.

Stock Purchase Agreement and IBT Research Services Agreement

On January 9, 2020, SeaStar Medical entered into a Stock Purchase Agreement with Innovative BioTherapies, Inc. (“IBT”) and Dr. Humes (the “IBT Stock Purchase Agreement”) pursuant to which SeaStar Medical sold 100% of IBT’s issued and outstanding shares of common stock to Dr. Humes.

Contemporaneously with the IBT Stock Purchase Agreement, SeaStar Medical entered into a Research Services Agreement with IBT (the “IBT Research Services Agreement”), pursuant to which SeaStar Medical and IBT agreed to jointly identify and define specific research projects for IBT to execute so as to advance SeaStar Medical’s technology platform. Pursuant to the terms of the IBT Research Services Agreement, SeaStar Medical agreed to pay IBT a monthly retainer fee equal to \$45,000, payable in nine (9) equal monthly installments of \$5,000 per month. As consideration for its sale of IBT to Dr. Humes, SeaStar Medical received a \$110,000 credit for future payment obligations to IBT under the IBT Research Services Agreement. SeaStar Medical owns all rights in the work product that results from IBT’s services provided under the IBT Research Services Agreement (the “Deliverables”); however, SeaStar Medical grants IBT a non-exclusive, non-transferable, non-sublicenseable, royalty-free limited right and license to use SeaStar Medical materials and property for the sole purpose of performing the services. No further license is granted to or retained by IBT in such Deliverables and IBT is not permitted to use the Deliverables for any purposes. Additionally, SeaStar Medical has a right of first refusal until January 9, 2025 to license or purchase any intellectual property created by IBT outside of the scope of the IBT Research Services Agreement that is related to our SCD or similar blood filtration devices for patients.

Humes MOU and Convertible Notes

Pursuant to a Memorandum of Understanding between SeaStar Medical and Dr. Humes, dated December 31, 2021, subject to a waiver agreement (“Humes MOU”), the parties agreed that SeaStar Medical pay certain outstanding invoices and future amounts incurred for consulting services performed by Dr. Humes under the Humes Consulting Agreement in the form of convertible promissory notes up to an aggregate amount of \$348,963, which consists of certain outstanding invoices as well as future amounts to be incurred in connection with Dr. Humes’ consulting services pursuant to the Humes Consulting Agreement. As such, SeaStar Medical has issued the following convertible promissory notes (the “Humes Notes”) as payments under the Humes Consulting Agreement to date:

<u>Date of Issuance</u>	<u>Principal Amount</u>	<u>Maturity Date</u>	<u>Interest Rate Per Annum</u>
December 31, 2021	\$ 44,713	December 31, 2024	8%
January 1, 2022	\$ 10,063	January 1, 2025	8%
February 28, 2022	\$ 2,100	February 28, 2025	8%
March 31, 2022	\$ 8,488	March 31, 2025	8%

The Humes Note issued on December 31, 2021 was part of the Note Financing and Exchange. Accordingly, Dr. Humes’s 3,623 shares of Series A-2 Preferred Stock were converted into 3,623 shares of Series B Preferred

Stock in December 2021. Dr. Humes waived the right to exchange additional shares of Series A-2 Preferred Stock into Series B Preferred Stock in connection with the Humes Notes issued on January 1, 2022, February 28, 2022 and March 31, 2022.

The Humes Notes will be converted into shares of common stock of SeaStar Medical at a conversion price equal to \$10.00, subject to certain adjustments, immediately prior to the effective date of the Business Combination. In addition, SeaStar Medical and Dr. Humes have agreed that no additional convertible promissory notes will be issued to Dr. Humes under the Humes MOU prior to the closing of the Business Combination.

Humes Participation in non-Dow April 2022 Bridge Notes

On April 12, 2022, SeaStar Medical entered into a Convertible Note Purchase Agreement with certain holders (not including the Dow Pension Funds) of Series A-2 Preferred Stock and Series B Preferred Stock of the Company, pursuant to which SeaStar Medical issued a total of approximately \$422,000 in principal amount of convertible notes (the “non-Dow April 2022 Bridge Notes”). Dr. Humes purchased a non-Dow April 2022 Bridge Note with a principal amount of \$121,000. Pursuant to the terms of the related Convertible Note Purchase Agreement, SeaStar Medical agreed to convert, immediately prior to the effective date of the Business Combination, each share of Series A-2 Preferred Stock and Series B Preferred Stock held by purchasers of the Non-Dow April 2022 Bridge Notes into either (a) one point four (1.4) shares of common stock of SeaStar Medical or (ii) two (2) shares of common stock of SeaStar Medical, depending on the amount of the purchaser’s participation in the April 2022 financing. Accordingly, immediately prior to the effective date of the Business Combination, the 24,656 shares of Series A-2 Preferred Stock and 3,623 shares of Series B Preferred Stock held by Dr. Humes will be converted into 56,558 shares of common stock of SeaStar Medical (based on a multiple of two) pursuant to the terms of the Convertible Note Purchase Agreement, the non-Dow April 2022 Bridge Notes, and SeaStar Medical’s Ninth Amended and Restated Certificate of Incorporation.

IBT MOU and Convertible Notes

Pursuant to a Memorandum of Understanding between SeaStar Medical and IBT, dated December 31, 2021, as amended (the “IBT MOU”), the parties agreed that SeaStar Medical pay outstanding amount of invoices and certain future amounts incurred for research and technical services performed by IBT pursuant to the IBT Research Services Agreement in the form of convertible promissory notes in the aggregate amount of \$144,961.02. As such, SeaStar Medical has issued the following convertible promissory notes (the “IBT Notes”) as payments under the IBT Research Services Agreement to date:

<u>Date of Issuance</u>	<u>Principal Amount</u>	<u>Maturity Date</u>	<u>Interest Rate Per Annum</u>
December 31, 2021	\$ 69,148.62	December 31, 2024	8%
January 31, 2022	\$ 14,635.96	January 31, 2025	8%
March 31, 2022	\$ 61,176.44	March 31, 2025	8%

The IBT Note issued on December 31, 2021 was part of the Note Financing and Exchange. Accordingly, IBT’s 187 shares of Series A-2 Preferred Stock were converted into 187 shares of Series B Preferred Stock in December 2021. In addition, SeaStar Medical and IBT have agreed that other than the notes set forth above, no additional convertible promissory notes will be issued to IBT under the IBT MOU prior to the closing of the Business Combination.

Chow Consulting Agreement

On November 1, 2019, SeaStar Medical entered into an Independent Consultant Agreement with Mr. Ray Chow, a director of SeaStar Medical, which was amended and restated on May 22, 2020 (the “Chow Consulting Agreement”). Pursuant to the Chow Consulting Agreement, Mr. Chow agreed to provide, among other services, corporate, strategy and business development assistance to SeaStar Medical. As compensation for such services,

SeaStar Medical agreed to pay Mr. Chow \$25,000 per month during the term of the Chow Consulting Agreement. In addition, pursuant to the Chow Consulting Agreement, Mr. Chow is entitled to receive, subject to approval by SeaStar Medical's board of directors, options to purchase up to 141,733 shares of common stock of SeaStar Medical. The Chow Consulting Agreement is effective until May 22, 2023, unless renewed by SeaStar Medical in writing at its sole discretion. Each party may terminate the agreement by providing 90-days' advance notice to the other party. SeaStar Medical may terminate the Chow Consulting Agreement upon a Change in Control (as defined in the Chow Consulting Agreement). SeaStar Medical terminated the Chow Consulting Agreement immediately prior to the closing of the Business Combination. The Chow Consulting Agreement terminated upon Mr. Chow's death on November 24, 2022.

Pursuant to the Chow Consulting Agreement, SeaStar Medical may suspend the payment of fees to Mr. Chow in the event SeaStar Medical's cash and cash equivalents on its balance sheet is less than \$500,000. In addition, SeaStar Medical will be required to pay all fees due to Mr. Chow under the Chow Consulting Agreement in the event of a Change of Control of SeaStar Medical, which includes completion of the Business Combination. Since the execution of the Chow Consulting Agreement, SeaStar Medical has paid a total of \$588,258.50 to Mr. Chow for his services under the Chow Consulting Agreement.

Chow Bonus Agreement

In December 2021, SeaStar Medical entered into a transaction bonus agreement with Mr. Chow, which provide for two long-term incentives: a business development bonus and an exit event bonus.

The business development bonus payable under the transaction bonus agreements is based on the amount of cash received by SeaStar Medical, with a threshold amount of \$125,000 payable, if cash payments exceed a specified threshold, prior to December 31, 2022. If the amount of business development proceeds falls below a threshold set forth in the agreements, then the business development bonus will vest with respect to twenty-five percent (25%) on each of the six (6) month anniversaries of SeaStar Medical receiving a specified minimum amount of proceeds, provided that such vesting shall immediately accelerate in full if the amount of such proceeds exceeds a specified multiple of the minimum amount or SeaStar Medical experiences an exit event.

The exit event bonus payable to Mr. Chow upon the occurrence of certain merger transactions resulting in an acquisition of SeaStar Medical, our post-merger securities being publicly-traded, or an initial public offering (an "exit event"). The calculation of the bonus varies based on the exit event. The bonus is based on a percentage of the gross cash proceeds exceeding a specified threshold for an acquisition by way of merger, consolidation, reorganization, or other transaction (or series of transactions) resulting in SeaStar Medical stockholders owning less than 50% of the voting interests in the surviving entity, a sale, lease, exclusive license, or other disposition of substantially all of SeaStar Medical's assets, or any person or group becoming the beneficial owner of more than 50% of SeaStar Medical's outstanding voting securities having the right to vote for members of the Board. A \$150,000 exit event bonus is payable in connection with an initial public offering and other business combination resulting in SeaStar Medical's post-merger securities being publicly-traded. In December 2022, the Board determined that the \$150,000 cash exit event bonus would be payable to Mr. Chow's estate in connection with the Business Combination.

Barnett Consulting Agreement

On March 1, 2021, SeaStar Medical entered into an Independent Consulting Agreement with Rick Barnett, a director of SeaStar Medical, pursuant to which Mr. Barnett provides SeaStar Medical services related to business development support, hospital strategy development, commercial strategy planning, fundraising support and IPO preparation. As compensation for such services, SeaStar Medical paid Mr. Barnett \$12,500 per month during the term of the Independent Consulting Agreement. The Independent Consulting Agreement with Rick Barnett was terminated on March 1, 2022. Since the execution of the Independent Consulting Agreement and prior its termination, SeaStar Medical paid a total of \$112,500 to Mr. Barnett.

Collins Consulting Agreement

On March 1, 2021, SeaStar Medical entered into an Independent Consulting Agreement with Allan Collins, a current director of SeaStar Medical, pursuant to which Mr. Collins provides services related to clinical development plans, medical education plans, key opinion leader development and medical affairs plans. As compensation for such services, SeaStar Medical paid Mr. Collins \$12,500 per month during the term of the Independent Consulting Agreement. The Independent Consulting Agreement with Allan Collins was terminated on March 1, 2022. Since the execution of the Independent Consulting Agreement and prior its termination, SeaStar Medical paid a total of \$112,500 to Mr. Collins.

Subscription Agreements/PIPE Investment

On August 23, 2022, LMAO entered into Subscription Agreements with the PIPE Investors pursuant to which the PIPE Investors have agreed to purchase, and LMAO has agreed to sell, an aggregate of 700,000 shares of Common Stock at \$10.00 per share and the PIPE Warrants for an aggregate purchase price of \$7,000,000. The obligations to consummate the transaction contemplated by the Subscription Agreements are conditioned upon, among other things, customary closing conditions and the consummation of the transactions contemplated by the Merger Agreement. The Dow Pension Funds have agreed to purchase an aggregate of \$5,000,000 in the PIPE Investment. The transactions contemplated by the Subscription Agreements were consummated immediately after the Closing.

Business Combination Transactions

In connection with the closing of the Business Combination, the Company entered into various transactions with certain related parties. For a detailed description of such transactions, please see “*Business Combination—Amended and Restated Registration Rights Agreement; Director Nomination Agreement; Amendment to Credit Agreement with LMFA; and Amended Promissory Note and Sponsor Promissory Note*”.

Company Related Person Transaction Policy

The Company adopted a related person transaction policy that sets forth its procedures for the identification, review, consideration and approval or ratification of related person transactions. For purposes of the Company’s policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which the Company and any related person are, were or will be participants in which the amount involved exceeds \$120,000. Transactions involving compensation for services provided to the Company as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of the Company’s voting securities and any of their respective immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, the Company’s management must present information regarding the related person transaction to the Company’s audit committee, or, if audit committee approval would be inappropriate, to another independent body of the Board, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests (direct and indirect) of the related persons, the benefits to the Company of the transaction and whether the transaction is on terms that are comparable to the terms available to or from (as the case may be) an unrelated third party or to or from employees generally. Under the policy, the Company will collect information that it deems reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable the Company to identify any existing or potential related person transactions and to effectuate the terms of the policy. In addition, under the Code of Conduct, the Company’s employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could

be expected to give rise to a conflict of interest. In considering related person transactions, the Company's audit committee, or other independent body of the Board, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to the Company;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, the Company's audit committee, or other independent body of the Board, must consider, in light of known circumstances, whether or not the transaction is consistent with the Company's best interests and those of the Company's stockholders, as the Company's audit committee, or other independent body of the Board, determines in the good faith exercise of its discretion.

BENEFICIAL OWNERSHIP OF SECURITIES

The following table sets forth information regarding the beneficial ownership of Common Stock on March 31, 2023 by:

- each person known by the Company to be the beneficial owner of more than 5% of outstanding Common Stock;
- each of the Company's current named executive officers and directors; and
- all current executive officers and directors of the Company as a group.

Beneficial ownership is determined according to the rules of the SEC, which generally provide that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security or the right to acquire such power within 60 days. Except as indicated by the footnotes below, the Company believes, based on the information furnished to it, that the persons and entities named in the table below will have sole voting and investment power with respect to all stock that they beneficially own, subject to applicable community property laws.

Common stock issuable upon exercise of warrants or options currently exercisable within 60 days are deemed outstanding solely for purposes of calculating the percentage of total voting power of the beneficial owner thereof.

Subject to the paragraph above, the percentage ownership of Common Stock is based on 13,296,516 shares of Common Stock outstanding as of March 31, 2023.

<u>Name and Address of Beneficial Owner</u>	<u>Number of Shares Beneficially Owned</u>	<u>% of Class</u>
<i>Five Percent Holders</i>		
LMFAO Sponsor, LLC ⁽¹⁾	8,325,500	43.7%
Saba Capital Management, L.P. ⁽²⁾	972,567	7.7%
3i, LP ⁽³⁾	1,325,200	9.5%
Dow Employees' Pension Plan Trust ⁽⁴⁾	4,751,567	34.9%
Union Carbide Employees' Pension Plan Trust ⁽⁵⁾	3,167,706	23.5%
<i>Directors and Executive Officers</i> ⁽⁶⁾		
Eric Schlorff ⁽⁷⁾	189,620	1.4%
Rick Barnett ⁽⁸⁾	18,841	*
Allan Collins, MD ⁽⁸⁾	18,841	*
Kenneth Van Heel ⁽⁹⁾	14,251	*
Andres Lobo	—	*
Bruce Rodgers ⁽¹⁾	—	*
Richard Russell ⁽¹⁾	—	*
Caryl Baron ⁽¹⁰⁾	37,620	*
Kevin Chung, MD	—	*
All directors and executive officers as a group (9 persons)	279,173	2.1%

* Less than 1%.

(1) Includes (i) 2,587,500 shares of Common Stock and (ii) 5,738,000 shares of Common Stock issuable upon the exercise of private warrants held by the Sponsor that became exercisable upon consummation of the Business Combination. Sponsor is the record holder of the shares reported herein. The sole manager of the Sponsor is LMFA, of which Bruce Rodgers is the Chief Executive Officer, President, and Chairman of the Board of Directors and Richard Russell is the Chief Financial Officer, Treasurer, and Secretary. Although

Mr. Rodgers and Mr. Russell have membership interests in the Sponsor, the board of directors of LMFA has sole voting and investment discretion with respect to the shares held of record by the Sponsor, and as such, neither Mr. Rodgers nor Mr. Russell is deemed to have beneficial ownership of the Common Stock held directly by the Sponsor. The business address of the Sponsor is 1200 W. Platt St., Suite 100, Tampa, Florida 33606.

