

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

POST-EFFECTIVE AMENDMENT NO. 1  
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)

**3841**

(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, Suite 410  
Denver, CO 80216**

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

*Copies to:*

**Joshua Erekson  
Daniel Lyman  
Dorsey & Whitney LLP  
111 South Main Street, Suite 2100  
Salt Lake City, UT 84111  
(801) 933-7360**

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, 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 of the Exchange Act:

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 this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

## EXPLANATORY NOTE

This Post-Effective Amendment No. 1 on Form S-1 to the Registration Statement on Form S-1 (Registration No. 333-289447) (the “Original Registration Statement”), which was declared effective by the Commission on August 12, 2025, is being filed to (i) revise the prospectus included herein to reflect the incorporation by reference herein of disclosures from previous filings with the Commission and to incorporate by reference herein information from future filings with the Commission, all as provided by to Item 12 of Form S-1, and (ii) to serve as a Section 10(a)(3) update to the Original Registration Statement and to make certain other updates to the prospectus that forms a part of this Post-Effective Amendment No. 1. Pursuant to Rule 416 under the Securities Act, there are also being registered such securities that may be issued because of events such as recapitalizations, stock dividends, stock splits and reverse stock splits, and similar transactions. No additional securities are being registered under this Post-Effective Amendment No. 1. All applicable registration fees were paid at the time of the filing of the Original Registration Statement. Accordingly, we hereby amend the Original Registration Statement, as amended and supplemented through the date hereof, by filing this Post-Effective Amendment No. 1.

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**The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**PRELIMINARY PROSPECTUS (Subject to Completion)**

**Dated April 28, 2026**

**Up to 1,091,730 Shares of Common Stock**

**Offered by the Selling Securityholders**



**SeaStar Medical Holding Corporation**

This prospectus covers the offer and resale from time to time of: (i) up to 524,249 shares of common stock (the “July Common Warrant Shares”), par value \$0.0001 per share (“Common Stock”) issuable upon exercise of common stock purchase warrants (the “July Common Warrants”) with an exercise price of \$6.38 per share; (ii) up to 36,699 shares of Common Stock (the “July Placement Agent Warrant Shares”) issuable upon exercise of the placement agent common stock purchase warrants (the “July Placement Agent Warrants”) with an exercise price of \$9.538 per share; (iii) up to 496,057 shares of Common Stock (the “August Common Warrant Shares”) issuable upon exercise of common stock purchase warrants (the “August Common Warrants”) with an exercise price of \$7.62 per share; and (iv) up to 34,725 shares of Common Stock (the “August Placement Agent Warrant Shares”) issuable upon exercise of the placement agent common stock purchase warrants (the “August Placement Agent Warrants”) with an exercise price of \$11.088 per share. The July Common Warrants were issued pursuant to that certain Securities Purchase Agreement dated July 10, 2025, in a private placement transaction. The August Common Warrants were issued pursuant to that certain Securities Purchase Agreement dated July 31, 2025, in a private placement transaction. The July Placement Agent Warrants and the August Placement Agent Warrants were issued pursuant to that certain Engagement Agreement dated May 17, 2024, as amended on November 13, 2024 and April 1, 2025. The July Common Warrants, August Common Warrants, July Placement Agent Warrants, and August Placement Agent Warrants are together referred to as the “Warrants”. The shares issuable upon exercise of the Warrants are together referred to as the “Resale Shares”.

We are registering the offer and sale of the Resale Shares on behalf of the Selling Securityholders to satisfy certain registration rights that we have granted to the Selling Securityholders.

Sales of the Resale Shares by the Selling Securityholders may occur at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. The Selling Securityholders may sell the Resale Shares to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the Selling Securityholders, the purchasers of the Resale Shares, or both.

We are paying the cost of registering the Resale Shares as well as various related expenses. The Selling Securityholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their Resale Shares. See “Plan of Distribution” for more information about how the Selling Securityholders may sell or dispose of their Resale Shares.

We are a “smaller reporting company” under the federal securities laws and, as such, are subject to reduced public company reporting requirements. See “Implications of Being a Smaller Reporting Company.”

We are an “emerging growth company” under the federal securities laws and, as such, are subject to reduced public company reporting requirements. See “Implications of Being an Emerging Growth Company.”

Our Common Stock and listed warrants (the “Listed Warrants”) are traded on the Nasdaq Stock Market (“Nasdaq”) under the symbols “ICU” and “ICUCW,” respectively. The Listed Warrants are not exercisable on a one-for-one basis. Each Listed Warrant has an exercise price of \$11.50 and represents 1/250th of a share; therefore, 250 listed warrants must be exercised, for a total of \$2,875.00, to acquire one share of Common Stock. On April 20, 2026, the closing price of our Common Stock was \$4.63 per share, and the closing price of our Listed Warrants was \$.0241 per warrant.

On January 5, 2026, we effected a 1-for-10 reverse stock split (the “Reverse Split”) of our issued and outstanding shares of Common Stock, and our shares of Common Stock began trading on a split-adjusted basis on the Nasdaq Capital Market on January 5, 2026 under the same symbol “ICU”. All of our stock options and warrants outstanding immediately prior to the Reverse Split were proportionally adjusted except for the Listed Warrants and the private placement warrants that were issued as part of the SPAC transaction, which total 16,788,000 outstanding warrants in the aggregate (the “Unadjusted Warrants”). The Unadjusted Warrants retain an \$11.50 exercise price each and require the exercise of 250 warrants to purchase one share of Common Stock. Unless otherwise indicated, all other share and per share prices in this prospectus have been adjusted to reflect the Reverse Split.

**Investing in our securities involves a high degree of risk. You should read “Risk Factors” beginning on page 5 of this prospectus, and under similar headings in the documents incorporated by reference in this prospectus, as well as in any amendments or supplements to this prospectus, to read about factors to consider before purchasing 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 , 2026.**

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## ABOUT THIS PROSPECTUS

Neither we nor the Selling Securityholders have authorized anyone to provide you with information different from that contained in this prospectus, the documents incorporated by reference herein, or any accompanying prospectus supplement or free writing prospectus, and neither we nor the Selling Securityholders take any responsibility for any other information that others may give you. We and the Selling Securityholders are offering to sell these securities and seeking offers to buy these securities only in jurisdictions where offers and sales are permitted. This prospectus, the documents incorporated by reference herein, and any accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate.