- (2) According to Schedule 13G filed on February 14, 2022. The business address of Saba Capital Management, L.P. is 405 Lexington Avenue, 58th Floor, New York, NY 10174.
- (3) Includes (i) 1,215,690 shares of Common Stock and (ii) 528,352 shares of Common Stock subject to warrants exercisable within 60 days of March 31, 2023. The business address of 3i, LP is 140 Broadway, 38th Floor, New York, NY 10005.
- (4) Includes (i) 4,449,841 shares of Common Stock and (ii) 301,726 shares of Common Stock subject to warrants exercisable within 60 days of March 31, 2023. The business address of the Dow Employees' Pension Plan Trust is Sylvia Stoesser Center, 2211 H.H. Dow Way, Midland, MI 48674.
- (5) Includes (i) 2,966,555 shares of Common Stock and (ii) 201,151 shares of Common Stock subject to warrants exercisable within 60 days of March 21, 2023. The business address of the Union Carbide Employees' Pension Plan Trust is Sylvia Stoesser Center, 2211 H.H. Dow Way, Midland, MI 48674.
- (6) Unless otherwise noted, the business address of each of the following entities or individuals is c/o SeaStar Medical Holding Corporation, 3513 Brighton Blvd Ste 410, Denver, CO 80216.
- (7) Includes 2,909 shares of Common Stock issuable upon exercise of stock options within 60 days of March 31, 2023, and the vested portion of the 198,530 RSUs granted on April 4, 2022 where 50% plus one month vested (103,398 RSUs) on the first anniversary of the grant date, and then monthly for 2 years.
- (8) Includes 848 shares of Common Stock issuable upon exercise of stock options within 60 days of March 31, 2023, and the vested portion of the 8,422 RSUs granted on April 4, 2022, where 50% vested, plus one month vested (4,561 RSUs) on the first anniversary of the grant date and then monthly for 1 year.
- (9) Includes 848 shares of Common Stock issuable upon exercise of stock options within 60 days of March 31, 2023, and the vested portion of the 8,422 RSUs granted on April 4, 2022, where 50% vested, plus one month vested (4,561 RSUs) on the first anniversary of the grant date and then monthly for 1 year.
- (10) Includes 1,188 shares of Common Stock issuable upon exercise of stock options within 60 days of March 31, 2023 and the vested portion of the 42,112 RSUs granted on April 4, 2022, where 50% vested, plus one month vested (21,932 RSUs) on the first anniversary of the grant date and then monthly for 2 years.

SELLING STOCKHOLDER

This prospectus relates to the possible resale from time to time by Tumim Stone Capital of any or all of the shares of Common Stock that may be issued by us to Tumim Stone Capital under the Purchase Agreement. For additional information regarding the issuance of Common Stock covered by this prospectus, see the section titled “Tumim Stone Capital Committed Equity Financing” above. We are registering the shares of Common Stock pursuant to the provisions of the Registration Rights Agreement we entered into with Tumim Stone Capital on August 23, 2022 in order to permit the selling stockholder to offer the shares for resale from time to time. Except for the transactions contemplated by the Purchase Agreement and the Registration Rights Agreement, Tumim Stone Capital has not had any material relationship with us within the past three years.

The table below presents information regarding the Selling Stockholder and the shares of Common Stock that it may offer from time to time under this prospectus. This table is prepared based on information supplied to us by the Selling Stockholder, and reflects holdings as of March 31, 2023. The number of shares in the column “Shares to be Sold in this Offering” represents all of the shares of Common Stock that the Selling Stockholder may offer under this prospectus. The Selling Stockholder may sell some, all or none of its shares in this offering. We do not know how long the Selling Stockholder will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the Selling Stockholder regarding the sale of any of the shares.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act, and includes shares of Common Stock with respect to which the Selling Stockholder has sole or shared voting or investment power, or the right to acquire sole or shared voting or investment power within sixty days. The percentage of shares of Common Stock beneficially owned by the Selling Stockholder prior to the offering shown in the table below is based on an aggregate of 13,296,516 shares of our Common Stock outstanding on March 31, 2023. Because the purchase price of the shares of Common Stock issuable under the Purchase Agreement is determined during the applicable VWAP Purchase Valuation Period for a VWAP Purchase, the number of shares that may actually be sold by the Company under the Purchase Agreement may be fewer than the number of shares being offered by this prospectus. The last column assumes the resale by the Selling Stockholder of all of the shares of Common Stock being offered for resale pursuant to this prospectus.

<u>Name of Selling Stockholder</u>	<u>Number of Shares Owned Prior to Offering</u>		<u>Maximum Number of Shares to be Offered Pursuant to this Prospectus</u>	<u>Number of Shares Owned After Offering</u>	
	<u>Number⁽¹⁾</u>	<u>%</u>		<u>Number⁽²⁾</u>	<u>%</u>
Tumim Stone Capital LLC ⁽³⁾	5,000	*	6,718,842	—	—

* Less than 1%.

- (1) This number represents the 5,000 shares of Common Stock we issued to Tumim as Commitment Shares in partial consideration for entering into the Purchase Agreement with us that have not been resold by Tumim as of March 31, 2023. In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares beneficially owned prior to the offering all of the shares that Tumim may be required to purchase under the Purchase Agreement, because the issuance of such shares is solely at our discretion and is subject to conditions contained in the Purchase Agreement, the satisfaction of which are entirely outside of Tumim’s control, including the registration statement that includes this prospectus becoming and remaining effective. Furthermore, the Purchases of shares of our Common Stock are subject to certain agreed upon maximum amount limitations set forth in the Purchase Agreement. Also, the Purchase Agreement prohibits us from issuing and selling any shares of our common stock to Tumim to the extent such shares, when aggregated with all other shares of our Common Stock then beneficially owned by Tumim, would cause Tumim’s beneficial ownership of our common stock to exceed the 4.99% Beneficial Ownership Limitation. The Purchase Agreement also prohibits us from issuing or selling shares of our common stock under the Purchase Agreement in excess of the 19.99% Exchange Cap, unless we obtain stockholder approval to do so, or unless sales of common stock are made at a price equal to or greater than

\$7.18 per share, such that the Exchange Cap limitation would not apply under applicable Nasdaq rules. Neither the Beneficial Ownership Cap nor the Exchange Cap (to the extent applicable under Nasdaq rules) may be amended or waived under the Purchase Agreement.

- (2) Assumes the sale of all shares being offered pursuant to this prospectus. Depending on the price per share at which we sell our Common Stock to Tumim pursuant to the Purchase Agreement, we may need to sell to Tumim under the Purchase Agreement more shares of our Common Stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the \$100 million Total Commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares. The number of shares ultimately offered for resale by Tumim is dependent upon the number of shares we sell to Tumim under the Purchase Agreement.
- (3) The business address of Tumim Stone Capital LLC is 140 Broadway, 38th Floor, New York, NY 10005. Tumim Stone Capital LLC's principal business is that of a private investor. Maier Joshua Tarlow is the manager of 3i Management, LLC, the general partner of 3i, LP, which is the sole member of Tumim Stone Capital, LLC, and has sole voting control and investment discretion over securities beneficially owned directly by Tumim Stone Capital LLC and indirectly by 3i Management, LLC and 3i, LP. 3i Management, LLC is also the manager of Tumim Stone Capital LLC. We have been advised that none of Mr. Tarlow, 3i Management, LLC, 3i, LP or Tumim Stone Capital LLC is a member of the Financial Industry Regulatory Authority, or FINRA, or an independent broker-dealer, or an affiliate or associated person of a FINRA member or independent broker-dealer. The foregoing should not be construed in and of itself as an admission by Mr. Tarlow as to beneficial ownership of the securities beneficially owned directly by Tumim Stone Capital LLC and indirectly by 3i Management, LLC and 3i, LP.

DESCRIPTION OF SECURITIES

The following summary of the material terms of our securities is not intended to be a complete summary of the rights and preferences of such securities. The descriptions below are qualified by reference to the actual text of our Charter. We urge you to read our Charter in its entirety for a complete description of the rights and preferences of our securities.

Authorized and Outstanding Stock

Our Charter authorizes the issuance of 110,000,000 shares, consisting of (a) 100,000,000 shares of Common Stock and (b) 10,000,000 shares of preferred stock (the "Preferred Stock").

The outstanding shares of Common Stock issued in the Business Combination are duly authorized, validly issued, fully paid and non-assessable. All outstanding shares of LMAO Class B Common Stock following the Business Combination were converted into shares of LMAO Class A Common Stock on a one-to-one basis. Immediately following the conversion of such Class B Common Stock into shares of Class A Common Stock, each share of Class A Common Stock issued and outstanding was reclassified, redesignated and changed into one validly issued, fully paid and non-assessable share of Common Stock.

As of March 31, 2023, there were 13,296,516 shares of Common Stock issued and outstanding and no shares of Preferred Stock issued and outstanding.

Common Stock

The Charter provides the following with respect to the rights, powers, preferences and privileges of the Common Stock:

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of Common Stock possess all voting power for the election of the Company's directors and all other matters requiring stockholder action. Holders of Common Stock are entitled to one vote per share on matters to be voted on by stockholders. Our Charter does not provide for cumulative voting rights.

Dividends

Subject to the rights, if any, of the holders of any outstanding shares of preferred stock, under the Charter, holders of Common Stock will be entitled to receive such dividends, if any, as may be declared from time to time by the Board in its discretion out of funds legally available therefor.

Liquidation, Dissolution and Winding Up

In the event of the Company's voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the Common Stock will be entitled to receive an equal amount per share of all of the Company's assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock have been satisfied and after payment or provision for payment of the Company's debts.

Preemptive or Other Rights

There are no preemptive rights or sinking fund provisions applicable to the shares of the Company's Common Stock.

Preferred Stock

Our Charter provides that shares of preferred stock may be issued from time to time in one or more series. Our Board is authorized to fix the voting rights, if any, designations, powers, preferences, the relative, participating, optional, or other special rights and any qualifications, limitations, and restrictions thereof, applicable to the shares of each series. Our Board will be able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of the Common Stock and could have anti-takeover effects. The ability of our Board to issue preferred stock without stockholder approval could have the effect of delaying, deferring, or preventing a change of control of us or the removal of existing management. We have no preferred stock outstanding at the date hereof. Although we do not currently intend to issue any shares of preferred stock, we cannot assure you that we will not do so in the future.

While we have no current plans to issue preferred stock, circumstances in which we might issue preferred stock in the future could include, among others, offerings of preferred stock undertaken for capital raising purposes (whether before or in connection with our initial business combination or thereafter), issuances in connection with acquisitions we might make in the future, or issuances in connection with potential change of control or strategic transactions involving us. Any determination by us to issue shares of preferred stock in the future will be dependent on the facts and circumstances at the time.

Warrants

Public Stockholders' Warrants

Each warrant entitles the holder thereof to purchase one share of Common Stock at a price of \$11.50 per share, subject to adjustment as discussed below, at any time after November 27, 2022. The warrants will expire on October 28, 2027, or earlier upon redemption or liquidation.

We will not be obligated to deliver any shares of Common Stock pursuant to the exercise of a warrant and will have no obligation to settle such warrant exercise unless a registration statement under the Securities Act with respect to the shares of Common Stock underlying the warrants is then effective and a prospectus relating thereto is current, subject to our satisfying our obligations described below with respect to registration. No warrant will be exercisable and we will not be obligated to issue shares of Common Stock upon exercise of a warrant unless Common Stock issuable upon such warrant exercise has been registered, qualified or deemed to be exempt under the securities laws of the state of residence of the registered holder of the warrants. In the event that the conditions in the two immediately preceding sentences are not satisfied with respect to a warrant, the holder of such warrant will not be entitled to exercise such warrant and such warrant may have no value and expire worthless. In no event will we be required to net cash settle any warrant. In the event that a registration statement is not effective for the exercised warrants, the purchaser of a unit containing such warrant will have paid the full purchase price for the unit solely for the share of Common Stock underlying such unit.

The registration statement of which this prospectus is part provides for the registration, under the Securities Act, of the issuance of the shares of Common Stock issuable upon exercise of the warrants. We will use our reasonable best efforts maintain a current prospectus relating to those shares of Common Stock until the warrants expire or are redeemed, as specified in the warrant agreement. Notwithstanding the above, if our Common Stock is at the time of any exercise of a warrant not listed on a national securities exchange such that it satisfies the definition of a "covered security" under Section 18(b)(1) of the Securities Act, we may, at our option, require holders of public warrants who exercise their warrants to do so on a "cashless basis" in accordance with Section 3(a)(9) of the Securities Act and, in the event we so elect, we will not be required to file or maintain in effect a registration statement, but we will be required to use our reasonable best efforts to register or qualify the shares under applicable blue sky laws to the extent an exemption is not available.

Once the warrants become exercisable, we may call the warrants for redemption (other than the Private Placement Warrants):

- in whole and not in part;
- at a price of \$0.01 per warrant;
- upon not less than 30 days' prior written notice of redemption (the "30-day redemption period") to each warrant holder; and
- if, and only if, the reported last sale price of the Common Stock equals or exceeds \$18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30-trading day period ending 3 business days before we send the notice of redemption to the warrant holders.

If and when the warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws.

We have established the last of the redemption criterion discussed above to prevent a redemption call unless there is at the time of the call a significant premium to the warrant exercise price. If the foregoing conditions are satisfied and we issue a notice of redemption of the warrants, each warrant holder will be entitled to exercise its warrant prior to the scheduled redemption date. However, the price of the Common Stock may fall below the \$18.00 redemption trigger price (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations, and the like) as well as the \$11.50 warrant exercise price after the redemption notice is issued.

If we call the warrants for redemption as described above, our management will have the option to require any holder that wishes to exercise its warrant to do so on a "cashless basis." In determining whether to require all holders to exercise their warrants on a "cashless basis," our management will consider, among other factors, our cash position, the number of warrants that are outstanding and the dilutive effect on our stockholders of issuing the maximum number of shares of Common Stock issuable upon the exercise of our warrants. If our management takes advantage of this option, all holders of warrants would pay the exercise price by surrendering their warrants for that number of shares of Common Stock equal to the quotient obtained by dividing: (x) the product of the number of shares of Common Stock underlying the warrants, multiplied by the difference between the exercise price of the warrants and the "fair market value" (defined below); by (y) the fair market value. The "fair market value" shall mean the average reported last sale price of the Common Stock for the 10 trading days ending on the third trading day prior to the date on which the notice of redemption is sent to the holders of warrants. If our management takes advantage of this option, the notice of redemption will contain the information necessary to calculate the number of shares of Common Stock to be received upon exercise of the warrants, including the "fair market value" in such case. Requiring a cashless exercise in this manner will reduce the number of shares to be issued and thereby lessen the dilutive effect of a warrant redemption. We believe this feature is an attractive option to us if we do not need the cash from the exercise of the warrants after our initial business combination. If we call our warrants for redemption and our management does not take advantage of this option, our Sponsor and its permitted transferees would still be entitled to exercise their Private Placement Warrants for cash or on a cashless basis using the same formula described above that other warrant holders would have been required to use had all warrant holders been required to exercise their warrants on a cashless basis, as described in more detail below.

A holder of a warrant may notify us in writing in the event it elects to be subject to a requirement that such holder will not have the right to exercise such warrant, to the extent that after giving effect to such exercise, such person (together with such person's affiliates), to the warrant agent's actual knowledge, would beneficially own in excess of 4.9% or 9.8% (or such other amount as a holder may specify) of the shares of Common Stock outstanding immediately after giving effect to such exercise.

If the number of outstanding shares of Common Stock is increased by a stock dividend payable in shares of Common Stock, or by a split-up of shares of Common Stock or other similar event, then, on the effective date of

such stock dividend, split-up or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be increased in proportion to such increase in the outstanding shares of Common Stock. A rights offering to holders of Common Stock entitling holders to purchase shares of Common Stock at a price less than the fair market value will be deemed a stock dividend of a number of shares of Common Stock equal to the product of: (i) the number of shares of Common Stock actually sold in such rights offering (or issuable under any other equity securities sold in such rights offering that are convertible into or exercisable for Common Stock); and (ii) one (1) minus the quotient of: (x) the price per share of Common Stock paid in such rights offering, divided by (y) the fair market value. For these purposes: (i) if the rights offering is for securities convertible into or exercisable for Common Stock, in determining the price payable for Common Stock, there will be taken into account any consideration received for such rights, as well as any additional amount payable upon exercise or conversion; and (ii) fair market value means the volume weighted average price of Common Stock as reported during the ten (10) trading day period ending on the trading day prior to the first date on which the shares of Common Stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive such rights.

In addition, if we, at any time while the warrants are outstanding and unexpired, pay a dividend or make a distribution in cash, securities or other assets to the holders of Common Stock on account of such shares of Common Stock (or other shares of our capital stock into which the warrants are convertible), other than: (a) as described above; (b) certain ordinary cash dividends; or (c) to satisfy the redemption rights of the holders of Common Stock in connection with the Business Combination, then the warrant exercise price will be decreased, effective immediately after the effective date of such event, by the amount of cash and/or the fair market value of any securities or other assets paid on each share of Common Stock in respect of such event.

If the number of outstanding shares of our Common Stock is decreased by a consolidation, combination, reverse stock split or reclassification of shares of Common Stock or other similar event, then, on the effective date of such consolidation, combination, reverse stock split, reclassification or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be decreased in proportion to such decrease in outstanding shares of Common Stock.

Whenever the number of shares of Common Stock purchasable upon the exercise of the warrants is adjusted, as described above, the warrant exercise price will be adjusted by multiplying the warrant exercise price immediately prior to such adjustment by a fraction (x) the numerator of which will be the number of shares of Common Stock purchasable upon the exercise of the warrants immediately prior to such adjustment, and (y) the denominator of which will be the number of shares of Common Stock so purchasable immediately thereafter.

In case of any reclassification or reorganization of the outstanding shares of Common Stock (other than those described above or that solely affects the par value of such shares of Common Stock), or in the case of any merger or consolidation of us with or into another corporation (other than a consolidation or merger in which we are the continuing corporation and that does not result in any reclassification or reorganization of our outstanding shares of Common Stock), or in the case of any sale or conveyance to another corporation or entity of the assets or other property of us as an entirety or substantially as an entirety in connection with which we are dissolved, the holders of the warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the warrants and in lieu of the shares of our Common Stock immediately theretofore purchasable and receivable upon the exercise of the rights represented thereby, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, that the holder of the warrants would have received if such holder had exercised their warrants immediately prior to such event. If less than 70% of the consideration receivable by the holders of Common Stock in such a transaction is payable in the form of Common Stock in the successor entity that is listed for trading on a national securities exchange or is quoted in an established over-the-counter market, or is to be so listed for trading or quoted immediately following such event, and if the registered holder of the warrant properly exercises the warrant within thirty days following public disclosure of such transaction, the warrant exercise price will be reduced as specified in the

warrant agreement based on the Black-Scholes value (as defined in the warrant agreement) of the warrant. The purpose of such exercise price reduction is to provide additional value to holders of the warrants when an extraordinary transaction occurs during the exercise period of the warrants pursuant to which the holders of the warrants otherwise do not receive the full potential value of the warrants.

The warrants were issued in registered form under a warrant agreement between Continental, as warrant agent, and us. The description of the warrants set forth herein is a summary and does not purport to be complete. The warrant agreement provides that the terms of the warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 65% of the then outstanding public warrants to make any change that adversely affects the interests of the registered holders of public warrants.

The warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price (or on a cashless basis, if applicable), by certified or official bank check payable to us, for the number of warrants being exercised. The warrant holders do not have the rights or privileges of holders of Common Stock and any voting rights until they exercise their warrants and receive shares of Common Stock. After the issuance of shares of Common Stock upon exercise of the warrants, each holder will be entitled to one (1) vote for each share held of record on all matters to be voted on by stockholders.

In addition, if: (x) we issue additional shares of Common Stock or equity-linked securities for capital raising purposes in connection with the closing of the Business Combination at a Newly Issued Price of less than \$9.20 per share of Common Stock (with such issue price or effective issue price to be determined in good faith by our Board and, in the case of any such issuance to our Sponsor or its affiliates, without taking into account any founder shares held by our Sponsor or its affiliates, prior to such issuance); (y) the aggregate gross proceeds from such issuances represent more than 60% of the total equity proceeds, and interest thereon, available for the funding of the Business Combination on the date of the consummation of the Business Combination (net of redemptions); and (z) the Market Value is below \$9.20 per share, the exercise price of the warrants will be adjusted (to the nearest cent) to be equal to 115% of the higher of the Market Value and the Newly Issued Price, and the \$18.00 per share redemption trigger price (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations, and the like) will be adjusted (to the nearest cent) to be equal to 180% of the higher of the Market Value and the Newly Issued Price.

We have agreed that, subject to applicable law, any action, proceeding or claim against us arising out of or relating in any way to the warrant agreement will be brought and enforced in the courts of the State of New York or the United States District Court for the Southern District of New York, and we irrevocably submit to such jurisdiction, which jurisdiction will be the exclusive forum for any such action, proceeding or claim. This provision applies to claims under the Securities Act but does not apply to claims under the Exchange Act or any claim for which the federal district courts of the United States of America are the sole and exclusive forum.

Private Placement Warrants

The Private Placement Warrants (including the Common Stock issuable upon exercise of the Private Placement Warrants) will not be redeemable by us so long as they are held by our Sponsor or its permitted transferees. Our Sponsor, or its permitted transferees, has the option to exercise the Private Placement Warrants on a cashless basis. Except as described below, the Private Placement Warrants have terms and provisions that are identical to those of the warrants sold as part of the units in our IPO, including as to exercise price, exercisability and exercise period. If the Private Placement Warrants are held by holders other than the Sponsor or its permitted transferees, the Private Placement Warrants will be redeemable by us and exercisable by the holders on the same basis as the warrants included in the units sold in our IPO.

If holders of the Private Placement Warrants elect to exercise them on a cashless basis, they would pay the exercise price by surrendering their warrants for that number of shares of Common Stock equal to the quotient obtained by dividing (x) the product of the number of shares of Common Stock underlying the warrants, multiplied by the difference between the exercise price of the warrants and the “fair market value” (defined below) by (y) the fair market value. The “fair market value” shall mean the average reported last sale price of the Common Stock for the 10 trading days ending on the third trading day prior to the date on which the notice of warrant exercise is sent to the warrant agent. The reason that LMAO agreed that these warrants would be exercisable on a cashless basis so long as they are held by the Sponsor or its permitted transferees is because it was not known at that time whether they would be affiliated with us following the Business Combination. If they are affiliated with us, their ability to sell our securities in the open market will be significantly limited. We may have policies in place in the future that prohibit insiders from selling our securities except during specific periods of time. Even during such periods of time when insiders will be permitted to sell our securities, an insider cannot trade in our securities if he or she is in possession of material non-public information. Accordingly, unlike public stockholders who could sell the shares of Common Stock issuable upon exercise of the warrants freely in the open market, the insiders could be significantly restricted from doing so. As a result, LMAO believed that allowing the holders to exercise such warrants on a cashless basis was appropriate.

In order to finance transaction costs in connection with the Business Combination, our Sponsor or an affiliate of our Sponsor or certain of our officers and directors had the option, but were not obligated to, loan us funds as may be required. On February 1, 2022, LMAO issued a promissory note to the Sponsor pursuant to which LMAO may borrow up to an aggregate principal amount of \$500,000 and to which such convertible promissory note was amended and restated on July 28, 2022 to increase the aggregate principal amount to \$1.75 million and subsequently amended by the Sponsor Note, a more detailed discussion of which is contained elsewhere in this prospectus. As of March 31, 2023, we had drawn down \$910,000 under the note to pay for offering expenses.

In addition, holders of our Private Placement Warrants are entitled to certain registration rights.

Listing

Our Common Stock and warrants are traded on the Nasdaq Capital Market under the symbols “ICU” and “ICUCW,” respectively.

PLAN OF DISTRIBUTION

The shares of common stock offered by this prospectus are being offered by the Selling Stockholder, Tumim Stone Capital LLC. The shares may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the ordinary shares offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for the ordinary shares;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

Tumim Stone Capital is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Tumim Stone Capital has informed us that it intends to use one or more registered broker-dealers to effectuate all sales, if any, of our common stock that it has acquired and may in the future acquire from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such registered broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Tumim Stone Capital has informed us that each such broker-dealer will receive commissions from Tumim Stone Capital that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the purchasers, for whom the broker-dealers may act as agent, of the shares sold by the selling stockholder through this prospectus. The compensation paid to any such particular broker-dealer by any such purchasers of shares of our common stock sold by the selling stockholder may be less than or in excess of customary commissions. Neither we nor the selling stockholder can presently estimate the amount of compensation that any agent will receive from any purchasers of shares of our common stock sold by the selling stockholder.

We know of no existing arrangements between the selling stockholder or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement of which this prospectus forms a part to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares offered by this prospectus by the selling stockholder, including

the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares by the selling stockholder, any compensation paid by the selling stockholder to any such brokers, dealers, underwriters or agents, and any other required information.

We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our common stock covered by this prospectus by the selling stockholder. As consideration for its irrevocable commitment to purchase our common stock under the Purchase Agreement, on January 20, 2023, we issued, as partial consideration, to Tumim Stone Capital 218,842 shares of our Common Stock as Commitment Shares. We also paid \$75,000 in cash to Tumim Stone Capital as reimbursement for the fees and disbursements of its counsel in connection with the transactions contemplated by the Purchase Agreement. We estimate the total cost of this offering to be \$150,000.

We also have agreed to indemnify Tumim Stone Capital and certain other persons against certain liabilities in connection with the offering of shares of our common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Tumim Stone Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Tumim Stone Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

Tumim Stone Capital has agreed that during the term of the Purchase Agreement, neither Tumim Stone Capital nor any of its affiliates nor any entity managed or controlled by Tumim Stone Capital shall, directly or indirectly, (i) engage in or effect any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or (ii) execute any stock pledge, forward sales contract, option, put, call, swap or similar hedging arrangement (including on a total return basis), which establishes a net short position with respect to our common stock.

We have advised the selling stockholder that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the date that all shares of our common stock offered by this prospectus have been sold by the selling stockholder.

Our common stock is currently listed on The Nasdaq Capital Market under the symbol "ICU".

MATERIAL UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following discussion is a summary of the U.S. federal income tax considerations generally applicable to the ownership and disposition of our Common Stock and Warrants, which we refer to collectively as our securities. This summary is based upon U.S. federal income tax law as of the date of this prospectus, which is subject to change or differing interpretations, possibly with retroactive effect. This summary does not discuss all aspects of U.S. federal income taxation that may be important to particular investors in light of their individual circumstances, including investors subject to special tax rules (e.g., financial institutions, insurance companies, broker-dealers, tax-exempt organizations (including private foundations), taxpayers that have elected mark-to-market accounting, S corporations, regulated investment companies, real estate investment trusts, passive foreign investment companies, controlled foreign corporations, investors that will hold Common Stock or Warrants as part of a straddle, hedge, conversion, or other integrated transaction for U.S. federal income tax purposes, or investors that have a functional currency other than the U.S. dollar), all of whom may be subject to tax rules that differ materially from those summarized below. In addition, this summary does not discuss other U.S. federal tax consequences (e.g., estate or gift tax), any state, local, or non-U.S. tax considerations or the Medicare tax or alternative minimum tax. In addition, this summary is limited to investors that will hold our securities as “capital assets” (generally, property held for investment) under the Internal Revenue Code of 1986, as amended, (the “Code”). No ruling from the Internal Revenue Service, (the “IRS”) has been or will be sought regarding any matter discussed herein. No assurance can be given that the IRS would not assert, or that a court would not sustain a position contrary to any of the tax aspects set forth below.

For purposes of this summary, a “U.S. Holder” is a beneficial holder of securities who or that, for U.S. federal income tax purposes is:

- an individual who is a United States citizen or resident of the United States;
- a corporation or other entity treated as a corporation for United States federal income tax purposes created in, or organized under the law of, the United States or any state or political subdivision thereof;
- an estate the income of which is includible in gross income for United States federal income tax purposes regardless of its source; or
- a trust (A) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons (within the meaning of the Code) who have the authority to control all substantial decisions of the trust or (B) that has in effect a valid election under applicable Treasury regulations to be treated as a United States person.

A “non-U.S. Holder” is a beneficial holder of securities that is neither a U.S. Holder nor a partnership for U.S. federal income tax purposes.

If a partnership (including an entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our securities, the tax treatment of a partner, member or other beneficial owner in such partnership will generally depend upon the status of the partner, member or other beneficial owner, the activities of the partnership and certain determinations made at the partner, member or other beneficial owner level. If you are a partner, member or other beneficial owner of a partnership holding our securities, you are urged to consult your tax advisor regarding the tax consequences of the ownership and disposition of our securities.

THIS DISCUSSION MATERIAL OF U.S. FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. PROSPECTIVE HOLDERS SHOULD CONSULT THEIR TAX ADVISORS CONCERNING THE U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF OWNING AND DISPOSING OF OUR SECURITIES, AS WELL AS THE APPLICATION OF ANY, STATE, LOCAL AND NON-U.S. INCOME, ESTATE AND OTHER TAX CONSIDERATIONS.

U.S. Holders

Taxation of Distributions

We have not paid cash dividends on our capital stock, and we do not anticipate paying any dividends on our Common Stock in the foreseeable future. However, if we do pay distributions to U.S. Holders of shares of our Common Stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of current and accumulated earnings and profits will constitute a return of capital that will be applied against and reduce (but not below zero) the U.S. Holder's adjusted tax basis in our Common Stock. Any remaining excess will be treated as gain realized on the sale or other disposition of the Common Stock and will be treated as described under "*U.S. Holders—Gain or Loss on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock*" below.

Dividends we pay to a U.S. Holder that is a taxable corporation generally will qualify for the dividends received deduction if the requisite holding period is satisfied. With certain exceptions (including dividends treated as investment income for purposes of investment interest deduction limitations), and provided certain holding period requirements are met, dividends we pay to a non-corporate U.S. Holder will generally constitute "qualified dividends" that will be subject to tax at the maximum tax rate accorded to long-term capital gains.

Gain or Loss on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock

A U.S. Holder will recognize gain or loss on the sale, taxable exchange or other taxable disposition of our Common Stock. Any such gain or loss will be capital gain or loss, and will be long-term capital gain or loss if the U.S. Holder's holding period for the Common Stock so disposed of exceeds one year. The amount of gain or loss recognized will generally be equal to the difference between (1) the sum of the amount of cash and the fair market value of any property received in such disposition and (2) the U.S. Holder's adjusted tax basis in its Common Stock so disposed of. A U.S. Holder's adjusted tax basis in its Common Stock will generally equal the U.S. Holder's acquisition cost less any prior distributions treated as a return of capital. The deductibility of capital losses is subject to limitations.

Redemption of Common Stock

In the event that a U.S. Holder's Common Stock is redeemed by us, including pursuant to an open market transaction, the treatment of the transaction for U.S. federal income tax purposes will depend on whether the redemption qualifies as sale of the Common Stock under Section 302 of the Code. If the redemption qualifies as a sale of Common Stock under the tests described below, the tax consequences to the U.S. Holder will be the same as described under "*U.S. Holders—Gain or Loss on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock*" above. If the redemption does not qualify as a sale of Common Stock, the U.S. Holder will be treated as receiving a corporate distribution, the tax consequences of which are described above under "*U.S. Holders—Taxation of Distributions.*" Whether the redemption qualifies for sale treatment will depend primarily on the total number of shares of our stock treated as held by the U.S. Holder (including any stock constructively owned by the U.S. Holder as a result of owning Warrants) both before and after the redemption. The redemption of Common Stock will generally be treated as a sale of the Common Stock (rather than as a corporate distribution) if the redemption (1) is "substantially disproportionate" with respect to the U.S. Holder, (2) results in a "complete termination" of the U.S. Holder's interest in us or (3) is "not essentially equivalent to a dividend" with respect to the U.S. Holder. These tests are explained more fully below.

In determining whether any of the foregoing tests are satisfied, a U.S. Holder takes into account not only stock actually owned by the U.S. Holder, but also shares of our stock that are constructively owned by it. A U.S. Holder may constructively own, in addition to stock owned directly, stock owned by certain related individuals and entities in which the U.S. Holder has an interest or that have an interest in such U.S. Holder, as well as any stock the U.S. Holder has a right to acquire by exercise of an option, which would generally include common

stock which could be acquired pursuant to the exercise of the Warrants. A redemption of a U.S. Holder's stock will be substantially disproportionate with respect to the U.S. Holder if the percentage of our outstanding voting stock actually and constructively owned by the U.S. Holder immediately following the redemption of common stock is, among other requirements, less than 80% of the percentage of our outstanding voting stock actually and constructively owned by the U.S. Holder immediately before the redemption. There will be a complete termination of a U.S. Holder's interest if either (1) all of the shares of our stock actually and constructively owned by the U.S. Holder are redeemed or (2) all of the shares of our stock actually owned by the U.S. Holder are redeemed and the U.S. Holder is eligible to waive, and effectively waives in accordance with specific rules, the attribution of stock owned by certain family members and the U.S. Holder does not constructively own any other stock (including any stock constructively owned by the U.S. Holder as a result of owning Warrants). The redemption of the Common Stock will not be essentially equivalent to a dividend if the redemption results in a "meaningful reduction" of the U.S. Holder's proportionate interest in us. Whether the redemption will result in a meaningful reduction in a U.S. Holder's proportionate interest in us will depend on the particular facts and circumstances. The IRS has indicated in a published ruling that even a small reduction in the proportionate interest of a small minority stockholder in a publicly held corporation who exercises no control over corporate affairs may constitute such a "meaningful reduction." A U.S. Holder is urged to consult its tax advisors as to the tax consequences of a redemption, including the application of the constructive ownership rules described above.

If none of the foregoing tests is satisfied, the redemption will be treated as a corporate distribution, the tax consequences of which are described under "*U.S. Holders—Taxation of Distributions*," above. After the application of those rules, any remaining tax basis of the U.S. Holder in the redeemed Common Stock should be added to the U.S. Holder's adjusted tax basis in its remaining stock, or, if it has none, to the U.S. Holder's adjusted tax basis in its warrants or possibly in other stock constructively owned by it.

Exercise of a Warrant

Except as discussed below with respect to the cashless exercise of a Warrant, a U.S. Holder will not recognize gain or loss upon the exercise of a Warrant. The U.S. Holder's tax basis in the share of our Common Stock received upon exercise of the Warrant will generally be an amount equal to the sum of the U.S. Holder's initial investment in the Warrant and the exercise price of such Warrant. It is unclear whether a U.S. Holder's holding period for the Common Stock received upon exercise of the Warrant would commence on the date of exercise of the Warrant or the day following the date of exercise of the Warrant; however, in either case the holding period will not include the period during which the U.S. Holder held the Warrants.

The tax consequences of a cashless exercise of a Warrant are not clear under current tax law. A cashless exercise may be nontaxable, either because the exercise is not a realization event or because the exercise is treated as a recapitalization for U.S. federal income tax purposes. In either situation, a U.S. Holder's tax basis in the Common Stock received would generally equal the holder's tax basis in the Warrant. If the cashless exercise were treated as not being a realization event, it is unclear whether a U.S. Holder's holding period for the Common Stock would commence on the date of exercise of the Warrant or the day following the date of exercise of the Warrant. If, however, the cashless exercise were treated as a recapitalization, the holding period of the Common Stock would include the holding period of the Warrant.

It is also possible that a cashless exercise could be treated as a taxable exchange in which gain or loss is recognized. In such event, a U.S. Holder would be deemed to have surrendered a number of Warrants having a fair market value equal to the exercise price. The U.S. Holder would recognize capital gain or loss in an amount equal to the difference between the fair market value of the Common Stock represented by the Warrants deemed surrendered and the U.S. Holder's tax basis in the Warrants deemed surrendered. In this case, a U.S. Holder's tax basis in the Common Stock received would equal the sum of the U.S. Holder's initial investment in the Warrants exercised and the exercise price of such Warrants. It is unclear whether a U.S. Holder's holding period for the Common Stock would commence on the date of exercise of the Warrant or the day following the date of exercise of the Warrant; however, in either case the holding period will not include the period during which the U.S. Holder held the Warrants.