You should not assume that the information contained in this prospectus, the documents incorporated by reference herein, or any prospectus supplement or free writing prospectus is accurate as of any date other than the date on the front cover of those documents, regardless of the time of delivery of this prospectus or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus relates to the offering of our Common Stock. Before buying any of our Common Stock, you should carefully read this prospectus, the documents incorporated by reference herein, any supplement to this prospectus, and the additional information under the heading “Where You Can Find More Information.” These documents contain important information that you should consider when making your investment decision. 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 and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Exchange Act of 1934, as amended (the “Exchange Act”). These statements are based on our management’s current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the sections titled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Our actual results may differ, including materially, from those anticipated in these forward-looking statements as a result of various risks and uncertainties. These risks and uncertainties include, but are not limited to, those risks discussed in this prospectus under “Risk Factors,” the risks described under “Part I—Item 1A—Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2025, and under “Part II, Item 1A—Risk Factors” in our Quarterly Reports on Form 10-Q, both of which are incorporated herein by reference.

Any statements in this prospectus and the documents incorporated herein about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements. Within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, these forward-looking statements may include, but are not limited to, statements regarding:

- our plans to conduct further clinical trials and anticipated enrollment, clinical sites, completion, results, and timing thereof;
- our plans and expected timeline related to our products, including timing of commercial launch, or developing new products, to address additional indications or to obtain regulatory approvals or clearances or otherwise;
- the expected use of our products by clinicians, including market awareness, acceptance and adoption of our products, and anticipated utilization of our products;
- our expectations regarding the number of procedures that will be performed with our products, the number of clinicians we expect to train, and the number of our sales territories;
- our ability to obtain, maintain, and expand regulatory clearances for our current products and any new products we create;
- the expected growth of our business and our organization;
- our expectations regarding government and third-party payer coverage and reimbursement;
- our ability to retain and recruit key personnel;
- our ability to obtain an adequate supply of materials and components for our products from our third-party suppliers, most of whom are single-source suppliers;
- our ability to manufacture sufficient quantities of our products with sufficient quality and the sufficiency of our current manufacturing capabilities;
- our ability to obtain and maintain intellectual property protection for our products and our business;

- our ability to expand our business into new geographic markets and the anticipated timing thereof;
- our compliance with extensive Nasdaq and SEC requirements and government laws, rules and regulations both in the United States and internationally;
- our expectations regarding operating trends, future financial performance and expense management and our estimates of our future expenses, ongoing losses, future revenue, capital requirements and our need for, or ability to obtain, additional financing;
- our ability to identify and develop new and planned products and/or acquire new products;
- our experience with inflationary and price pressures and increased labor costs and labor and staffing shortages as a result of general macroeconomic factors;
- developments and projections relating to our market opportunity and penetration, competitors, or our industry;
- our intended use of net proceeds from our public offerings.
- our future capital requirements and sources and uses of cash;
- our ability to obtain funding or raise capital for its operations and future growth;
- any delays or challenges in obtaining FDA approval of our SCD product candidates;
- economic downturns and the possibility of rapid change in the highly competitive industry in which our operates;
- the ability to develop and commercialize its products or services following regulatory approval of our 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 our products and services;
- inability to secure or protect its intellectual property;
- dispute or deterioration of relationship with our major partners and collaborators;
- the ability to maintain the listing of its Common Stock on Nasdaq;
- delays associated with government and other grant funding;
- the ability to recognize the anticipated benefits of the Business Combination, which may be affected by, among other things, competition, and the ability of our to grow and manage growth profitably; and
- other risks and uncertainties indicated in this Annual Report, including those under “Risk Factors” herein, and other filings that have been made or will be made with the SEC.

In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expects,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would” or the negative or plural of those terms, and similar expressions intended to identify statements about the future, although not all forward-looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

## SUMMARY

*This summary highlights selected information appearing elsewhere in this prospectus. 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 documents incorporated by reference herein, and the registration statement of which this prospectus is a part carefully, including the information set forth under the heading "Risk Factors" and our financial statements.*

### **Business Summary**

#### ***Company Overview***

We are a commercial-stage healthcare company focused on transformational treatments for critically ill patients facing organ failure and potential loss of life. Our Selective Cytopheretic Device ("SCD") is designed as a disease-modifying device that neutralizes over-active immune cells and stops the cytokine storm that yields destructive hyperinflammation and creates a cascade of events that wreak havoc in the patient's body. It has broad potential applications for patients suffering from both acute and chronic kidney disease as well as cardiovascular and other serious inflammatory diseases.

We received Food and Drug Administration ("FDA") approval on February 21, 2024, under a Humanitarian Device Exemption ("HDE") for our pediatric SCD therapy. It is the only FDA approved product for use in pediatric patients with acute kidney injury ("AKI") due to sepsis or a septic condition requiring kidney replacement therapy. We shipped our first commercial pediatric SCD ("QUELIMMUNE") in July 2024. In addition, we are currently conducting a pivotal clinical trial, also referred to as "NEUTRALIZE-AKI" to assess the safety and efficacy of the SCD therapy in critically ill adult patients with AKI requiring continuous renal replacement therapy ("CRRT"). We are also conducting a feasibility study of the SCD therapy in adult patients with Cardiorenal Syndrome ("CRS") awaiting left ventricular assist device ("LVAD") implantation.

Our SCD therapy has been awarded six Breakthrough Device Designations ("BDD") by the FDA. These BDDs cover multiple therapeutic indications for the use of our SCD therapy in adult patients with AKI, CRS awaiting LVAD implantation, hepatorenal syndrome, end stage renal disease ("ESRD"), and systemic inflammatory response while undergoing cardiac surgery. The BDD enables the potential for a speedier pathway to approval and the ability to have more frequent and flexible meetings with FDA.

The inflammatory response is essential to the healing process of critical organs; however, the overactivation of inflammatory cells, which can be triggered by many different bodily insults such as trauma, surgery or infection, can send the body into shock and cause severe damage to a variety of critical organs such as the heart, lungs and kidneys. Central to inflammation are the cells within blood and lymph circulatory systems, called white blood cells (primarily neutrophils and monocytes). 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) that trigger the immune system to eliminate foreign pathogens or damaged tissue, enhancing the immune response.

If the inflammatory response becomes excessive and dysregulated (referred to as proinflammatory), the inflammatory cells will continue to produce cytokines and other damaging molecules, further enhancing the dysregulated immune response, and 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 and potentially chronic solid organ dysfunction or failure, including the heart, lung, kidney, liver, and even death. 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.