Due to the absence of authority on the U.S. federal income tax treatment of a cashless exercise, including when a U.S. Holder's holding period would commence with respect to the Common Stock received, there can be no assurance which, if any, of the alternative tax consequences and holding periods described above would be adopted by the IRS or a court of law. Accordingly, U.S. Holders are urged to consult their tax advisors regarding the tax consequences of a cashless exercise.

Sale, Exchange, Redemption or Expiration of a Warrant

Upon a sale, exchange (other than by exercise), redemption (other than a redemption for Common Stock), or expiration of a Warrant, a U.S. Holder will recognize taxable gain or loss in an amount equal to the difference between (1) the amount realized upon such disposition or expiration and (2) the U.S. Holder's tax basis in the Warrant. Such gain or loss will generally be treated as long-term capital gain or loss if the Warrant is held by the U.S. Holder for more than one year at the time of such disposition or expiration. If a Warrant is allowed to lapse unexercised, a U.S. Holder generally will recognize a capital loss equal to such holder's tax basis in the Warrant. The deductibility of capital losses is subject to certain limitations.

A redemption of Warrants for Common Stock described in this prospectus under "*Description of Securities—Warrants*" should be treated as a "recapitalization" within the meaning of Section 368(a)(1)(E) of the Code. Accordingly, you should not recognize any gain or loss on the redemption of Warrants for shares of our Common Stock. Your aggregate tax basis in the shares of Common Stock received in the redemption should equal your aggregate tax basis in your Warrants redeemed and your holding period for the shares of Common Stock received in redemption of your Warrants should include your holding period for your surrendered Warrants.

Possible Constructive Distributions

The terms of each Warrant provide for an adjustment to the number of shares of Common Stock for which the Warrant may be exercised or to the exercise price of the Warrant in certain events, as discussed in the section of this prospectus captioned "*Description of Securities—Warrants*." An adjustment which has the effect of preventing dilution is generally not a taxable event. Nevertheless, a U.S. Holder of Warrants would be treated as receiving a constructive distribution from us if, for example, the adjustment increases the holder's proportionate interest in our assets or earnings and profits (e.g., through an increase in the number of shares of Common Stock that would be obtained upon exercise) as a result of a distribution of cash to the holders of shares of our Common Stock which is taxable to such holders as a distribution as described under "*U.S. Holders—Taxation of Distributions*" above. Such constructive distribution would be subject to tax as described under that section in the same manner as if such U.S. Holder received a cash distribution from us equal to the fair market value of such increased interest.

Non-U.S. Holders

Taxation of Distributions

In general, any distributions (including constructive distributions) we make to a non-U.S. Holder of shares of our Common Stock, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles), will constitute dividends for U.S. federal income tax purposes and, provided such dividends are not effectively connected with the non-U.S. Holder's conduct of a trade or business within the United States, we will be required to withhold tax from the gross amount of the dividend at a rate of 30%, unless such non-U.S. Holder is eligible for a reduced rate of withholding tax under an applicable income tax treaty and provides proper certification of its eligibility for such reduced rate (usually on an IRS Form W-8BEN or W-8BEN-E, as applicable). In the case of any constructive dividend, it is possible that this tax would be withheld from any amount owed to a non-U.S. Holder by the applicable withholding agent, including cash distributions on other property or sale proceeds from Warrants or other property subsequently paid or

credited to such holder. Any distribution not constituting a dividend will be treated first as reducing (but not below zero) the non-U.S. Holder's adjusted tax basis in its shares of our Common Stock and, to the extent such distribution exceeds the non-U.S. Holder's adjusted tax basis, as gain realized from the sale or other disposition of the Common Stock, which will be treated as described under "*Non-U.S. Holders—Gain on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock and Warrants*" below. In addition, if we determine that we are classified as a "United States real property holding corporation" (see "*Non-U.S. Holders—Gain on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock and Warrants*" below), we will withhold 15% of any distribution that exceeds our current and accumulated earnings and profits.

Dividends we pay to a non-U.S. Holder that are effectively connected with such non-U.S. Holder's conduct of a trade or business within the United States (or if a tax treaty applies are attributable to a U.S. permanent establishment or fixed base maintained by the non-U.S. Holder) will generally not be subject to U.S. withholding tax, provided such non-U.S. Holder complies with certain certification and disclosure requirements (usually by providing an IRS Form W-8ECI). Instead, such dividends will generally be subject to U.S. federal income tax, net of certain deductions, at the same graduated individual or corporate rates applicable to U.S. Holders. If the non-U.S. Holder is a corporation, dividends that are effectively connected income may also be subject to a "branch profits tax" at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty).

Exercise of a Warrant

The U.S. federal income tax treatment of a non-U.S. Holder's exercise of a Warrant generally will correspond to the U.S. federal income tax treatment of the exercise of a Warrant by a U.S. Holder, as described under "*U.S. Holders—Exercise of a Warrant*" above, although to the extent a cashless exercise results in a taxable exchange, the tax consequences to the non-U.S. Holder would be the same as those described below in "*Non-U.S. Holders—Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Warrants*."

Redemption of Warrants for Common Stock

The U.S. federal income tax treatment to a non-U.S. Holder upon a redemption of Warrants for Common Stock described in this prospectus under "*Description of Securities—Warrants*" generally will correspond to the U.S. federal income tax treatment to a U.S. Holder, as described in the second paragraph under "*U.S. Holders—Sale, Exchange, Redemption or Expiration of a Warrant*."

Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Warrants

A non-U.S. Holder will generally not be subject to U.S. federal income or withholding tax in respect of gain recognized on a sale, taxable exchange or other taxable disposition of our Common Stock or a sale, taxable exchange, expiration, redemption or other taxable disposition of our Warrants unless:

- the gain is effectively connected with the conduct of a trade or business by the non-U.S. Holder within the United States (and, if an applicable tax treaty so requires, is attributable to a U.S. permanent establishment or fixed base maintained by the non-U.S. Holder);
- the non-U.S. Holder is an individual who is present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met; or
- we are or have been a "United States real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the non-U.S. Holder held our Common Stock, and, in the case where shares of our Common Stock are regularly traded on an established securities market, the non-U.S. Holder has owned, directly or constructively, more than 5% of our Common Stock at any time within the shorter of the five-year period preceding the disposition or such non-U.S. Holder's holding period for the shares of our Common Stock. There can be no assurance that our Common Stock will be treated as regularly traded on an established securities market for this purpose.

Gain described in the first bullet point above will be subject to tax at generally applicable U.S. federal income tax rates. Any gains described in the first bullet point above of a non-U.S. Holder that is a foreign corporation may also be subject to an additional “branch profits tax” at a 30% rate (or lower applicable treaty rate). Gain described in the second bullet point above will generally be subject to a flat 30% U.S. federal income tax. Non-U.S. Holders are urged to consult their tax advisors regarding possible eligibility for benefits under income tax treaties.

If the third bullet point above applies to a non-U.S. Holder, gain recognized by such holder on the sale, exchange or other disposition of our Common Stock or Warrants will be subject to tax at generally applicable U.S. federal income tax rates. In addition, a buyer of our Common Stock or Warrants from such holder may be required to withhold U.S. income tax at a rate of 15% of the amount realized upon such disposition. We will be classified as a United States real property holding corporation if the fair market value of our “United States real property interests” equals or exceeds 50% of the sum of the fair market value of our worldwide real property interests plus our other assets used or held for use in a trade or business, as determined for U.S. federal income tax purposes. We do not believe we currently are or will become a United States real property holding corporation, however there can be no assurance in this regard. Non-U.S. Holders are urged to consult their tax advisors regarding the application of these rules.

Possible Constructive Distributions

The terms of each Warrant provide for an adjustment to the number of shares of Common Stock for which the Warrant may be exercised or to the exercise price of the Warrant in certain events, as discussed in the section of this prospectus captioned “*Description of Securities—Warrants.*” An adjustment which has the effect of preventing dilution is generally not a taxable event. Nevertheless, a non-U.S. Holder of Warrants would be treated as receiving a constructive distribution from us if, for example, the adjustment increases the holder’s proportionate interest in our assets or earnings and profits (e.g., through an increase in the number of shares of Common Stock that would be obtained upon exercise) as a result of a distribution of cash to the holders of shares of our Common Stock which is taxable to such holders as a distribution, as described under “*Non-U.S. Holders—Taxation of Distributions*” above. A non-U.S. Holder would be subject to U.S. federal income tax withholding under that section in the same manner as if such non-U.S. Holder received a cash distribution from us equal to the fair market value of such increased interest without any corresponding receipt of cash.

Redemption of Common Stock

The characterization for U.S. federal income tax purposes of the redemption of a non-U.S. Holder’s Common Stock will generally correspond to the U.S. federal income tax characterization of such a redemption of a U.S. Holder’s Common Stock, as described under “*U.S. Holders—Redemption of Common Stock*” above, and the consequences of the redemption to the non-U.S. Holder will be as described above under “*Non-U.S. Holders—Taxation of Distributions*” and “*Non-U.S. Holders—Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Warrants,*” as applicable.

Foreign Account Tax Compliance Act

Sections 1471 through 1474 of the Code and the Treasury Regulations and administrative guidance promulgated thereunder (commonly referred to as the “Foreign Account Tax Compliance Act” or “FATCA”) generally impose withholding at a rate of 30% in certain circumstances on dividends in respect of, and the gross proceeds of dispositions of, our securities which are held by or through certain foreign financial institutions (including investment funds), unless any such institution (1) enters into, and complies with, an agreement with the IRS to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution that are owned by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments, or (2) if required under an intergovernmental agreement between the United States and an applicable foreign country, reports such information to its local tax

authority, which will exchange such information with the U.S. authorities. Under proposed Treasury Regulations promulgated by the Treasury Department on December 13, 2018, which state that taxpayers may rely on the proposed Treasury Regulations until final Treasury Regulations are issued, this withholding tax will not apply to the gross proceeds from the sale or disposition of our securities. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Accordingly, the entity through which our securities are held will affect the determination of whether such withholding is required. Similarly, dividends in respect of our securities held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exceptions will generally be subject to withholding at a rate of 30%, unless such entity either (1) certifies to us or the applicable withholding agent that such entity does not have any “substantial United States owners” or (2) provides certain information regarding the entity’s “substantial United States owners,” which will in turn be provided to the U.S. Department of Treasury. Prospective investors should consult their tax advisors regarding the possible implications of FATCA on their investment in our securities.

LEGAL MATTERS

The validity of the securities offered by this prospectus has been passed upon for us by Morgan, Lewis & Bockius LLP, Palo Alto, California. If the validity of any securities is also passed upon by counsel for the underwriters, dealers or agents of an offering of those securities, that counsel will be named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of the Company as of December 31, 2022 and 2021, and for each of the years then ended, included in this prospectus, which is referred to and made a part of this prospectus and Registration Statement, have been audited by Armanino LLP, independent registered public accounting firm, as set forth in their report appearing elsewhere herein (which contains an emphasis-of-matter paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities offered by this prospectus. This prospectus, which forms a part of such registration statement, does not contain all of the information included in the registration statement. For further information pertaining to us and our securities, you should refer to the registration statement and to its exhibits. The registration statement has been filed electronically and may be obtained in any manner listed below. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement or a report we file under the Exchange Act, you should refer to the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit to a registration statement or report is qualified in all respects by the filed exhibit.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC's website at www.sec.gov and on our website, free of charge, at <https://seastarmedical.com/>. The information found on, or that can be accessed from or that is hyperlinked to, our website is not part of this prospectus. You may inspect a copy of the registration statement through the SEC's website, as provided herein.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of SeaStar Medical Holding Corporation

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of SeaStar Medical Holding Corporation and subsidiary (collectively the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, changes in convertible preferred stock and stockholders’ deficit, and cash flows for the years then ended, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Substantial Doubt about the Company’s Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has incurred recurring significant losses that raise substantial doubt about its ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Armanino LLP
Bellevue, Washington
March 30, 2023

We have served as the Company’s auditor since 2021.

SeaStar Medical Holding Corporation
Consolidated Balance Sheets
As of December 31, 2022 and 2021
(in thousands, except for share and per-share amounts)

	2022	2021
ASSETS		
Current assets		
Cash	\$ 47	\$ 510
Other receivables	12	58
Prepaid expenses	2,977	33
Total current assets	3,036	601
Forward option-prepaid forward contracts, net	1,729	—
Other assets	2	2
Total assets	<u>\$ 4,767</u>	<u>\$ 603</u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	\$ 1,927	\$ 85
Accrued expenses	2,245	186
Notes payable	1,178	—
Convertible notes - related party, net of discount	—	2,378
Convertible notes derivative liability	—	471
Total current liabilities	5,350	3,120
Notes Payable	7,652	—
Government loans	—	63
Convertible notes - related party, net of discount, net of current portion	—	181
Convertible notes derivative liability, net of current portion	—	55
Total liabilities	13,002	3,419
Commitments and contingencies (see Note 13)		
Stockholders' deficit (1)		
Class A common stock - \$0.0001 par value per share; 100,000,000 shares authorized; 12,699,668 and 7,238,767 shares issued and outstanding at December 31, 2022 and 2021, respectively	1	1
Additional paid-in capital	91,089	73,495
Accumulated deficit	(99,325)	(76,312)
Total stockholders' deficit (1)	(8,235)	(2,816)
Total liabilities, convertible preferred stock and stockholders' deficit	<u>\$ 4,767</u>	<u>\$ 603</u>

(1) Retroactively restated to give effect to the reverse recapitalization

The accompanying notes are an integral part of these consolidated financial statements.

SeaStar Medical Holding Corporation
Consolidated Statements of Operations
For the Years Ended December 31, 2022 and 2021
(in thousands, except for share and per-share amounts)

	<u>2022</u>	<u>2021</u>
Operating expenses		
Research and development	\$ 2,819	\$ 2,766
General and administrative	6,600	1,683
Origination cost of prepaid forward contracts	2,190	—
Total operating expenses	<u>11,609</u>	<u>4,449</u>
Loss from operations	(11,609)	(4,449)
Other income (expense), net		
Interest expense	(630)	(212)
Other income	—	91
Change in fair value of convertible notes derivative liability	(602)	(27)
Change in fair value of forward option-prepaid forward contracts	(10,170)	—
Loss on sale of recycled shares	(1)	—
Total other expense, net	<u>(11,403)</u>	<u>(148)</u>
Loss before income tax provision (benefit)	(23,012)	(4,597)
Income tax provision (benefit)	1	(1)
Net loss	<u>\$ (23,013)</u>	<u>\$ (4,596)</u>
Net loss per share of common stock, basic and diluted	<u>\$ (2.80)</u>	<u>\$ (0.63)</u>
Weighted-average shares outstanding, basic and diluted (1)	<u>8,211,256</u>	<u>7,238,767</u>

(1) Retroactively restated to give effect to the reverse recapitalization

The accompanying notes are an integral part of these consolidated financial statements.

SeaStar Medical Holding Corporation
Consolidated Statements of Changes in Convertible Preferred Stock and Stockholders' Deficit
For the Years Ended December 31, 2022 and 2021
(in thousands, except for share and per-share amounts)

	Convertible Preferred Stock							Stockholders' Deficit				
	Series B Preferred Stock		Series A-1 Preferred Stock		Series A-2 Preferred Stock		Total	Common Shares		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares (1)	Amount	Shares (1)	Amount	Shares (1)	Amount		Shares (1)	Amount			
Balance, January 1, 2021	426,977	\$ 5,270	1,576,154	\$ 19,451	784,511	\$ 48,628	\$ 73,349	—	\$ —	\$ 133	\$ (71,716)	\$ (71,583)
Retroactive application of recapitalization	(426,977)	(5,270)	(1,576,154)	(19,451)	(784,511)	(48,628)	(73,349)	7,238,767	1	73,348	—	73,349
Adjusted balance, beginning of period	—	—	—	—	—	—	—	7,238,767	1	73,481	(71,716)	1,766
Stock-based compensation	—	—	—	—	—	—	—	—	—	14	—	14
Net loss	—	—	—	—	—	—	—	—	—	—	(4,596)	(4,596)
Balance, December 31, 2021	—	—	—	—	—	—	—	7,238,767	1	73,495	(76,312)	(2,816)
Reverse recapitalization on October 28, 2022	—	—	—	—	—	—	—	4,162,040	—	3,294	—	3,294
Conversion of Convertible Notes to Class A common shares	—	—	—	—	—	—	—	598,861	—	5,989	—	5,989
PIPE financing	—	—	—	—	—	—	—	700,000	—	7,000	—	7,000
Stock-based compensation	—	—	—	—	—	—	—	—	—	1,311	—	1,311
Net loss	—	—	—	—	—	—	—	—	—	—	(23,013)	(23,013)
Balance, December 31, 2022	—	\$ —	—	\$ —	—	\$ —	\$ —	12,699,668	\$ 1	\$ 91,089	\$ (99,325)	\$ (8,235)

(1) Retroactively restated to give effect to the reverse recapitalization

The accompanying notes are an integral part of these consolidated financial statements

SeaStar Medical Holding Corporation
Consolidated Statements of Cash Flows
For the Years Ended December 31, 2022 and 2021
(in thousands, except for shares and per-share amounts)

	2022	2021
Cash flows from operating activities		
Net loss	\$ (23,013)	\$ (4,596)
Adjustments to reconcile net loss to net cash used in operating activities		
Amortization of discount on convertible notes	242	140
Non-cash accrued interest related to convertible notes	341	72
Change in fair value of convertible notes derivative liability	602	27
Change in fair value of forward option	10,170	—
Loss on sale of recycled shares	1	—
PPP loan forgiveness	—	(91)
Stock-based compensation	1,311	14
Changes in operating assets and liabilities		
Other receivables	4	—
Inventory	—	55
Prepaid expenses	(1,073)	12
Accounts payable	1,548	(297)
Accrued expenses and other current liabilities	2,073	(450)
Net cash used in operating activities	(7,794)	(5,114)
Cash flows from financing activities		
Proceeds from issuance of convertible notes	1,681	2,746
Proceeds from recapitalization	9,961	—
Payment of recapitalization transaction costs	(1,211)	—
Proceeds from PIPE investors	7,000	—
Payment for forward contracts	(11,940)	—
Proceeds from sale of recycled shares	40	—
Proceeds from notes payable	1,878	—
Payment of notes payable	(15)	—
Proceeds from PPP loan	—	91
Repayment of Government loans	(63)	—
Repayment of PPP loan	—	(20)
Net cash provided by financing activities	7,331	2,817
Net decrease in cash	(463)	(2,297)
Cash, beginning of period	510	2,807
Cash, end of period	\$ 47	\$ 510
Supplemental disclosure of cash flow information		
Cash paid for income taxes	\$ 1	\$ —
Cash paid for interest	\$ 6	\$ —
Supplemental disclosure of noncash flow information		
Conversion of Series A-2 Preferred stock into Series B Preferred stock	\$ 2,400	\$ 151
Conversion of Preferred stock to common stock	73,349	—
Conversion of convertible notes to common stock	5,989	—
Recapitalization transaction costs in accounts payable	294	—
Recapitalization transaction costs in notes payable	2,209	—
Value of derivative liability on issuance of convertible notes	52	499
Non-cash conversion of accrued expenses into convertible notes	96	114
Other receivables of cash in transit for convertible notes	—	58

The accompanying notes are an integral part of these consolidated financial statements.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Note 1. Description of Business

Organization and description of business

SeaStar Medical, Inc. was incorporated as a Delaware corporation in June 2007, and it is headquartered in Denver, Colorado. The Company is principally engaged in the research, development, and commercialization of a platform medical device technology designed to modulate inflammation in various patient populations. The primary target of this technology is for the treatment of acute kidney injuries.

SeaStar Medical, Inc. is in the pre-revenue stage focused on product development.

On October 28, 2022, LMF Merger Sub, Inc., a wholly owned subsidiary of LMF Acquisition Opportunities, Inc., (“LMAO”) merged with and into SeaStar Medical, Inc. (the “Business Combination”), with SeaStar Medical, Inc. surviving the Business Combination as a wholly owned subsidiary of LMAO (see Note 3). Following the consummation of the Business Combination, LMAO was renamed to “SeaStar Medical Holding Corporation” (“the Company”, “we”, “SeaStar Medical”).

Basis of presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and the rules and regulations of the Securities and Exchange Commission (“SEC”). The consolidated financial statements include the consolidated accounts of the Company’s wholly owned subsidiary, SeaStar Medical, Inc.

All significant intercompany transactions have been eliminated in consolidation.

Segment information

The Company operates in one operating segment and, accordingly, no segment disclosures have been presented herein.

Liquidity and Going Concern

As of December 31, 2022, the Company has an accumulated deficit of \$99,325 and cash of \$47. We do not believe that will be sufficient to enable us to fund our operations, including clinical trial expenses and capital expenditure requirements for at least 12 months from the issuance of these consolidated financial statements. We believe that this raises substantial doubt about our ability to continue as a going concern.

Our need for additional capital will depend in part on the scope and costs of our development activities. To date, we have not generated any significant revenue from the sales of commercialized products. Our ability to generate product revenue will depend on the successful development and eventual commercialization of our product. Until such time, if ever, we expect to finance our operations through the sale of equity or debt, borrowing under credit facilities, or through potential collaborations, other strategic transactions or government and other grants. Adequate capital may not be available to us when needed or on acceptable terms.

If we are unable to raise capital, we could be forced to delay, reduce, suspend, or cease our research and development programs or any future commercialization efforts, which would have a negative impact on our business, prospects, operating results and financial condition. The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern and do not include adjustments that might result from the outcome of this uncertainty. This basis of accounting contemplates the recovery of the Company’s assets and the satisfaction of liabilities in the normal course of business.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Risks and uncertainties

The Company is subject to risks common to early-stage companies in the medical technology industry including, but not limited to, new medical and technological innovations, dependence on key personnel, protection of proprietary technology, and product liability. There can be no assurance that the Company's products or services will be accepted in the marketplace, nor can there be any assurance that any future products or services can be developed or deployed at an acceptable cost and with appropriate performance characteristics, or that such products or services will be successfully marketed, if at all. These factors could have a materially adverse effect on the Company's future financial results, financial position and cash flows.

The Company cannot at this time predict the specific extent, duration, or full impact that a future pandemic will have on its financial condition and operations. A future pandemic may affect our ability to initiate and complete preclinical studies, delay our clinical trials or future clinical trials, disrupt regulatory activities, or have other adverse effects on our business and operations.

Note 2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the period. Significant estimates include the valuation of the forward option on prepaid forward contracts, derivative liability, warrants, tax provision, and the amount of share-based compensation expense. Although actual results could differ from those estimates, such estimates are developed based on the best information available to management and management's best judgments at the time.

Cash

The Company maintains its cash in commercial banks in the United States ("U.S.") which are insured by the Federal Deposit Insurance Corporation up to \$250.

Concentrations of credit risk

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash. Periodically, the Company may maintain deposits in financial institutions in excess of government insured limits. The Company has not experienced any losses on deposits since inception.

Income taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the consolidated financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates expected to apply to taxable income in the periods in which such differences are expected to reverse. A valuation allowance is provided when the realization of net deferred tax assets is not deemed more likely than not.

The Company complies with the provisions of "Accounting Standards Codification ("ASC") 740, Income Taxes, which provides a comprehensive model for the recognition, measurement, and disclosure in consolidated

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

financial statements of uncertain income tax positions that a company has taken or expects to take on a tax return. Under this guidance, a company can recognize the benefit of an income tax position only if it is more likely than not (greater than 50%) that the tax position will be sustained upon tax examination, based solely on the technical merits of the tax position; otherwise, no benefit can be recognized. The tax benefits recognized are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Additionally, the Company accrues interest and related penalties, if applicable, on all tax exposures for which reserves have been established consistent with jurisdictional tax laws. Interest and penalties are classified as income tax expense in the consolidated financial statements.

Fair value measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). Inputs used to measure fair value are classified into the following hierarchy:

Level 1 – quoted prices in active markets for identical assets and liabilities.

Level 2 – other significant observable inputs (including quoted prices for similar assets and liabilities, interest rate, credit risk, etc.).

Level 3 – significant unobservable inputs (including the Company’s own assumptions in determining the fair value of assets and liabilities).

The fair value of the forward option on prepaid forward contracts and the convertible notes derivative liability are classified as Level 3 in the fair value hierarchy.

The following table presents the changes in the forward option and the convertible notes derivative liability for the years ended December 31, 2022 and 2021 (in thousands):

<u>Level 3 Rollforward</u>	<u>Forward Option On Prepaid Forward Contracts</u>	<u>Convertible Notes Derivative Liability</u>
Balance December 31, 2020	\$ —	\$ —
Additions	—	(499)
Changes in fair value	—	(27)
Balance December 31, 2021	—	(526)
Additions	11,940	(52)
Sale of recycled shares	(41)	—
Changes in fair value	(10,170)	(602)
Reclassified to additional paid-in capital	—	1,180
Balance December 31, 2022	<u>\$ 1,729</u>	<u>\$ —</u>

The forward option in the amount of \$11,940 was recorded on October 28, 2022, for the forward option in the forward purchase agreements (see Note 4). The forward option is remeasured each reporting period using a Monte-Carlo Simulation in a risk-neutral framework (a special case of the Income Approach). Specifically, the future stock price is simulated assuming a Geometric Brownian Motion (“GBM”). For each simulated path, the forward purchase value is calculated based on the contractual terms and then discounted at the term-matched risk-free rate. Finally, the value of the forward is calculated as the average present value over all simulated paths.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Convertible notes derivative liabilities in the amounts of \$4, \$0, \$35 and \$13, were recorded on January 31, 2022, February 28, 2022, March 16, 2022 and March 31, 2022, respectively, for the issuance of convertible notes along with a corresponding debt discount (see Note 8). The convertible notes liabilities are remeasured each reporting period using a probability-weighted model and assumption related to the conversion price and timing of conversion. The put option liability was valued based on the calculated returns as a result of the various discounts included in the Company's convertible notes and the related probability assessments of the various settlement scenarios. The convertible notes derivative liability was extinguished as of the closing of the Business Combination (the "Closing"), as a result of the conversion of the convertible notes. On October 28, 2022, the put option liability was settled upon the Closing and reclassified to additional paid-in capital.

Derivative liabilities in the amounts of \$80, \$364, and \$55 were recorded on June 10, 2021, September 10, 2021 and December 31, 2021, respectively, for the issuance of convertible notes along with a corresponding debt discount.

The change in fair value of the derivative liabilities were recorded in change in fair value of convertible notes derivative liability in the consolidated statements of operations.

The estimated fair value of prepaid expenses, accounts payable and accrued expenses approximate their fair value because of the short-term nature of these instruments.

Stock-based compensation

In accordance with ASC Topic 718, Compensation – Stock Compensation, the Company recognizes compensation expense for all stock-based awards issued to employees based on the estimated grant-date fair value, which is recognized as expense on a graded vesting approach over the requisite service period. The Company has elected to recognize forfeitures as they occur. The fair value of stock options is determined using the Black-Scholes option-pricing model. The determination of fair value for stock options on the date of grant using an option-pricing model requires management to make certain assumptions including expected volatility, expected term, risk-free interest rate and expected dividends in addition to the Company's common stock valuation. The determination of fair value of restricted stock units is valued based on the value of the Company's common stock on the grant date (see Note 12).

Prior to the Business Combination, due to the absence of an active market for the Company's common stock, the Company utilized methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation to estimate the fair value of its common stock. In determining the exercise prices for options granted, the Company considered the fair value of the Company as of the grant date. The fair value of the Company was determined based upon a variety of factors, including the Company's financial position, historical performance and operating results, the Company's stage of development, the progress of the Company's research and development programs, the prices at which the Company sold its convertible preferred stock, the superior rights, preferences and privileges of the Company's convertible preferred stock relative to its common stock, external market conditions affecting the biotechnology industry, the lack of marketability of the Company's common stock and the prospects of a liquidity event and the analysis of initial public offering and market performance of similar companies as well as recently completed mergers and acquisition of peer companies. Significant changes to the key assumptions underlying the factors used could result in different fair values of the Company at each valuation date.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Research and development expenses

Expenditures made for research and development are charged to expense as incurred. External costs consist primarily of payments for laboratory supplies purchased in connection with the company's discovery and preclinical activities, and process development and clinical development activities. Internal costs consist primarily of employee-related costs, consultants fees and costs related to compliance with regulatory requirements. Nonrefundable advance payments for goods and services that will be used in future research and development activities are capitalized and recorded as expense in the period that the Company receives the goods or when services are performed.

The Company records expenses related to external research and development services based on services received and efforts expended pursuant to invoices and contracts with consultants that supply, conduct, and manage preclinical studies and clinical trials on its behalf.

Emerging growth company status

The Company is an "emerging growth company", as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"). Under the JOBS Act, emerging growth companies can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. The Company has elected to use this extended transition period for complying with certain new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it is (1) no longer an emerging growth company or (2) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act.

Net loss per share attributable to common stockholders

The Company's basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period. The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. The dilutive effect of these potential common shares is reflected in diluted earnings per share by application of the treasury stock method.

Recently issued accounting standards not yet adopted

In August 2020, the Financial Accounting Standards Board ("FASB") issued Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"). ASU 2020-06 addresses issues identified as a result of the complexity associated with applying US GAAP for certain financial instruments with characteristics of liabilities and equity. In addressing the complexity, ASU 2020-06 focused on amending the guidance on convertible instruments and the guidance on the derivatives scope exception for contracts in an entity's own equity. The amendments in this Update are effective for public business entities that meet the definition of a Securities and Exchange Commission ("SEC") filer, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted. In accordance with the JOBS Act, the Company has delayed adoption of ASU 2020-06. As a result, these consolidated financial statements may not be comparable to those companies that comply with the new or revised accounting pronouncements as of public company effective dates.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Note 3. Business Combination and Recapitalization

On October 28, 2022, LMAO consummated a series of transactions that resulted in the combination of LMF Merger Sub, Inc. and SeaStar Medical, Inc. pursuant to an Agreement and Plan of Merger, as described in Note 1.

The Business Combination was accounted for as a reverse recapitalization in accordance with U.S. GAAP. Under this method of accounting LMAO was treated as the acquired company for financial reporting purposes. This determination is primarily based on the fact that subsequent to the Business Combination, SeaStar Medical, Inc.'s stockholders have the majority of the voting power of the combined entity, SeaStar Medical, Inc. comprised all of the ongoing operations of the combined entity, SeaStar Medical, Inc. comprised a majority of the governing body of the combined entity, and SeaStar Medical, Inc.'s senior management comprised all of the senior management of the combined entity. Accordingly, for accounting purposes, the Business Combination was treated as the equivalent of SeaStar Medical, Inc. issuing shares for the net assets of LMAO, accompanied by a recapitalization. The net assets of LMAO were stated at historical costs. No goodwill or intangibles were recorded. Operations prior to the Business Combination are those of SeaStar Medical, Inc.

The aggregate consideration to the stockholders of SeaStar Medical, Inc. at the closing of the Business Combination was \$85,406, which consisted of shares of the Company's Class A common stock, par value \$0.0001 per share, valued at \$10.00 per share, resulting in the issuance of 8,540,552 shares.

Upon the Closing, each of SeaStar Medical, Inc.'s outstanding convertible notes, in the amount of \$4,636, and related accrued interest totaling \$341 less \$168 in unamortized discounts converted into 598,861 shares of SeaStar Medical Holding Corporation Class A common stock valued at \$10.00 per share. The excess fair value of shares transferred for convertible note conversion of \$1,180 is recorded in the consolidated statement of operations for the year ended December 31, 2022.

Also, upon the Closing, 633,697 shares of Series B Preferred stock, 1,576,154 shares of Series A-1 Preferred stock, and 577,791 shares of Series A-2 Preferred stock of SeaStar Medical, Inc. converted into 7,238,767 shares of SeaStar Medical Holding Corporation Class A common stock. SeaStar Medical, Inc.'s 57,942 outstanding warrants were assumed by LMAO and converted into 69,714 warrants to purchase SeaStar Medical Holding Corporation Class A common stock. SeaStar Medical, Inc.'s 271,280 outstanding options were assumed by LMAO and converted into 326,399 options to purchase SeaStar Medical Holding Corporation Class A common stock. SeaStar Medical, Inc.'s 255,000 outstanding restricted stock unit awards were assumed by LMAO and converted into 306,811 SeaStar Medical Holding Corporation restricted stock units. The increase in the number of stock-based awards was accounted for as a modification (see Note 12).

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As part of the Business Combination, \$92,137 was paid to redeem Class A shares from LMAO existing shareholders. 4,162,040 Class A shares remained unredeemed at the time of the Business Combination. LMAO had 10,350,000 public warrants and 5,738,000 private placement warrants at the time of the Business Combination. The public warrants and the private placement warrants are classified as equity. The Company received net cash consideration of \$9,961 and net liabilities of LMAO of \$10,882. The net liabilities of LMAO were as follows (in thousands):

Other receivables	\$ 16
Prepaid expenses	1,871
Accrued expenses	(82)
Public warrants liability	(1,241)
Private placement warrants liability	(6,688)
LMFAO note payable	(2,785)
Maxim note payable	(1,973)
	<u>\$ (10,882)</u>

The table below summarizes the shares of Class A common stock issued immediately after the Closing as well as the impact of the transaction on the consolidated statements of changes in convertible preferred stock and stockholders' deficit as of October 28, 2022.

(\$ in thousands)	Common Shares		Additional
	Shares	Amount	Paid-In Capital
SPAC financing	4,162,040	\$ —	\$ (921)
Public warrants liability reclassified to equity	—	—	1,241
Private Placement warrants liability reclassified to equity	—	—	6,688
Transaction costs	—	—	(3,714)
Reverse recapitalization on October 28, 2022	<u>4,162,040</u>	<u>\$ —</u>	<u>\$ 3,294</u>

Note 4. Forward Purchase Agreements

In October 2022, LMAO, SeaStar Medical, Inc. entered into a Forward Purchase Agreements ("FPAs") with Vellar Opportunity Fund SPV LLC – Series 4 and HB Strategies LLC ("FPA Sellers"), whereby, prior to the Business Combination, the FPA Sellers purchased 1,151,400 LMF Class A Shares from redeeming holders (the "Recycled Shares"), and an additional 200,000 LMF Class A Shares constituting share consideration, each at an average price per share of \$10.37. Pursuant to the FPA, the FPA Sellers waived their redemption rights under the governing documents of LMF Merger Sub, Inc. in connection with the Business Combination.