Currently, there are no therapeutic options that specifically neutralize the white blood cells that are primarily responsible for the destructive hyperinflammatory response. Clinicians typically address hyperinflammation with therapies that are either immunosuppressive or that target a specific cytokine, both of which are generally suboptimal in the treatment of hyperinflammation. We believe our technology has the potential to overcome limitations in existing anti-inflammatory treatments and address the challenge of selectively targeting activated neutrophils and monocytes.

Clinical and preclinical studies conducted over the last 15 years have demonstrated that our SCD therapy can modulate the degree of activity of proinflammatory cells to help reduce tissue damage and speed the repair and recovery of organ function. Data from our trials demonstrated that the use of our SCD therapy to reverse the cytokine storm in more than 150 pediatric and adult patients with acute kidney injury on CRRT reduced mortality rates by 50%, and of those patients who survived 60 days, none have required dialysis. We believe our SCD therapy has the potential to transform the treatment of acute organ failure in the intensive care unit ("ICU") and to improve organ function in patients with chronic kidney disease, certain cardiovascular diseases, and other serious inflammatory diseases.

Preclinically, we evaluated our SCD therapy in various animal models representing multiple hyperinflammatory indications, including acute myocardial infarction, intracranial hemorrhage, chronic heart failure, sepsis, and acute respiratory distress syndrome. The animal models demonstrated the inflammatory response and how it was modified by our SCD therapy. We will continue to explore the application of our SCD therapy across a broad range of indications where proinflammatory activated neutrophils and monocytes contribute to disease progression or severity in both acute and chronic indications.

We are leveraging our patent protected and scalable SCD therapy platform to develop proprietary treatments that are organ agnostic and target both acute and chronic indications. The SCD therapy is delivered via an extracorporeal synthetic membrane device that easily integrates into existing CRRT systems that are commonly employed for patients with acute organ injury in hospitals, including in ICUs throughout the United States. It also has the potential to be integrated into kidney dialysis systems for chronic kidney disease patients receiving renal replacement therapy at centers throughout the United States. We believe that the ease of use and broad applicability of the therapy across multiple disease states should enable us to capture a sizable market for our SCD therapy with increasingly favorable economics.

Our senior management team and Board have extensive experience in the healthcare industry, including expertise in regulatory and medical affairs, commercialization and distribution in our initial therapeutic priority areas. We also have assembled a team of well-respected scientific advisors who are experts in the development of our technology and products.

There is a substantial clinical need for safe and effective control of hyperinflammation and we believe that our first-in-class SCD therapy can address the large potential market of over one million patients each year that face life-threatening hyperinflammatory conditions, including organ failure and potential loss of life.

On October 28, 2022, we completed a business combination with LMAO, pursuant to that certain Agreement and Plan of Merger, dated as of April 21, 2022 (the “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, Inc.”). As contemplated by the Merger Agreement, SeaStar Medical, Inc. merged with and into Merger Sub, with SeaStar Medical, Inc. 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, LMAO changed its name to “SeaStar Medical Holding Corporation.”

#### ***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.

#### ***Implications of Being a Smaller Reporting Company***

We are a “smaller reporting company,” meaning that the market value of our Common Stock held by non-affiliates is less than \$250.0 million measured on the last business day of our most recent second fiscal quarter or our annual revenue was less than \$100.0 million during the most recent completed fiscal year and the market value of our Common Stock held by non-affiliates was less than \$700.0 million measured on the last business day of our most recent second fiscal quarter. Accordingly, we may provide less public disclosure than larger public companies, including the inclusion of only two years of audited financial statements and only two years of management’s discussion and analysis of financial condition and results of operations disclosure. As a result, the information that we provide to our stockholders may be different than what you might receive from other public reporting companies in which you hold equity interests.

#### ***Implications of Being an Emerging Growth Company***

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) and may remain an emerging growth company for up to five years. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not applicable to emerging growth companies. These exemptions include:

- reduced disclosure about our executive compensation arrangements;
- no non-binding stockholder advisory votes on executive compensation or golden parachute arrangements; and
- exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We have taken advantage of reduced reporting requirements in this prospectus and may continue to do so until such time that we are no longer an emerging growth company. We will remain an “emerging growth company” until the earliest of (a) the last day of the fiscal year in which we have total annual gross revenues of \$1.235 billion or more, (b) the last day of our first fiscal year following the fifth anniversary of the closing of the Business Combination, (c) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years or (d) the date on which we are deemed to be a large accelerated filer under the rules of the SEC. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period for complying with new or revised accounting standards.

## **Recent Developments**

### ***Reverse Stock Split***

On December 18, 2025, our stockholders duly approved a 1-for-10 reverse stock split of our common stock, the Reverse Split, at a Special Meeting of Stockholders. The Board of Directors of the Company previously approved the Reverse Split subject to stockholder approval. The Reverse Split was effective as of 12:01 a.m. Eastern Standard Time on January 5, 2026, and the Company’s shares of common stock began trading on a split-adjusted basis on Nasdaq on January 5, 2026, under the same symbol “ICU”. All stock options and warrants of the Company outstanding, except the Unadjusted Warrants, immediately prior to the Reverse Split were proportionally adjusted. While the number of listed warrants actively traded under the symbol ICUCW remains at 10,550,000, holders of listed warrants will be required to exercise 250 warrants for an aggregate exercise price of \$2,875.00 to purchase one share of Common Stock.

As a result of the Reverse Split, every 10 shares of the Company’s issued and outstanding common stock were automatically combined and converted into one issued and outstanding share of common stock. The Company did not issue any fractional shares in connection with the Reverse Split. Instead, the number of shares was rounded up to the next whole number. The Reverse Split did not modify the rights or preferences of the common stock.

### ***Shareholder Claims***

On July 5, 2024, Forrest A K Wells, a purported stockholder of ours, filed a putative class action complaint in the United States District Court for the District of Colorado, captioned Wells v. SeaStar Medical Holding Corporation et al, Case No. 1:24-cv-0187 (D. Colorado) (the “Class Action”). The Class Action alleges that we, our Chief Executive Officer and former Chief Financial Officer made or caused to be made material misstatements or omissions regarding our business and operations, allegedly culminating in our restatement of our consolidated financial statements, disclosed in a Form 8-K and filed on March 27, 2024. The Class Action asserts claims pursuant to the Securities Exchange Act of 1934, including Section 10(b), Rule 10b-5 promulgated thereunder and Section 20(a). The Class Action seeks to recover, among other remedies, compensatory damages. On March 4, 2025, the Plaintiff filed an amended complaint. The Defendants moved to dismiss the complaint. The Defendants’ motion to dismiss the complaint was referred to United States District Court Magistrate Judge Timothy P. O’Hara. On February 27, 2026, Magistrate Judge O’Hara issued a written report and recommendation to United States District Judge Regina M. Rodriguez that the complaint be dismissed with leave to amend (“R&R”). On March 30, 2026, Judge Rodriguez adopted the Magistrate Judge’s R&R and dismissed the complaint with leave to amend. On April 21, 2026 the parties filed a Stipulation and Proposed Order of Dismissal with Prejudice (“Stipulation”). On April 27, 2026 the Court ordered that the case is dismissed with prejudice.