At the Closing, LMAO paid to Vellar, out of funds held in the LMAO trust account, aggregate amounts of \$14,358, an amount equal to 1,173,400 LMF Class A Shares ("Recycled Shares"), multiplied by \$10.37, the redemption price, \$2,074 for the purpose of repayment of the FPA Sellers having purchased 200,000 shares from third parties in the open market, and reimbursement of legal expenses and a commission fee in the amount of \$116.

The FPA Sellers may, at their discretion, sell Recycled Shares, ("Terminated Shares"). The Company is entitled to proceeds from such sales of Terminated Shares equal to the number of Terminated Shares multiplied by the reset price (the "Reset Price"). The Reset Price is initially the per-share redemption price, but will be adjusted on

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a monthly basis to the lower of (a) the then-current Reset Price, (b) \$10.00 and (c) the volume weighted average price (“VWAP”) price of the last ten trading days of the prior calendar month, but not lower than \$5.00; provided, however, that if we offer and sell Class A common stock, or currently outstanding or future issued securities are exercised or converted, at a price lower than then then-current Reset Price, then the Reset Price shall be modified to equal such reduced price.

In the event that the VWAP Price is less than \$3.00 per share for 20 trading days during any 30 trading-day-period, then the FPA Sellers may accelerate the maturity date (“Maturity Date”), which otherwise will be the third anniversary of the Closing. Upon the occurrence of the Maturity Date, we are obligated to pay to the FPA Sellers an amount equal to the number of unsold Recycled Shares, multiplied by \$2.50 (the “Maturity Consideration”).

The Maturity Consideration shall be payable by the Company in cash, or at the Company’s option, as equity, issued in Class A common stock, with a per share issue price based on the average daily VWAP Price over 30 scheduled trading days. FPA Sellers will deliver to the Company the number of unsold Recycled Shares.

During the year ended December 31, 2022, 3,995 recycled shares were sold by FPA Sellers. There were 1,147,405 recycled shares remaining at December 31, 2022.

In accordance with ASC 815, Derivatives and Hedging, the Company has determined that the forward option within the Forward Purchase Agreements (i) is a freestanding financial instrument (ii) does not meet the definition of a derivative, (iii) is indexed to the Company’s own stock, and (iv) does not meet the requirements for equity classification. The fair value of the option is recorded as an asset or a liability on the Consolidated Balance Sheets as forward option-prepaid forward contracts. The Company has performed fair value measurements for the forward option within the FPAs as of the Closing and as of December 31, 2022, which is described in Note 2. The Company remeasures the fair value of the forward option each reporting period.

The initial value of the Forward option-prepaid forward contracts was \$11,940 at Closing. Recycled Shares with a value of \$41 were sold by the FPA Sellers. A loss on remeasurement of \$10,170 was recorded in Change in fair value of forward option on the consolidated statements of operations for the year ended December 31, 2022. On December 31, 2022, the value of the forward option within the FPAs was \$1,729 and recorded as Forward option-prepaid forward contracts on the consolidated balance sheets.

Note 5. Accrued Expenses

Accrued expenses consisted of the following amounts as of December 31, 2022 and 2021:

(\$ in thousands)	2022	2021
Accrued commitment fee, equity line of credit	\$1,500	\$—
Accrued bonus	450	—
Accrued interest	112	72
Accrued legal	80	27
Accrued director remuneration	61	—
Accrued research and development	18	58
Accrued other	24	29
Total accrued expenses	<u>\$2,245</u>	<u>\$186</u>

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Note 6. Equity Line of Credit

In August 2022, SeaStar Medical, Inc., LMAO, and Tumim Stone Capital LLC (“Tumim”) entered into an equity line financing arrangement through a common Stock Purchase Agreement providing the right to sell Tumim up to \$100,000 worth of shares of common stock. The Common Stock Purchase Agreement is subject to certain limitations and conditions and provided for a \$2,500 commitment fee payable to Tumim. The Company paid \$1,000 of the commitment fee in cash on the closing date of the Business Combination. The Company has recorded an accrued expense for the remaining \$1,500 of the commitment fee as of December 31, 2022, of which \$1,000 will be paid in newly issued shares of common stock. The \$2,500 commitment fee was recorded in general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2022.

Note 7. Notes Payable

Notes payable consisted of the following on December 31:

(\$ in thousands)	2022	2021
LMFA notes payable	\$ 968	\$—
LMFAO note payable	2,785	—
Maxim note payable	4,167	—
Insurance financing	910	—
Total notes payable	<u>\$8,830</u>	<u>\$—</u>

LMFA Notes Payable

On September 9, 2022, SeaStar Medical, Inc. entered into a Credit Agreement (“LMFA Note”) with LM Funding America, Inc. (“LMFA”) whereby LMFA agreed to make advances to SeaStar Medical, Inc. of up to \$700 for general corporate purposes at an interest rate of 15% per annum. All advances made to SeaStar Medical, Inc. under the LMFA Note and accrued interest were due and payable to LMFA on the maturity date. The maturity date of the loan was the earlier of (a) October 25, 2022, (b) the consummation of the Business Combination, and (c) the termination of the Merger agreement.

On October 28, 2022, SeaStar Medical Holding Corporation and LMFA entered into the First Amendment to Credit Agreement, dated September 9, 2022 between LMFA and SeaStar Medical, Inc. whereby (i) the maturity date of the loan under the LMFA Note was extended to October 30, 2023; (ii) the Company is required to use 5.0% of the gross cash proceeds received from any future debt and equity financing to pay outstanding balance of LMFA Note, provided that such repayment is not required for the first \$500 of cash proceeds; (iii) the interest rate of the LMFA Note is reduced from 15% to 7% per annum; and (iv) the default interest rate is reduced from 18% to 15%. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the LMFA Note as long-term in the consolidated balance sheets as of December 31, 2022. The LMFA Note contains customary representations and warranties, affirmative and negative covenants, and events of default. The balance due was \$700 as of December 31, 2022. The Company recorded interest expense of \$19 for the year ended December 31, 2022.

In addition, on October 28, 2022, the parties entered into a security agreement, pursuant to which SeaStar Medical Holding Corporation granted LMFA a security interest in substantially all of the assets and property of the Company, subject to certain exceptions, as collateral under the amended LMFA Note. In addition, the Company entered into a guaranty, dated October 28, 2022, whereby SeaStar Medical Holding Corporation unconditionally guarantees and promises to pay to LMFA the outstanding principal amount under the LMFA Note.

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On November 2, 2022, The Company entered into an additional promissory note in the amount of \$268 with LMFA. The promissory note is noninterest bearing and is due on demand at any time on or after March 31, 2023. The note was paid in full in January 2023.

LMFAO Note Payable

On October 28, 2022, the Company entered into a consolidated amended and restated promissory note with LMFAO Sponsor, LLC, LMAO's sponsor and the sole holder of founding shares (the "Sponsor") as the lender, for an aggregate principal amount of \$2,785 (the "LMFAO Note") to amend and restate in its entirety (i) the promissory note, dated July 29, 2022, for \$1,035 in aggregate principal amount issued by LMAO to the Sponsor and (ii) the Amended and Restated Promissory Note, dated July 28, 2022, for \$1,750 in aggregate principal amount, issued by LMAO to the Sponsor (collectively, the "Original Notes"). The LMFAO Note amended the Original Notes to: (i) extend maturity dates of the Original Notes to October 30, 2023; (ii) permit outstanding amount due under the LMFAO Note to be prepaid without premium or penalty; and (iii) require the Company to use 20.0% of the gross cash proceeds received from any future debt and equity financing to pay outstanding balance of LMFAO Note, provided that such repayment is not required for the first \$500 of cash proceeds. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the LMFAO Note as long-term in the consolidated balance sheets as of December 31, 2022. The LMFAO Note carries an interest rate of 7% per annum and contains customary representations and warranties and affirmative and negative covenants.

The LMFAO Note is subject to events of default, which may result in the LMFAO Note becoming immediately due and payable, with interest of 15.0% per annum. In addition, on October 28, 2022, the parties entered into a security agreement whereby the Company granted the Sponsor a security interest in substantially all of the assets and property of the Company, subject to certain exceptions, as collateral to secure the Company's obligations under the LMFAO Note. The balance due was \$2,785 as of December 31, 2022. The Company recorded interest expense of \$35 for the year ended December 31, 2022.

Maxim Note Payable

Pursuant to an engagement letter between the Company and Maxim dated October 28, 2022, the Company was required to pay Maxim, as its financial advisor, an amount equal to \$4,182 in cash as professional fees (\$1,973 assumed from LMAO and \$2,209 related to professional fees of the Company). Upon the Closing, the parties agreed that such amount would be paid in the form of a promissory note. Accordingly, on October 28, 2022, the Company entered into a promissory note with Maxim as the lender, for an aggregate principal amount of \$4,182 (the "Maxim Note"). The Maxim Note had a maturity date of October 30, 2023 and outstanding amounts may be prepaid without premium or penalty. Subsequent to December 31, 2022, the maturity date was extended to June 15, 2024 (Note 16). As such, the Company has classified the Maxim Note as long-term in the consolidated balance sheets as of December 31, 2022. If the Company receives any cash proceeds from a debt or equity financing transaction prior to the maturity date, then the Company is required to prepay the indebtedness equal to 25.0% of the gross amount of the cash proceeds, provided that such repayment obligation shall not apply to the first \$500 of the cash proceeds received by the Company. Interest on the Maxim Note is due at 7.0% per annum.

The Maxim Note contains customary representations and warranties, and affirmative and negative covenants. The Maxim Note is subject to events of default, which may result in the Maxim Note becoming immediately due and payable, with interest of 15.0% per annum. The balance of the Maxim Note was \$4,167 as of December 31, 2022. The Company recorded interest expense of \$51 for the year ended December 31, 2022.

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Insurance Financing

In October 2022, the Company entered into a financing agreement with a lender to finance a portion of the annual premium of an insurance policy in the amount of \$910. Interest on the financing agreement is due at 7.35% per annum. The balance due was \$910 as of December 31, 2022. The Company made payments of principal and interest of \$135 and \$101, in January 2023 and February 2023, respectively. Seven additional monthly installments of principal and interest of \$101 will be made during the year ended December 31, 2023. The Company recorded interest expense of \$7 for the year ended December 31, 2022.

Note 8. Convertible Notes**Dow Notes**

The Company had issued convertible note agreements to the Dow Employee's Pension Plan Trust (Dow Notes) in the following amounts (in thousands):

<u>Issue Date</u>	<u>Amount</u>	<u>Maturity Date</u>
June 2021	\$ 300	December 2022
September 2021	840	December 2024
October 2021	240	December 2024
November 2021	240	December 2024
March 2022	120	March 2024
April 2022	480	April 2025
April 2022	120	April 2025
	<u>\$ 2,340</u>	

Interest on the unpaid balances accrued at the rate of eight percent per year. At each issuance, the fair value of the conversion features was separated from the convertible notes and reported as a debt discount and derivative liability as discussed in Note 2, Recurring fair value measurements. Upon the occurrence of the Business Combination, the principal plus accrued interest was converted into shares of common stock.

Union Carbide Notes

The Company had issued convertible note agreements to the Union Carbide Employee Pension Plan Trust (Union Carbide Notes) in the following amounts (in thousands):

<u>Issue Date</u>	<u>Amount</u>	<u>Maturity Date</u>
June 2021	\$ 200	December 2022
September 2021	560	December 2024
October 2021	160	December 2024
November 2021	160	December 2024
March 2022	80	March 2024
April 2022	320	April 2025
April 2022	80	April 2025
	<u>\$ 1,560</u>	

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Interest on the unpaid balances accrued at the rate of eight percent per year. At each issuance, the fair value of the conversion features was separated from the convertible notes and reported as a debt discount and derivative liability as discussed in Note 2, Recurring fair value measurements. Upon the occurrence of the Business Combination, the principal plus accrued interest was converted into shares of common stock.

IBT Notes

During the years ended December 31, 2022 and 2021, the Company converted unpaid invoices in the amounts of \$96 and \$114, respectively, into convertible note agreements with IBT and David Humes (collectively the "IBT Notes"). Interest on the unpaid balances accrued at the rate of eight percent per year. At each issuance, the fair value of the conversion features was separated from the convertible notes and reported as a debt discount and derivative liability as discussed in Note 2, Recurring fair value measurements. Upon the occurrence of the Business Combination, the principal plus accrued interest was converted into shares of common stock.

Investor Notes

During the years ended December 31, 2022 and 2021, the Company issued convertible notes to investors for \$422 and \$104, respectively (collectively the "Investor Notes"). Interest on the unpaid balances accrued at the rate of eight percent per year. At each issuance, the fair value of the conversion features was separated from the convertible notes and reported as a debt discount and derivative liability as discussed in Note 2, Recurring fair value measurements. Upon the occurrence of the Business Combination, the principal plus accrued interest was converted into shares of common stock.

The discounts recorded at the time of the above issuances were amortized to interest expense over the life of the convertible notes using the effective interest method. Amortization of the debt discounts for the years ended December 31, 2022 and 2021 was \$242 and \$140, respectively.

The convertible notes and debt discounts consisted of the following on December 31, 2021:

(\$ in thousands)	December 31, 2021
Dow Notes	\$ 1,620
Union Carbide Notes	1,080
IBT & David Humes Notes	114
Investor Notes	104
Unamortized debt discount	(359)
	2,559
Less current portion	(2,378)
	<u>\$ 181</u>

As part of the Business Combination, the Company converted all convertible notes with a principal amount of \$4,636, accrued interest of \$341, and unamortized discount of \$168 into 598,861 shares of common stock. The fair value of the common stock issued was \$5,989 and the Company has recognized a loss on conversion of convertible notes of \$1,180 in the consolidated statements of operations for the year ended December 31, 2022.

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The following notes were converted:

(\$ in thousands)	
Dow Notes	\$ 2,340
Union Carbide Notes	1,560
IBT & David Humes Notes	210
Investor Notes	526
	<u>\$ 4,636</u>

Note 9. Government Loans and PPP Loans

Government Loans

In June 2020, SeaStar Medical, Inc. received a loan in the amount of \$63 from the U.S. Small Business Administration (“SBA”) under the Economic Injury Disaster Loan assistance program established as part of the CARES Act. The loan called for monthly payments in the amount of \$0.3 until maturity in May 2050. The loan accrued interest at 3.75%.

On October 17, 2022, the Company pre-paid the full balance to the SBA in the amount of \$63 principal and \$6 accrued interest. Interest expense was \$2 and \$3 for the years ended December 31, 2022 and 2021, respectively.

PPP Loans

On April 2, 2021, the Company received loan proceeds of \$91 from a promissory note issued by Silicon Valley Bank, under the Paycheck Protection Program (“PPP”) which was established under the CARES Act. The original term on the loan was two years and the annual interest rate was 1%. Payments of principal and interest were deferred for the first six months of the loan. Under the terms of the CARES Act, PPP loan recipients can apply for and be granted forgiveness for all or a portion of the loan proceeds. Such forgiveness is determined based on the use of the loan proceeds for payroll costs, rent and utility expenses and the maintenance of workforce and compensation levels with certain limitations. During the year ended December 31, 2021, the Company was granted forgiveness for the entire PPP loan. The Company recorded \$91 to other income.

In April 2020, the Company had received loan proceeds of \$104 from a promissory note issued by Silicon Valley Bank, under the PPP. During the year ended December 31, 2020, the Company recorded \$84 to other income for loan forgiveness and during the year ended December 31, 2021, the Company paid \$20 for the unforgiven remaining balance of a PPP loan.

Note 10. Warrants

Prior to the Business Combination, SeaStar Medical, Inc. had outstanding warrants to purchase shares of SeaStar Medical, Inc.’s preferred stock which had been issued in conjunction with various debt financings. Upon effectiveness of the Business Combination, 57,942 outstanding warrants were converted into 69,714 warrants to purchase common stock of SeaStar Medical Holding Corporation (“Legacy SeaStar Warrants”) at their previous exercise prices. On December 31, 2022, there were 69,714 Legacy SeaStar Warrants outstanding, which are accounted for as equity.

As part of LMAO’s initial public offering, under the Warrant Agreement dated as of January 25, 2021 and, prior to the effectiveness of the Business Combination, LMAO issued 10,350,000 warrants each of which entitled the

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holder to purchase one share of common stock at an exercise price of \$11.50 per share (“Public Stockholders’ Warrants”). Simultaneously with the closing of the Initial Public Offering, LMAO completed the private sale of 5,738,000 million warrants each of which entitled the holder to purchase one share of common stock at an exercise price of \$11.50 per share, to LMAO’s sponsor (“Private Placement Warrants”). Upon the effectiveness of the Business Combination, the outstanding Public Stockholders’ Warrants and Private Placement Warrants automatically converted into warrants of SeaStar Medical Holding Corporation. The Company has reviewed the terms of the warrants to determine whether the warrants should be classified as liabilities or stockholders’ deficit in its consolidated balance sheets. In order for a warrant to be classified in stockholders’ deficit, the warrant must be (a) indexed to the Company’s equity and (b) meet the conditions for equity classification in ASC 815-40, *Derivatives and Hedging-Contracts in an Entity’s own Equity*. If a warrant does not meet the conditions for equity classification, it is carried on the consolidated balance sheets as a warrant liability measured at fair value, with subsequent changes in the fair value of the warrant recorded in the consolidated statements of operations as change in fair value of warrants. The Company determined that the warrants are required to be classified as stockholders’ deficit as of the date of the Business Combination. The Company has the ability to redeem outstanding Public Shareholders’ Warrants at any time after they become exercisable and prior to their expiration, at a price of \$0.01 per warrant, provided that the last reported sales price of our common stock equals or exceeds \$18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, and the like) for any 20 trading days within a 30 day trading-day period. The Company does not have the ability to redeem the Private Placement Warrants. The Private Placement Warrants were valued at \$6,688 at the date of the Business Combination date. On December 31, 2022, there were 10,350,000 Public Shareholders’ Warrants outstanding and 5,738 Private placement Warrants outstanding.

On October 28, 2022, the Company entered into a Private Investment in Public Equity (“PIPE”) Agreement, pursuant to which the PIPE investors purchased an aggregate of 700,000 shares of common stock at \$10.00 per share and received 700,000 PIPE Investor Warrants, which entitled the holder to purchase one share of common stock of SeaStar Medical Holding Corporation at \$11.50 per share, for an aggregate purchase price of \$7,000. At December 31, 2022, there were 700,000 PIPE Investor Warrants outstanding, which are accounted for as equity.

The Company has the following warrants outstanding on December 31, 2022 and 2021:

	December 31, 2022	December 31, 2021
Public Stockholders’ Warrants	10,350,000	—
Private Placement Warrants	5,738,000	—
PIPE Investor Warrants	700,000	—
SeaStar Warrants	69,714	69,714
	<u>16,857,714</u>	<u>69,714</u>

Note 11. Convertible Preferred Stock, Common Stock and Preferred Stock

During the years ended December 31, 2022 and 2021, SeaStar Medical, Inc. converted 194,494 and 12,226 shares of Series A-2 Preferred stock, respectively, to Series B Preferred stock. Immediately prior to the Business Combination, SeaStar Medical, Inc. converted 633,697 shares of Series B Preferred stock, 1,576,154 shares of Series A-1 Preferred stock and 577,791 shares of Series A-2 Preferred stock to 7,238,767 shares of common stock. Also, during the year ended December 31, 2022, SeaStar Medical, Inc. converted Convertible Notes with a principal amount of \$4,636, a discount amount of \$168 and accrued interest of \$341 to 598,861 shares of common stock.

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SeaStar Medical, Inc.'s convertible preferred stock was classified as temporary equity in the accompanying consolidated balance sheets given the voting interest held by convertible preferred stockholders which could cause certain events to occur that were outside of SeaStar Medical, Inc.'s control whereby SeaStar Medical, Inc. could have been obligated to redeem the convertible preferred stock. SeaStar Medical, Inc. did not adjust the carrying values of the convertible preferred stock to the respective liquidation preferences of such shares as the instruments were not yet redeemable, and SeaStar Medical, Inc. believed it was not probable that the instruments would become redeemable.

Subsequent to the Business Combination, the Company is authorized to issue 110,000,000 shares, consisting of (a) 100,000,000 shares of common stock and (b) 10,000,000 shares of preferred stock (the "Preferred Stock").

Common stock

The charter of the Company (the "Charter") provides the following with respect to the rights, powers, preferences, and privileges of the common stock.

Voting power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of common stock possess all voting power for the election of the Company's directors and all other matters requiring stockholder action. Holders of common stock are entitled to one voter per share on matters to be voted on by stockholders. The Charter does not provide for cumulative voting rights.

Dividends

Subject to the rights, if any, of the holders of any outstanding shares of preferred stock, under the Charter, holders of common stock will be entitled to receive such dividends, if any, as may be declared from time to time by the Board in its discretion out of funds legally available therefor.

Liquidation, dissolution and winding up

In the event of the Company's voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the common stock will be entitled to receive an equal amount per share of all of the Company's assets of whatever kind available for distribution to stockholders, after the rights of the holders of the Preferred Stock have been satisfied and after payment or provision for payment of the Company's debts.

Preemptive or other rights

There are no preemptive rights or sinking fund provisions applicable to the shares of the Company's common stock.

Preferred Stock

The Charter provides that shares of preferred stock may be issued from time to time in one or more series. Our Board is authorized to fix the voting rights, if any, designations, powers, preferences, the relative, participating, optional, or other special rights and any qualifications, limitations, and restrictions thereof, applicable to the shares of each series. We have no preferred stock outstanding at December 31, 2022.

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Note 12. Stock-Based Compensation Awards

Equity incentive plan—stock options

The Company’s board of directors adopted the SeaStar Medical, Inc.’s 2019 Stock Incentive Plan (the “Stock Incentive Plan”) on February 25, 2019 to provide long-term incentive for its key employees and non-employee service providers. As of December 31, 2022 and 2021, 547,717 shares were reserved for the issuance of stock options to key employees and non-employee service providers for the purchase of SeaStar Medical, Inc.’s common stock. The vesting of stock options is stated in each individual grant agreement, which is generally four years. Options granted expire 10 years after the date of grant. There were 260,355 shares available for future grant as of December 31, 2021.

Upon the Closing, the Stock Incentive Plan was terminated, and the Company will not grant any further awards under such plan. However, the outstanding awards under the Stock Incentive Plan will be assumed and continued in connection with the Business Combination.

Each SeaStar Medical, Inc. Option to purchase shares of SeaStar Medical, Inc. common stock or SeaStar Medical, Inc. Preferred Stock (“SeaStar Option”) that was outstanding and unexercised immediately prior to the Business Combination converted into an option to purchase common stock, par value \$0.0001 per share, of SeaStar Medical Holding Corporation in accordance with its terms. The increase in the number of stock options was accounted for as a modification. The incremental fair value from the stock option modification increased stock-based compensation expense by \$134 for the year ended December 31, 2022, and increased unrecognized stock-based compensation cost by \$223 as of December 31, 2022.

The Company’s Board of Directors adopted, and the shareholders approved SeaStar Medical, Inc.’s 2022 Omnibus Incentive Plan (the “Equity Incentive Plan”) to provide long-term incentive for its key employees and non-employee service providers. As of December 31, 2022, 1,270,000 shares were reserved for the issuance of stock options to key employees and non-employee service providers for the purchase of the Company’s common stock. The vesting of stock options is stated in each individual grant agreement, which is generally four years. Options granted expire 10 years after the date of grant. There were 743,720 options available for future grant as of December 31, 2022.

Option activity for the years ended December 31, 2022 and 2021, are as follows:

(\$ in thousands)	Options	Weighted Average Exercise Price	Total Intrinsic Value	Weighted Average Remaining Contractual Life (Years)
Outstanding as of December 31, 2020	141,851	\$ 5.34		
Granted	153,504	\$ 0.55		
Forfeited	(7,973)	\$ 10.00		
Outstanding as of December 31, 2021	<u>287,382</u>	\$ 2.65	<u>\$ —</u>	8.61
Forfeited prior to merger conversion	(83,928)	\$ 4.63		
Additional options issued in merger conversion	41,338	\$ 1.84		
Outstanding as of December 31, 2022	<u>244,792</u>	<u>\$ 1.84</u>	<u>\$751,851</u>	7.65
Options exercisable as of December 31, 2022	<u>145,365</u>	<u>\$ 2.46</u>	<u>\$412,681</u>	7.48

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

The Company recognized \$148 and \$14 in stock-based compensation expense in connection with the Equity Incentive Plan for the years ended December 31, 2022 and 2021. As of December 31, 2022, there was unrecognized stock-based compensation cost of \$246, which is expected to be recognized over a term of three years. There were no options exercised during the years ended December 31, 2022 and 2021. For options granted during the year ended December 31, 2021, the weighted-average grant date fair value was \$0.40 per share. No options were granted during the year ended December 31, 2022, other than the additional options issued in the Business Combination.

Stock-based compensation expense for options included in the consolidated statements of operations is as follows:

(\$ in thousands)	2022	2021
Research and development	\$ 7	\$ 1
General and administrative	141	13
Total	<u>\$ 148</u>	<u>\$ 14</u>

Equity incentive plan—restricted stock units

In April 2022, the board of directors granted employees and members of the board restricted stock units (“RSUs”), under which the holders have the right to receive an aggregate of 255,000 shares of common stock. The majority of the RSUs granted vest 50% on the first anniversary of the grant date, with the remaining 50% of the awards vesting monthly over a 12-to-24 month period following the first anniversary of the grant date. At grant date, the fair market value of an RSU was \$8.00 per share.

Each SeaStar Medical, Inc. RSU that was outstanding immediately prior to the Business Combination converted into an RSU to receive common stock, par value \$0.0001 per share, of SeaStar Medical Holding Corporation in accordance with its terms. The increase in the number of RSUs was accounted for as a modification. The incremental fair value from the modification increased stock-based compensation expense increased by \$130 for the year ended December 31, 2022, and increased unrecognized stock-based compensation cost by \$373 as of December 31, 2022.

RSU activity for the year ended December 31, 2022, was as follows:

Outstanding as of December 31, 2021	—
Granted	255,000
Forfeited prior to merger conversion	(7,000)
Additional RSUs issued in merger conversion	50,389
Outstanding as of December 31, 2022	<u>298,389</u>
Vested as of December 31, 2022	—
Shares subject to repurchase as of December 31, 2022	<u>298,389</u>

The Company recognized \$1,163 in stock-based compensation expense in connection with the RSUs for the year ended December 31, 2022. As of December 31, 2022, there was unrecognized stock-based compensation cost of \$1,353, which is expected to be recognized over a term of 2.2 years. For RSUs granted during the year ended December 31, 2022, the weighted-average grant date fair value was \$8.00 per share. The weighted-average fair value of the additional RSUs issued in the Business Combination conversion was \$10.00 per share.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Stock-based compensation expense for RSUs included in the consolidated statements of operations is as follows:

(\$ in thousands)	<u>2022</u>	<u>2021</u>
Research and development	\$ 89	\$ —
General and administrative	1,074	—
Total	<u>\$ 1,163</u>	<u>\$ —</u>

Note 13. Commitments and Contingencies

License and distribution agreement

On December 27, 2022, the Company entered into a license and distribution agreement (“License Agreement”) with a distributor, appointing the distributor as the exclusive distributor to promote, advertise, market, distribute and sell the Selective Cytopheretic Device (“SCD”) in the United States. The Company received an upfront payment of \$100 on January 3, 2023. If the Company does not receive written authorization to market the SCD, prior to the first anniversary of the effective date, the Company will repay the \$100. The Company shall also receive milestone payments in the amounts of \$450 and \$350 for obtaining FDA approval and for selling the first sixty units to any third parties. The term of the agreement is three years.

Lease agreements

The Company is part of a membership agreement for shared office space and can cancel at any time. Rent expense was \$32 for the years ended December 31, 2022 and 2021.

Litigation

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. From time to time, the Company may become involved in legal proceedings arising in the ordinary course of business. The Company was not subject to any material legal proceedings during the years ended December 31, 2022 and 2021 and no material legal proceedings are currently pending or threatened.

Note 14. Income Taxes

The Company recorded \$1 of current income tax expense and \$1 of current income tax benefit for the years ended December 31, 2022 and 2021, respectively.

The effective income tax rate of the Company’s provision for income taxes differed from the federal statutory rate as follows:

	<u>2022</u>	<u>2021</u>
Federal tax at statutory rate	21.0%	21.0%
State income tax	4.4%	3.6%
Interest on convertible notes	(0.6)%	0.0%
Change in fair value of convertible notes derivative liability	(0.7)%	0.0%
Other	0.3%	(0.8)%
Change in valuation allowance	(24.4)%	(23.8)%
Total effective income tax rate	<u>(0.0)%</u>	<u>(0.0)%</u>

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Significant components of deferred tax assets for federal and state income taxes were as follows:

(\$ in thousands)	December 31, 2022	December 31, 2021
Deferred tax assets:		
Net operating losses	\$ 18,627	\$ 17,538
Forward option-prepaid forward contracts, net	2,585	—
Finance charges and origination fees	1,028	—
Accrued compensation	130	—
Stock-based compensation	311	3
Section 174 research and development capitalization	434	—
Tax credits	715	648
Total deferred tax assets	23,830	18,189
Valuation allowance	(23,830)	(18,189)
Net deferred tax assets	\$ —	\$ —

In accordance with U.S. GAAP, a valuation allowance should be provided if it is more likely than not that some or all of the Company's deferred tax assets will not be realized. The Company's ability to realize the benefit of its deferred tax assets will depend on the generation of future taxable income. Due to the uncertainty of future profitable operations and taxable income, the Company has recorded a full valuation allowance against its net deferred tax assets. For the years ended December 31, 2022 and 2021, the net increase in the valuation allowance was \$5,641 and \$869, respectively.

As of December 31, 2022 and 2021, the Company had federal net operating loss carryforwards of \$82,265 and \$78,127, respectively, of which \$29,425 of federal net operating loss carryforwards post 2017 will be carried forward indefinitely. The remaining \$52,840 of federal net operating loss carryforwards begin expiring in 2027. The Company also had \$28,896 of state (Colorado, California, and Florida) net operating loss carryforwards, which will begin expiring in 2039. The Company has not used any net operating loss carryforwards to date.

The Company had federal energy credit carryforwards of \$647 as of December 31, 2022 and 2021, which will expire starting in 2027 if not utilized. The Company has federal research and development credit carryforwards of \$68 as of December 31, 2022, which will expire starting in 2042 if not utilized.

Pursuant to Internal Revenue Code (IRC) Sections 382 and 383, the Company's ability to use NOL and research tax credit carry forwards to offset future taxable income may be limited if the Company experiences a cumulative change in ownership of more than 50% within a three-year testing period. The Company has not completed an ownership change analysis pursuant to IRC Section 382. If ownership changes within the meaning of IRC Section 382 are identified as having occurred, the amount of NOL and research tax credit carryforwards available to offset future taxable income and income tax liabilities in future years may be significantly restricted or eliminated. Further, deferred tax assets associated with such NOLs, and research tax credits could be significantly reduced upon realization of an ownership change within the meaning of IRC Section 382.

The Company files U.S. federal and state tax returns with varying statutes of limitations. Due to net operating loss and credit carryforwards, the 2019 to 2022 tax years remain subject to examination by the U.S. federal and some state authorities. The actual amount of any taxes due could vary significantly depending on the ultimate timing and nature of any settlement.

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Uncertain Tax Benefits

The Company uses the “more likely than not” criterion for recognizing the income tax benefit of uncertain income tax positions and establishing measurement criteria for income tax benefits. The Company had no uncertain tax benefits as of December 31, 2022 and 2021. The Company does not anticipate any significant changes to unrecognized tax benefits over the next 12 months as of December 31, 2022.

Note 15. Net Loss Per Share

Basic net loss per common share is calculated by dividing the net loss by the weighted-average number of common shares outstanding during the period, without consideration of potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of common shares and potentially dilutive securities outstanding for the period. For purposes of the diluted net loss per share calculation, the convertible preferred stock and common stock options are considered to be potentially dilutive securities. Basic and diluted net loss per share is presented in conformity with the two-class method required for participating securities as the convertible preferred stock is considered a participating security. The Company’s participating securities do not have contractual obligation to share in the Company’s losses. As such, the net loss was attributed entirely to common stockholders. As the Company has reported net loss for all periods presented, diluted net loss per common share is the same as basic net loss per common share for those periods.

The following weighted-average outstanding shares of potentially dilutive securities were excluded from the computation of diluted net loss per share attributable to common stockholders for the periods presented because including them would have been anti-dilutive:

	<u>2022</u>	<u>2021</u>
Public Stockholders’ warrants	10,350,000	—
Private Placement warrants	5,738,000	—
PIPE Investor warrants	700,000	—
SeaStar warrants	69,714	69,714
Options to purchase common stock	244,792	345,773
Restricted stock units	298,389	—
Total	<u>17,400,895</u>	<u>415,487</u>

Net loss per share is calculated using the shares in connection with the Business Combination and related transactions, assuming the shares were outstanding since January 1, 2021. As the Business Combination and related transactions are being reflected as if they had occurred at the beginning of the period presented, the calculation of weighted average shares outstanding for basic and diluted net loss per share assumes that the shares issued in connection with the Business Combination have been outstanding for the entire period presented.

Year Ended December 31:	<u>2022</u>	<u>2021</u>
Net loss	\$ (23,013)	\$ (4,596)
Weighted average shares outstanding—basic	8,211,256	7,238,767
Basic net loss per share	\$ (2.80)	\$ (0.63)
Weighted average shares outstanding—diluted	8,211,256	7,238,767
Diluted net loss per share	\$ (2.80)	\$ (0.63)

SeaStar Medical Holding Corporation
Notes to the Consolidated Financial Statements
(in thousands, except for shares and per-share amounts)

Note 16. Subsequent Events

On January 3, 2023, the Company received an upfront payment of \$100 as part of its License Agreement (Note 13).

On March 13, 2023, the Company entered into a \$100 promissory note with LM Funding America Inc. with an interest rate of 7.0% per annum. The promissory note was payable on demand at any time after April 13, 2023 and had no prepayment penalty. The Company repaid the loan on March 24, 2023.

On March 15, 2023, the Company entered into a securities purchase agreement with an institutional investor, whereby the Company will issue a series of four senior unsecured convertible notes, with principal amounts totaling up to \$9,800, and warrants to purchase shares of the Company's common stock. On March 15, 2023, the Company issued a note, convertible into 1,207,729 shares of common stock at an initial conversion price of \$2.70, in a principal amount of \$3,261, and a warrant to purchase up to 328,352 shares of common stock. The senior unsecured convertible note was issued at an 8.0% discount, bears interest at 7.0% per annum, and matures on June 15, 2024. The senior unsecured convertible notes are redeemable, in whole or in part, at any time at the discretion of the Company. The warrants have an initial exercise price of \$2.97 per share of common stock, expire five years from their issuance date, and contain cashless exercise provisions.