On December 13, 2024, Jose Lazo, a purported stockholder of ours, filed a putative stockholder derivative action complaint captioned Lazo v. Schlorff et. al., C.A. No. 1:24-cv-3444 in the United States District Court for the District of Colorado (the “Derivative Action”). The factual allegations of the Derivative Action are substantially similar to the Class Action. On January 30, 2025, upon joint motion of the parties, the Court stayed the Derivative Action pending the Court’s resolution of the then-anticipated motion to dismiss to be filed in the Class Action.

The Derivative Action alleges, among other things, that our Chief Executive Officer, former Chief Financial Officer, and certain of the Company’s current and former directors violated Section 14(a) of the Exchange Act, breached fiduciary duties and were unjustly enriched by making or allowing to be made purportedly false and misleading statements regarding our prospects for success in obtaining FDA approval for our SCD. The Derivative Action further alleges that there were purported deficiencies in the Company’s internal financial controls and procedures and improper accounting for classification of certain financial instruments leading to our restatement of previously issued financial statements. The Derivative Action also asserts claims under Section 10(b) and 21D of the Exchange Act against our Chief Executive Officer and former Chief Financial Officer. Among other remedies, the Derivative Action seeks to recover damages and restitution on behalf of us and certain injunctive relief concerning our corporate governance and internal controls. Additional stockholders may file substantially similar complaints in the future. The Company will not make separate disclosure of such complaints unless they are materially different than the Derivative Action.

## THE OFFERING

<b>Securities we are offering</b>	1,091,730 shares of Common Stock consisting of: (i) up to 524,249 July Common Warrant Shares, (ii) up to 496,057 August Common Warrant Shares, (iii) up to 36,699 July Placement Agent Warrant Shares, and (iv) up to 34,725 August Placement Agent Warrant Shares.
<b>Common Stock outstanding immediately prior to this offering</b>	3,997,002 shares of Common Stock
<b>Common Stock to be outstanding after this offering</b>	5,088,732 shares of Common Stock, assuming all the Warrants are exercised.
<b>Use of proceeds</b>	We will not receive any proceeds from the sale of the shares of common stock offered by the Selling Securityholders. However, we will receive the proceeds of any cash exercise of the Warrants. See “Use of Proceeds” for additional information.
<b>Risk Factors</b>	Investment in our Common Stock involves a high degree of risk. See “Risk Factors” beginning on page 5 of this prospectus, and any other risk factors described in the documents incorporated by reference herein, as well as the other information included in this prospectus, for a discussion of risks you should carefully consider before investing in our Common Stock.
<b>Nasdaq Capital Market symbol</b>	Our Common Stock and Listed Warrants are listed for trading on Nasdaq under the symbols “ICU” and “ICUCW,” respectively.

The number of shares of our Common Stock outstanding prior to and after this offering in the table above is based on 3,997,002 shares of our Common Stock outstanding as of April 20, 2026, and excludes (in each case as of April 20, 2026):

- 42 shares of Common Stock issued subsequent April 20, 2026
- 1,764 shares of Common Stock issuable upon the exercise of stock options, with a weighted-average exercise price of \$488.44 per share;
- 159,810 shares of Common Stock issuable upon the settlement of outstanding restricted stock units;
- 2,669,947 shares of Common Stock issuable upon the exercise of outstanding warrants, with a weighted-average exercise price of \$84.02 per share; and
- 26,174 additional shares of Common Stock reserved for future issuance under our 2022 Omnibus Equity Incentive Plan.

## RISK FACTORS

*An investment in our Common Stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described in the documents incorporated by reference herein. The impacts of the contingencies contemplated by these risks could materially adversely affect our business, financial condition or results of operations. The risks described in the documents incorporated by reference herein are not the only ones we face, but those that we consider to be material. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations and financial condition. Please also read carefully the section titled "Cautionary Note Regarding Forward-Looking Statements," where we describe additional uncertainties associated with our business and the forward-looking statements included in this prospectus and in the documents incorporated by reference herein.*

## USE OF PROCEEDS

We are filing the registration statement of which this prospectus forms a part to permit holders of the shares of common stock described in the section entitled "*Selling Securityholders*" to resell such shares. We will not receive any proceeds from the resale of any shares offered by this prospectus by the Selling Securityholders. However, we will receive the proceeds of any cash exercise of the Warrants. If all of the Warrants are exercised for cash on a one-for-one basis, we would receive aggregate proceeds of approximately \$7.9 million. Specifically, if all 524,249 July Common Warrant Shares are issued upon exercise of the July Common Warrants for cash at an exercise price of \$6.38 per share, we would receive additional proceeds of approximately \$3.3 million, if all 36,699 July Placement Agent Warrant Shares are issued upon exercise of the July Placement Agent Warrants for cash at an exercise price of \$9.538 per share, we would receive additional proceeds of approximately \$0.4 million, if all 496,057 August Common Warrant Shares are issued upon exercise of the August Common Warrants for cash at an exercise price of \$7.62 per share, we would receive additional proceeds of approximately \$3.8 million, and if all 34,725 August Placement Agent Warrant Shares are issued upon exercise of the August Placement Agent Warrants for cash at an exercise price of \$11.088 per share, we would receive additional proceeds of approximately \$0.4 million. We cannot predict when or how many any of these Warrants will be exercised. It is possible that a significant number of these Warrants may expire and may never be exercised.

We intend to use any proceeds from the exercise of the Warrants for general corporate purposes.

## MARKET INFORMATION FOR OUR COMMON STOCK AND DIVIDEND POLICY

### Market Price of Our Common Stock

Our common stock is quoted on Nasdaq under the ticker symbol “ICU”. On April 20, 2026, the closing price of our common stock was \$4.63 per share.

As of April 20, 2026, we had 3,997,002 shares of common stock outstanding held by approximately 91 stockholders of record.