On March 15, 2023, the Company amended its LMFA notes, LMFAO note and Maxim note, extending their maturity dates to June 15, 2024. In consideration for such extension, the Company agrees to pay the note holders an aggregate amount of \$0.1 million in cash upon receipt of proceeds from the issuance of the notes at the second closing under the securities purchase agreement.

In March 2023, a VWAP trigger event occurred, and the Forward Purchase Agreements could mature on the date specified by the FPA Sellers at the FPA Sellers' discretion. The FPA Sellers have not specified the Maturity Date of the Forward Purchase Agreements as of the issuance of these consolidated financial statements.

During the period from January 1, 2023 through March 30, 2023, the Company made payments of \$2,701 on notes payable that were outstanding as of December 31, 2022.



6,718,842 Shares of Common Stock

PROSPECTUS

, 2023

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. You should not assume that the information contained or incorporated by reference in this prospectus is accurate as of any date other than the date of this prospectus. We are not making an offer of these securities in any state where the offer is not permitted.

PART II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following is an estimate of the expenses (all of which are to be paid by the registrant) that we may incur in connection with the securities being registered hereby.

	<u>Amount</u>
SEC registration fee	\$3,391.11
Legal fees and expenses	*
Accounting fees and expenses	*
Miscellaneous	*
Total	*

* These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be defined at this time.

We will bear all costs, expenses and fees in connection with the registration of the securities, including with regard to compliance with state securities or “blue sky” laws. The Selling Stockholder, however, will bear all underwriting commissions and discounts, if any, attributable to their sale of the securities. All amounts are estimates except the SEC registration fee and the FINRA filing fee.

Item 14. Indemnification of Directors and Officers.

Section 145 of the DGCL provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, provided that a court shall have determined, upon application, that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

In accordance with Section 102(b)(7) of the DGCL, our Charter provides that a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director’s duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision became effective. Accordingly, these provisions will have no effect on the availability of equitable remedies such as an injunction or rescission based on a director’s breach of his or her duty of care.

The Charter provides that we will indemnify our present and former directors and officers to the maximum extent permitted by the DGCL and that such indemnification will not be exclusive of any other rights to which

those seeking indemnification may be entitled under any bylaw provision, agreement, vote of stockholders or disinterested directors or otherwise.

The Company entered, and expects to continue to enter into, indemnification agreements with its directors, executive officers, and other employees as determined by the Board. Each indemnification agreement provides for indemnification and advancements by the Company of certain expenses and costs, if the basis of the indemnitee's involvement was by reason of the fact that the indemnitee is or was a director, officer, employee, or agent of the Company or any of its subsidiaries or was serving at the Company's request in an official capacity for another entity, to the fullest extent permitted by the laws of the state of Delaware.

Item 15. Recent Sales of Unregistered Securities.

PIPE Financing

As previously announced, on August 23, 2022, following the execution of the Merger Agreement, LMAO entered into Subscription Agreements with three institutional investors (the "PIPE Investors") pursuant to, and on the terms and subject to the conditions of which, the PIPE Investors collectively subscribed for an aggregate of 700,000 shares of Common Stock at \$10.00 per share, and 700,000 warrants (the "PIPE Warrants") for aggregate gross proceeds of \$7.0 million (the "PIPE Financing"). The PIPE Financing was consummated substantially concurrently with the Closing of the Business Combination.

The shares of Common Stock issued to the PIPE Investors were issued pursuant to and in accordance with the exemption from registration under the Securities Act, under Section 4(a)(2) promulgated under the Securities Act.

The issuance of Class A Common Stock upon the automatic conversion of the Class B Common Stock and the issuance of Common Stock upon the automatic conversion of the Class A Common Stock at the Closing has not been registered under the Securities Act in reliance on the exemption from registration provided by Section 3(a)(9) of the Securities Act.

Convertible Note Financing

On March 15, 2023, the Company entered into a Securities Purchase Agreement (the "Purchase Agreement") with an institutional investor (the "Purchaser"), pursuant to which the Company agreed to sell and issue to the Purchaser, in a series of up to four closings, senior unsecured convertible notes (the "Notes"), convertible into shares of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), in a principal amount of up to approximately \$9.8 million and warrants (the "Warrants") to purchase shares of the Company's Common Stock. On March 15, 2023 (the "Initial Closing Date"), the Company issued a Note, convertible into 1,207,729 shares of Common Stock at an initial conversion price of \$2.70, in a principal amount of \$3,260,869.57, and a Warrant to purchase up to 328,352 shares of Common Stock.

At the second closing, the Company will issue and sell to the Purchaser (i) an additional Note in a principal amount of \$2,173,913.04 and (ii) additional Warrants to purchase up to 218,901 shares of Common Stock. At each of the third and fourth closings, the Company may, at its option, issue and sell to the Purchaser (i) additional Notes, each in a principal amount of \$2,173,913.04 and (ii) additional Warrants to purchase shares of Common Stock equal to 25% of the Purchaser's shares of Common Stock issuable upon conversion of the Notes on the applicable closing date. Pursuant to the Purchase Agreement, the Company must satisfy certain additional conditions in order to sell and issue the additional Notes and additional Warrants at the second, third and fourth closings. Such additional conditions include, but are not limited to, the effectiveness of a registration statement to be filed by the Company with the SEC to register shares of Common Stock issuable upon conversion of the Notes and exercise of the Warrants, and for the third and fourth closings, the approval by stockholders of the Company to issue more than 19.99% of issued and outstanding shares pursuant to applicable Nasdaq Rules. If the third closing and fourth closing do not occur within the one-year anniversary of the Initial Closing Date, the Company's right to effect the third and fourth closings shall automatically terminate.

The Notes will be issued at an 8% original issue discount and bear an interest rate of 7%. The Notes mature fifteen (15) months after their issuance, or June 15, 2024 unless accelerated due to an event of default. The Notes are redeemable, in whole or in part, at any time at the discretion of the Company. At the Initial Closing Date, the Company received net proceeds, after the original issue discount and the Purchaser's counsel fees, of \$2,370,000.00.

The Notes contain standard and customary covenants and events of default. Such events of default include, but are not limited to, failure to make payments when due, failure to observe or perform covenants or agreements contained in the Notes, the breach of any material representation or warranty contain therein, the bankruptcy or insolvency of the Company, the suspension of trading of Common Stock, and the Company's failure to file required reports with the SEC. If any such event of default occurs, subject to any cure period, the Purchaser shall have the right to redeem any portion of the Note for a redemption price, with a certain dollar amount available for conversion, at the Purchaser's option, into shares of Common Stock.

The Warrants have an initial exercise price of \$2.97 per share of Common Stock, are exercisable at any time before the close of business on the day five (5) years after their issuance and contain cashless exercise provisions.

The Notes, Warrants, and shares of Common Stock issuable upon conversion of the Notes and upon exercise of such Warrants (the "Underlying Securities"), have not been registered under the Securities Act of 1933, as amended (the "Securities Act") and were issued and sold to an accredited investor in reliance upon the exemption from registration contained in Regulation D promulgated under the Securities Act.

Item 16. Exhibits.

(a) Exhibit Index

See the Exhibit Index immediately preceding the signature page hereto for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(b) Financial statement schedules

All schedules are omitted because the required information is either not present, not present in material amounts or presented within the consolidated financial statements included in the prospectus and are incorporated herein by reference.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- A. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
- (i) To include any prospectus required by section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

B. That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

D. That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

E. That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (iv) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (v) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (vi) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (vii) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

F. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
2.1†	<u>Agreement and Plan of Merger, dated as of April 21, 2022, by and among LMF Acquisition Opportunities, Inc. ("LMAO"), LMF Merger Sub, Inc. and SeaStar Medical, Inc. (incorporated by reference to Exhibit 2.1 to Form 8-K filed by the registrant on April 26, 2022).</u>
3.1	<u>Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation, filed with the Secretary of State of Delaware on October 28, 2022 (incorporated by reference to Exhibit 3.1 to Form 8-K filed by the registrant on November 4, 2022).</u>
3.2	<u>Amended and Restated Bylaws of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.2 to Form 8-K filed by the registrant on November 4, 2022).</u>
4.1	<u>Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to Form 8-K filed by the registrant on November 4, 2022).</u>
4.2	<u>Specimen Warrant Certificate (included in Exhibit 4.3).</u>
4.3	<u>Warrant Agreement, dated January 25, 2021, between LMAO and Continental Stock Transfer & Trust Company (incorporated by reference to Exhibit 4.1 to Form 8-K filed by the registrant on January 28, 2021).</u>
4.4	<u>Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to Form 8-K filed by the registrant on March 16, 2023).</u>
5.1	<u>Opinion of Morgan, Lewis & Bockius LLP (incorporated by reference to Exhibit 5.1 to the initial filing of this Registration Statement on January 20, 2023).</u>
10.1	<u>Amended and Restated Registration Rights Agreement, dated as of April 21, 2022, by and among LMAO, SeaStar Medical, Inc., and certain stockholders of SeaStar Medical, Inc. (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on April 26, 2022).</u>
10.2	<u>Investment Management Trust Agreement, dated January 25, 2021, between LMAO and Continental Stock Transfer & Trust Company, as trustee (incorporated by reference to Exhibit 10.2 to Form 8-K filed by the registrant on January 28, 2021).</u>
10.3	<u>Registration Rights Agreement, dated as of January 25, 2021, by and among LMF Acquisition Opportunities, Inc., SeaStar Medical, Inc. and certain stockholders of SeaStar Medical, Inc. (incorporated by reference to Exhibit 10.3 to Form 8-K filed by the registrant on January 28, 2021).</u>
10.4	<u>SeaStar Medical Holding Corporation 2022 Omnibus Incentive Plan (incorporated by reference to Annex D of Form S-4 filed by the registrant on May 16, 2022).</u>
10.5	<u>SeaStar Medical Holding Corporation 2022 Employee Stock Purchase Plan (incorporated by reference to Annex E of Form S-4 filed by the registrant on May 16, 2022).</u>
10.6	<u>Promissory Note, dated effective as of March 1, 2022, between LMFAO Sponsor LLC and LMAO (incorporated by reference to Exhibit 10.1 to Form 10-Q filed by the registrant on May 19, 2022).</u>
10.7	<u>Amended and Restated Promissory Note, dated July 28, 2022, issued by LMAO to LMFAO Sponsor, LLC (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on August 1, 2022).</u>
10.8	<u>Form of Subscription Agreement, dated August 23, 2022, between LMAO, SeaStar Medical, Inc. and certain investors (incorporated by reference to Exhibit 10.29 to Form S-4/A filed by the registrant on August 24, 2022).</u>

- 10.9 [Common Stock Purchase Agreement by and among Tumim Stone Capital LLC, LMAO, and SeaStar Medical, Inc., dated August 23, 2022 \(incorporated by reference to Exhibit 10.30 to Form S-4/A filed by the registrant on August 24, 2022\).](#)
- 10.10 [Registration Rights Agreement by and among Tumim Stone Capital LLC, LMAO and SeaStar Medical, Inc., dated August 23, 2022 \(incorporated by reference to Exhibit 10.31 to Form S-4/A filed by the registrant on August 24, 2022\).](#)
- 10.11 [Credit Agreement, between SeaStar Medical, Inc. and LM Funding America, Inc., dated September 9, 2022 \(incorporated by reference to Exhibit 10.34 to Form S-4/A filed by the registrant on September 13, 2022\).](#)
- 10.12 [Amendment No. 1 to Amended and Restated Registration Rights Agreement and Waiver of Lock-up Period, dated October 25, 2022, by and among LMAO and the investors listed on the signature pages thereto \(incorporated by reference to Exhibit 10.12 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.13 [Letter Agreement, dated October 28, 2022, by and among LMAO, SeaStar Medical, Inc., and Tumim Stone Capital LLC \(incorporated by reference to Exhibit 10.13 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.14 [Director Nomination Agreement, dated as of October 28, 2022, by and among LMFAO Sponsor LLC and LMAO \(incorporated by reference to Exhibit 10.14 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.15 [First Amendment to Credit Agreement, dated October 28, 2022, by and between SeaStar Medical, Inc. and LM Funding America, Inc. \(incorporated by reference to Exhibit 10.15 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.16 [Amended and Restated Promissory Note, dated October 28, 2022, issued by SeaStar Medical, Inc. to LM Funding America, Inc. \(incorporated by reference to Exhibit 10.16 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.17 [Security Agreement, dated October 28, 2022, issued by SeaStar Medical, Inc. and SeaStar Medical Holding Corporation to LM Funding America, Inc. \(incorporated by reference to Exhibit 10.17 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.18 [Guaranty, dated October 28, 2022, issued by SeaStar Medical Holding Corporation to LM Funding America, Inc. \(incorporated by reference to Exhibit 10.18 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.19 [Consolidated Amended and Restated Promissory Note, dated October 28, 2022, issued by SeaStar Medical Holding Corporation to LMFAO Sponsor, LLC \(incorporated by reference to Exhibit 10.19 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.20 [Security Agreement, dated October 28, 2022, issued by SeaStar Medical, Inc. and SeaStar Medical Holding Corporation to LMFAO Sponsor, LLC \(incorporated by reference to Exhibit 10.20 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.21 [Guaranty, dated October 28, 2022, issued by SeaStar Medical, Inc. to LMFAO Sponsor, LLC \(incorporated by reference to Exhibit 10.21 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.22 [Promissory Note, dated October 28, 2022, issued by SeaStar Medical Holding Corporation to Maxim Group LLC \(incorporated by reference to Exhibit 10.22 to Form 8-K filed by the registrant on November 4, 2022\).](#)
- 10.23 [Intercreditor Agreement, dated October 28, 2022, by and among Maxim Group LLC, LM Funding America, Inc., LMFAO Sponsor, LLC, SeaStar Medical, Inc. and SeaStar Medical Holding Corporation \(incorporated by reference to Exhibit 10.23 to Form 8-K filed by the registrant on November 4, 2022\).](#)

10.24	Confirmation for Prepaid Forward Transaction, dated October 26, 2022, by and among LMF Acquisition Opportunities, Inc., SeaStar Medical, Inc. and HB Strategies LLC (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on October 27, 2022).
10.25	Confirmation for Prepaid Forward Transaction, dated October 17, 2022, by and among LMF Acquisition Opportunities, Inc., SeaStar Medical, Inc. and Vellar Opportunity Fund SPV LLC—Series 4 (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on October 17, 2022).
10.26	Amendment No. 1 to Common Stock Purchase Agreement, dated as of November 9, 2022, by and among Tumim Stone Capital, LLC, SeaStar Medical, Inc., and SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on November 10, 2022).
10.27	Amendment No. 1 to Registration Rights Agreement, dated as of November 9, 2022, by and among Tumim Stone Capital LLC, SeaStar Medical, Inc., and SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 10.2 to Form 8-K filed by the registrant on November 10, 2022).
10.28	Securities Purchase Agreement, dated as of March 15, 2023, by and among SeaStar Medical Holding Corporation and 3i, LP (incorporated by reference to Exhibit 10.1 to Form 8-K filed by the registrant on March 16, 2023).
10.29	Registration Rights Agreement, dated as of March 15, 2023, by and among SeaStar Medical Holding Corporation and 3i, LP (incorporated by reference to Exhibit 10.2 to Form 8-K filed by the registrant on March 16, 2023).
10.30	Form of Senior Unsecured Convertible Note (incorporated by reference to Exhibit 10.3 to Form 8-K filed by the registrant on March 16, 2023).
21.1	List of Subsidiaries (incorporated by reference to Exhibit 21.1 to Form 8-K filed by the registrant on November 4, 2022).
23.1*	Consent of Armanino LLP
24.1	Power of Attorney (included on the signature page to the initial filing of this Registration Statement on January 20, 2023).
101.INS*	Inline XBRL Instance Document—the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)
107	Filing Fee Exhibit (incorporated by reference to Exhibit 107 to the initial filing of this Registration Statement on January 20, 2023).

† Schedules and exhibits to this agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

* Filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Denver, Colorado, on April 21, 2023.

SEASTAR MEDICAL HOLDING CORPORATION

By: /s/ Eric Schlorff

Name: Eric Schlorff

Title: Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-1 has been signed below by the following persons in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Eric Schlorff</u> Eric Schlorff	Chief Executive Officer and Director (Principal Executive Officer)	April 21, 2023
<u>/s/ Caryl Baron*</u> Caryl Baron	Interim Chief Financial Officer (Principal Financial and Accounting Officer)	April 21, 2023
<u>/s/ Rick Barnett*</u> Rick Barnett	Chairman of the Board of Directors	April 21, 2023
<u>/s/ Kenneth Van Heel*</u> Kenneth Van Heel	Director	April 21, 2023
<u>/s/ Andres Lobo*</u> Andres Lobo	Director	April 21, 2023
<u>/s/ Allan Collins*</u> Allan Collins	Director	April 21, 2023
<u>/s/ Bruce Rodgers*</u> Bruce Rodgers	Director	April 21, 2023
<u>/s/ Richard Russell*</u> Richard Russell	Director	April 21, 2023

* Indicates that such individual signed their name pursuant to the power of attorney previously filed as Exhibit 24.1 to this Registration Statement.



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use of our report dated March 30, 2023 relating to the consolidated financial statements of SeaStar Medical Holding Corporation included in this Registration Statement on Form S-1 (File No. 333-269338). We also consent to the reference to our firm under the heading "Experts" in such Registration Statement.

/s/ Armanino^{LLP}
Bellevue, Washington

April 21, 2023