### Dividend Policy

We have never paid any cash dividends on our capital stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain future earnings to fund ongoing operations and future capital requirements. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon financial condition, results of operations, capital requirements and such other factors as the board of directors deems relevant.

## PLAN OF DISTRIBUTION

We are registering the resale of the Resale Shares issuable upon exercise of the Warrants to permit the resale of these Resale Shares by the holder of the Warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the Selling Securityholders of the Resale Shares, although we will receive the exercise price of any Warrants not exercised by the Selling Securityholders on a cashless exercise basis. We will bear all fees and expenses incident to our obligation to register the Resale Shares.

The Selling Securityholders may sell all or a portion of the Resale Shares held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the Resale Shares are sold through underwriters or broker-dealers, the Selling Securityholders will be responsible for underwriting discounts or commissions or agent's commissions. The Resale Shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- one or more underwritten offerings on a firm commitment or best-efforts basis;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the Registration Statement is declared effective by the SEC;
- broker-dealers may agree with a selling security holder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Securityholders may also sell Resale Shares under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the Selling Securityholders may transfer the Resale Shares by other means not described in this prospectus. If the Selling Securityholders effect such transactions by selling Resale Shares to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the Selling Securityholders or commissions from purchasers of the Resale Shares for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the Resale Shares or otherwise, the Selling Securityholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the Resale Shares in the course of hedging in positions they assume. The Selling Securityholders may also sell the Resale Shares short and deliver the Resale Shares covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Securityholders may also loan or pledge the Resale Shares to broker-dealers that in turn may sell such shares.

The Selling Securityholders may pledge or grant a security interest in some or all of the Warrants or Resale Shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the Resale Shares from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of Selling Securityholders to include the pledgee, transferee or other successors in interest as a Selling Securityholder under this prospectus. The Selling Securityholders also may transfer and donate the Resale Shares in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the Selling Securityholders and any broker-dealer participating in the distribution of the Resale Shares may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the Resale Shares is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of Resale Shares being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the Selling Securityholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

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 Securityholders 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 Securityholders may be less than or in excess of customary commissions. Neither we nor the Selling Securityholders 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 Securityholders.

The Selling Securityholders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the Resale Shares by the Selling Securityholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the Resale Shares to engage in market-making activities with respect to the Resale Shares. All of the foregoing may affect the marketability of the Resale Shares and the ability of any person or entity to engage in market-making activities with respect to the Resale Shares.

We will pay all expenses of the registration of the Resale Shares, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, the Selling Securityholders will pay all underwriting discounts and selling commissions, if any. We will indemnify the Selling Securityholders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the Selling Securityholders will be entitled to contribution. We may be indemnified by the Selling Securityholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the Selling Securityholders specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the Resale Shares will be freely tradable in the hands of persons other than our affiliates.

## MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a discussion of material U.S. federal income tax considerations applicable to a Non-U.S. Holder (as defined below) with respect to the ownership and disposition of shares of our Common Stock acquired pursuant to this offering. For purposes of this discussion, the term “Non-U.S. Holder” means a beneficial owner of shares of our Common Stock acquired pursuant to this offering that is treated for U.S. federal income tax purposes as an individual, corporation, estate or trust, other than:

- an individual who is a citizen or resident of the United States, as determined for U.S. federal income tax purposes;
- a corporation, or other entity taxable as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust if: (i) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust; or (ii) it has a valid election in effect under applicable U.S. Treasury regulations to be treated as a domestic trust.

If a partnership (or an entity treated as a partnership for U.S. federal income tax purposes) holds shares of our Common Stock, the tax treatment of a person treated as a partner of such partnership generally will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding shares of our Common Stock and persons that, for U.S. federal income tax purposes, are treated as partners in such partnerships should consult their own tax advisors regarding the U.S. federal income tax consequences to them.

This discussion only addresses beneficial owners that are Non-U.S. Holders of shares of our Common Stock acquired pursuant to this offering that hold such shares of Common Stock as a capital asset within the meaning of Section 1221 of the U.S. Internal Revenue Code of 1986, as amended (the “Code”) (generally, property held for investment). This discussion does not address all aspects of U.S. federal income taxation that may be important to a Non-U.S. Holder in light of such Non-U.S. Holder’s particular circumstances or that may be applicable to Non-U.S. Holders subject to special treatment under U.S. federal income tax law (including, for example, banks, financial institutions, regulated investment companies, mutual funds, real estate investment trusts, dealers in securities, traders in securities that elect mark-to-market treatment, insurance companies, tax-exempt entities, governmental organizations, Non-U.S. Holders who acquire our Common Stock pursuant to the exercise of employee stock options or otherwise as compensation for their services, Non-U.S. Holders liable for the alternative minimum tax, controlled foreign corporations (and shareholders therein), passive foreign investment companies (and shareholders therein), former citizens or former long-term residents of the United States, persons subject to special tax accounting rules as a result of any item of gross income with respect to shares of our Common Stock being taken into account in an applicable financial statement, partnerships or other pass-through entities (and investors therein), corporations organized outside the United States, any state thereof, or the District of Columbia that are nonetheless treated as U.S. persons for U.S. federal income tax purposes, persons deemed to sell our Common Stock under the constructive sale provisions of the Code, and Non-U.S. Holders that hold our Common Stock as part of a hedge, straddle, constructive sale, conversion, or other integrated transaction). In addition, this discussion does not address U.S. federal tax laws other than those pertaining to U.S. federal income tax (such as U.S. federal estate or gift tax, the alternative minimum tax, or the federal net investment income tax), nor does it address any aspects of U.S. state, local or non-U.S. taxes. Non-U.S. Holders are urged to consult with their own tax advisors regarding the possible application of these taxes. Except as discussed below, this summary does not address tax reporting requirements.

The following discussion is based upon current provisions of the Code, U.S. judicial decisions, administrative pronouncements and Treasury regulations, all as in effect and applicable as of the date hereof. All of the preceding authorities are subject to change at any time, possibly with retroactive effect, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested, and will not request, a legal opinion from legal counsel or a ruling from the IRS with respect to any of the U.S. federal income tax consequences described below, and as a result there can be no assurance that the IRS will not disagree with or challenge any of the conclusions we have reached and describe herein.

Prospective purchasers should consult their own tax advisors as to the particular consequences to them under U.S. federal, state and local, and applicable foreign tax laws of the acquisition, ownership and disposition of our Common Stock.

## Distributions

Distributions of cash or property that we pay in respect of our Common Stock 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). Subject to the discussions below under “-U.S. Trade or Business Income,” “-Information Reporting and Backup Withholding” and “-FATCA,” a Non-U.S. Holder generally will be subject to U.S. federal withholding tax at a 30% rate, or at a reduced rate prescribed by an applicable income tax treaty, on any dividends received in respect of our Common Stock. If the amount of the distribution exceeds our current and accumulated earnings and profits, such excess first will be treated as a return of capital to the extent of such holder’s tax basis in our Common Stock, and thereafter will be treated as capital gain. However, we (or the paying agent or other intermediary through which a Non-U.S. Holder holds its Common Stock elects) may be required to withhold on the entire distribution, in which case a Non-U.S. Holder would be entitled to a refund from the IRS for the withholding tax on the portion of the distribution that exceeded our current and accumulated earnings and profits. If we are a USRPHC (as defined below) and we do not qualify for the Regularly Traded Exception (as defined below), distributions which constitute a return of capital will be subject to withholding tax unless an application for a withholding certificate is filed to reduce or eliminate such withholding.

In order to obtain a reduced rate of U.S. federal withholding tax under an applicable income tax treaty, a Non-U.S. Holder will be required to provide a properly executed IRS Form W-8BEN or Form W-8BEN-E (or, in each case, a successor form) certifying such holder’s entitlement to benefits under the treaty. If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, such holder may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS. Non-U.S. Holders are urged to consult their own tax advisor regarding possible entitlement to benefits under an applicable income tax treaty.

## Sale, Exchange or Other Taxable Disposition of Common Stock

Subject to the discussions below under “-U.S. Trade or Business Income,” “-Information Reporting and Backup Withholding” and “-FATCA,” Non-U.S. Holders generally will not be subject to U.S. federal income or withholding tax in respect of any gain on a sale, exchange or other taxable disposition of our Common Stock unless:

- the gain is U.S. trade or business income, in which case, such gain will be taxed as described in “-U.S. Trade or Business Income” below;
- the Non-U.S. Holder is an individual who is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, in which case the Non-U.S. Holder will be subject to U.S. federal income tax at a rate of 30% (or a reduced rate under an applicable income tax treaty) on the amount by which certain capital gains allocable to U.S. sources exceed certain capital losses allocable to U.S. sources; or
- we are or have been a “United States real property holding corporation” (a “USRPHC”) under Section 897 of the Code at any time during the shorter of the five-year period ending on the date of the disposition and such Non-U.S. Holder’s holding period for the Common Stock, in which case, subject to the exception set forth in the second sentence of the next paragraph, such gain will be subject to U.S. federal income tax in the same manner as U.S. trade or business income discussed below.

In general, a corporation is a USRPHC if the fair market value of its “United States real property interests” equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business. In the event that we are determined to be a USRPHC, gain will not be subject to tax as U.S. trade or business income if such Non-U.S. Holder’s holdings (actually and constructively) at all times during the applicable period described in the third bullet point above constituted 5% or less of our Common Stock, provided that our Common Stock was regularly traded on an established securities market during such period as determined under the rules set forth in the Treasury regulations (the “Regularly Traded Exception”). We believe that we are not currently, and we do not anticipate becoming in the future, a USRPHC for U.S. federal income tax purposes.

## U.S. Trade or Business Income

For purposes of this discussion, dividend income and gain on the sale, exchange or other taxable disposition of our Common Stock will be considered to be “U.S. trade or business income” if (i) such income or gain is effectively connected with a Non-U.S. Holder’s conduct of a trade or business within the United States and (ii) a Non-U.S. Holder is eligible for the benefits of an income tax treaty with the United States and, if such treaty requires, such gain is attributable to a permanent establishment (or, if a Non-U.S. Holder is an individual, a fixed base) that Non-U.S. Holder maintains in the United States. Generally, U.S. trade or business income is not subject to U.S. federal withholding tax (provided that a Non-U.S. Holder complies with applicable certification and disclosure requirements, including providing a properly executed IRS Form W-8ECI (or successor form)); instead, a Non-U.S. Holder is subject to U.S. federal income tax on a net basis at regular U.S. federal income tax rates (generally in the same manner as a U.S. person) on such Non-U.S. Holder’s U.S. trade or business income. If a Non-U.S. Holder is a corporation, any U.S. trade or business income that a Non-U.S. Holder receives may also be subject to a “branch profits tax” at a 30% rate, or at a lower rate prescribed by an applicable income tax treaty.

## Information Reporting and Backup Withholding

We must annually report to the IRS and to each Non-U.S. Holder any dividend income that is subject to U.S. federal withholding tax or that is exempt from such withholding pursuant to an income tax treaty. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which a Non-U.S. Holder resides. Under certain circumstances, the Code imposes a backup withholding obligation on certain reportable payments. Dividends paid to such Non-U.S. Holder will generally be exempt from backup withholding if such Non-U.S. Holder provides a properly executed IRS Form W-8BEN or Form W-8BEN-E (or, in each case, a successor form) or otherwise establish an exemption and we do not have actual knowledge or reason to know that such Non-U.S. Holder a U.S. person or that the conditions of such other exemption are not, in fact, satisfied.

The payment of the proceeds from the disposition of our Common Stock to or through the U.S. office of any broker (U.S. or non-U.S.) will be subject to information reporting and possible backup withholding unless a Non-U.S. Holder certifies as to its non-U.S. status under penalties of perjury or otherwise establishes an exemption and the broker does not have actual knowledge or reason to know that such holder is a U.S. person or that the conditions of any other exemption are not, in fact, satisfied. The payment of proceeds from the disposition of our Common Stock to or through a non-U.S. office of a non-U.S. broker will not be subject to information reporting or backup withholding unless the non-U.S. broker has certain types of relationships with the United States (a "U.S. related financial intermediary"). In the case of the payment of proceeds from the disposition of our Common Stock to or through a non-U.S. office of a broker that is either a U.S. person or a U.S. related financial intermediary, the Treasury regulations require information reporting (but not backup withholding) on the payment unless the broker has documentary evidence in its files that the owner is not a U.S. person and the broker has no knowledge to the contrary. Non-U.S. Holders are urged to consult their tax advisor on the application of information reporting and backup withholding in light of their particular circumstances.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a Non-U.S. Holder will be refunded or credited against its U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

## FATCA

Pursuant to Section 1471 through 1474 of the Code, commonly referred to as the Foreign Account Tax Compliance Act ("FATCA"), foreign financial institutions (which include most foreign hedge funds, private equity funds, mutual funds, securitization vehicles and any other investment vehicles) and certain other foreign entities that do not otherwise qualify for an exemption must comply with information reporting rules with respect to their U.S. account holders and investors or be subject to a withholding tax on U.S. source payments made to them (whether received as a beneficial owner or as an intermediary for another party).

More specifically, a foreign financial institution or other foreign entity that does not comply with the FATCA reporting requirements or otherwise qualify for an exemption will generally be subject to a 30% withholding tax with respect to any "withholdable payments." For this purpose, withholdable payments generally include U.S.-source payments otherwise subject to nonresident withholding tax (e.g., U.S.-source dividends). While withholding under FATCA would have also applied to payments of gross proceeds from the sale or other disposition of shares of our Common Stock, proposed Treasury regulations eliminate FATCA withholding on payments of gross proceeds. The preamble to these proposed regulations indicates that taxpayers may rely on them pending their finalization. The FATCA withholding tax will apply to all withholdable payments without regard to whether the beneficial owner of the payment would otherwise be entitled to an exemption from imposition of withholding tax pursuant to an applicable income tax treaty with the United States or U.S. domestic law. We will not pay additional amounts to holders of our Common Stock in respect of amounts withheld. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

FATCA currently applies to dividends made in respect of our Common Stock. To avoid withholding on dividends, Non-U.S. Holders may be required to provide us (or our withholding agents) with applicable tax forms or other information. Non-U.S. Holders are urged to consult with their own tax advisors regarding the effect, if any, of the FATCA provisions to them based on their particular circumstances.

## SELLING SECURITYHOLDERS

The shares of Common Stock being offered by the Selling Securityholders are those issuable to the Selling Securityholders upon exercise of the Warrants. We are registering the resale of such shares of Common Stock in order to permit the Selling Securityholders to offer the shares for resale from time to time. Except as described below, the Selling Securityholders have not had any material relationship with us within the past three years.

### **3i, LP**

Between March and December 2023, pursuant to a securities purchase agreement, we entered into a series of agreements with 3i, LP (“3i”) for up to \$9.8 million in senior unsecured convertible notes and related warrants. Notes were issued in four tranches, each at an 8% discount, bearing 7% annual interest, and convertible into common stock at prices ranging from \$27.00 to \$2.00 per share, with maturity dates from June 2024 to March 2025. Warrants to purchase common stock were issued alongside each note. Amendments allowed for additional tranches, adjusted conversion prices, and further warrant issuances.

On June 28, 2024, we entered into a warrant redemption agreement with 3i, redeeming all remaining outstanding warrants issued under the securities purchase agreement for \$35.60 per warrant, totaling \$449,734.80, payable in two installments with interest on the deferred amount at 7% per annum. All obligations under the securities purchase agreement, notes, and warrants were satisfied and discharged, except for any expressly surviving provisions.

3i was also a purchaser of securities in our best-efforts public offering in June 2025, and registered direct offerings and concurrent private placements in July 2025 and August 2025.

### **BPY Limited**

BPY Limited was a purchaser of securities in our best-efforts public offering in June 2025, and registered direct offerings and concurrent private placements in July 2025 and August 2025.

### **Nomis Bay Ltd**

Nomis Bay Ltd was a purchaser of securities in our best-efforts public offering in June 2025, and registered direct offerings and concurrent private placements in July 2025 and August 2025.

### **Hudson Bay Master Fund Ltd.**

An affiliate of Hudson Bay Master Fund Ltd., HB Strategies LLC, was an investor through the Business Combination.

Hudson Bay Master Fund Ltd. was a purchaser of securities in our best-efforts public offering in June 2025, and registered direct offerings and concurrent private placements in July 2025 and August 2025.

### **Intracoastal Capital LLC**

Intracoastal Capital LLC was a purchaser of securities in our registered direct offering in July 2024, our best-efforts public offering in June 2025, and registered direct offerings and concurrent private placements in July 2025 and August 2025.

### **H.C. Wainwright & Co., LLC**

Michael Vasinkevich, Noam Rubinstein, Craig Schwabe and Charles Worthman are affiliated with H.C. Wainwright & Co., LLC. Wainwright acted as placement agent in connection with our registered direct offering in July 2024, as financial advisor in connection with our registered direct offering in February 2025, as placement agent in connection with our best-efforts public offering in June 2025, and as placement agent in connection with our registered direct offerings and concurrent private placements in July 2025 and August 2025, for which it received compensation. Wainwright also acts as sales agent for our at-the-market offering program for which it has received, and may in the future receive, compensation.

As used in this prospectus, the term “Selling Securityholders” means the securityholders identified in the table below.

The table below lists the Selling Securityholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Exchange Act, and the rules and regulations thereunder) of the shares of Common Stock held by the Selling Securityholders. The second column lists the number of shares of Common Stock beneficially owned by the Selling Securityholders, based on its ownership of shares of Common Stock, as of March 31, 2026, assuming exercise of the Warrants held by the Selling Securityholders on that date, and does not take into account any limitations on exercise of the Warrants.

The third column lists the shares of Common Stock being offered by this prospectus by each Selling Securityholder and does not take into account any limitations on exercise of the Warrants set forth therein. The fourth column lists the number of shares of Common Stock beneficially owned by the Selling Securityholders, based on its ownership of shares of Common Stock, as of March 31, 2026, assuming exercise of the Warrants held by the Selling Securityholders on that date, and does not take into account any limitations on exercise of the Warrants.

Under the terms of the Warrants, the Selling Securityholders may not exercise the Warrants to the extent (but only to the extent) such Selling Securityholders or any of its affiliates would beneficially own a number of shares of our Common Stock which would exceed 4.99% or 9.99%, as the case may be, of our outstanding shares (the “Beneficial Ownership Limitation”). The Beneficial Ownership Limitation may be increased or decreased, provided that in no event shall it exceed 9.99%, upon notice to us, provided that any increase in the beneficial ownership limitation shall not be effective until 61 days following the receipt of such notice by us. The Selling Securityholders may sell all, some or none of their shares in this offering. See “Plan of Distribution” above.

The ownership percentage indicated in the following table is based on 3,993,719 total outstanding shares of our Common Stock as of March 31, 2026.

In computing the number of shares of Common Stock beneficially owned by the Selling Securityholders and the percentage ownership, we included outstanding shares of Common Stock issuable upon exercise of the Warrants that are currently exercisable or exercisable within 60 days of March 31, 2026.

Name	Shares of Common Stock		Maximum Number of Shares Being Registered for Resale	Shares Beneficially Owned After the Offering	
	Shares Beneficially Owned Prior to the Offering			Number of Shares (1)	Percentage
	Number of Shares	Percentage			
3i, LP(2)	524,744(3)	11.61%	255,076	269,668	6.33%
BPY Limited(4)	199,238(5)	4.76%	96,930	102,308	2.50%
Nomis Bay Ltd(6)	325,071(7)	7.53%	158,148	166,923	4.01%
Hudson Bay Master Fund Ltd. (8)	524,307(9)	11.61%	255,076	269,231	6.32%
Intracoastal Capital LLC(10)	542,056(11)	11.97%	255,076	286,980	6.72%
Michael Vasinkevich(12)	93,521(13)	2.29%	45,800	47,721	1.18%
Noam Rubinstein(12)	45,940(14)	1.14%	22,498	23,442	*%
Craig Schwabe(12)	4,923(15)	*%	2,411	2,512	*%
Charles Worthman(12)	1,460(16)	*%	715	745	*%

\* Less than 1%.

- (1) Assumes the sale of all shares offered pursuant to this prospectus. In accordance with the terms of the Warrants, in no event are we permitted to issue shares of Common Stock to each Selling Securityholder in excess of its Beneficial Ownership Limitation. Beneficial ownership of each Selling Securityholder included in this Selling Securityholders table reflects the total number of shares potentially issuable upon exercise of the Warrants and does not give effect to the Beneficial Ownership Limitation. Accordingly, actual beneficial ownership, as calculated in accordance with Section 13(d) of the Exchange Act and Rule 13d-3 thereunder, may be lower than as reflected in this table.
- (2) The business address of 3i, LP is 2 Wooster Street, 2nd Floor, New York, NY 10013. 3i, LP’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, and has sole voting control and investment discretion over securities beneficially owned directly by 3i, LP and indirectly by 3i Management, LLC. We have been advised that none of Mr. Tarlow, 3i Management, LLC or 3i, LP 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 3i, LP and indirectly by 3i Management, LLC.
- (3) Includes 523,944 common stock warrants and 800 shares of Common Stock issuable upon exercise of PIPE Warrants. The common stock warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts 3i, LP from exercising that portion of the warrants that would result in 3i, LP and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The PIPE warrants are currently subject to a beneficial ownership limitation of 4.9%, which such limitation restricts 3i, LP from exercising that portion of the warrants that would result in 3i, LP and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (4) James Keyes has voting control and investment discretion over securities beneficially owned directly or indirectly by BPY Limited. Mr. Keyes disclaims any beneficial ownership of the securities beneficially owned directly or indirectly by BPY Limited. The business address of BPY Limited is 5 Reid Street, Hamilton, Bermuda HM 11.
- (5) Includes 199,238 common stock warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts BPY Limited from exercising that portion of the warrants that would result in BPY Limited and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.

- (6) James Keyes has voting control and investment discretion over securities beneficially owned directly or indirectly by Nomis Bay Ltd. Mr. Keyes disclaims any beneficial ownership of the securities beneficially owned directly or indirectly by Nomis Bay Ltd. The business address of Nomis Bay Ltd. is 5 Reid Street, Hamilton, Bermuda HM 11.
- (7) Includes 325,071 common stock warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Nomis Bay Ltd from exercising that portion of the warrants that would result in Nomis Bay Ltd and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (8) Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Master Fund Ltd. and Sander Gerber disclaims beneficial ownership over these securities. The principal business address of Master Fund Ltd. is c/o Hudson Bay Capital Management LP, 290 Harbor Dr., 3rd Floor, Stamford, CT 06902.
- (9) Includes 524,307 common stock warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Hudson Bay Master Fund Ltd. from exercising that portion of the warrants that would result in Hudson Bay Master Fund Ltd. and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (10) Mitchell P. Kopin (“Mr. Kopin”) and Daniel B. Asher (“Mr. Asher”), each of whom are managers of Intracoastal Capital LLC (“Intracoastal”), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) of the securities reported herein that are held by Intracoastal. The principal business office of Mr. Kopin and Intracoastal is 245 Palm Trail, Delray Beach, Florida 33483.
- (11) Includes 8,270 shares of Common Stock and 533,786 common stock warrants. The warrants are currently subject to a beneficial ownership limitation of 9.99%, which such limitation restricts Intracoastal from exercising that portion of the warrants that would result in Intracoastal and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (12) Each of these Selling Securityholders is affiliated with the placement agent for our offerings in July 2025 and August 2025, a registered broker dealer with a registered address of H.C. Wainwright & Co., LLC, 430 Park Ave, 3rd Floor, New York, NY 10022, and each has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of Common Stock issuable upon exercise of Placement Agent Warrants, which were received as compensation in connection with the purchase agreements dated as of July 10, 2025 and July 31, 2025. Each of these Selling Securityholders acquired the Placement Agent Warrants in the ordinary course of business and, at the time the Placement Agent Warrants were acquired, each of these Selling Securityholders had no agreement or understanding, directly or indirectly, with any person to distribute such securities.
- (13) Includes 93,521 placement agent warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Mr. Vasinkevich from exercising that portion of the warrants that would result in Mr. Vasinkevich and his affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (14) Includes 45,940 placement agent warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Mr. Rubinstein from exercising that portion of the warrants that would result in Mr. Rubinstein and his affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (15) Includes 4,923 placement agent warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Mr. Schwabe from exercising that portion of the warrants that would result in Mr. Schwabe and his affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.
- (16) Includes 1,460 placement agent warrants. The warrants are currently subject to a beneficial ownership limitation of 4.99%, which such limitation restricts Mr. Worthman from exercising that portion of the warrants that would result in Mr. Worthman and his affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.

## 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 the Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation, as amended (the "Charter") and our Second Amended and Restated By-laws (the "Bylaws"). We urge you to read the Charter and the Bylaws in its entirety for a complete description of the rights and preferences of our securities.*

### **Authorized and Outstanding Stock**

The Charter authorizes the issuance of 435,000,000 shares, consisting of (a) 425,000,000 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.

### **Common Stock**

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

#### **Holders**

On April 20, 2026 there were approximately 91 holders of record of our 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 our 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. 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 our voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of our Common Stock will be entitled to receive an equal amount per share of all of our 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 our debts.

#### **Preemptive or Other Rights**

There are no preemptive rights or sinking fund provisions applicable to the shares of our 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. 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 our 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.

## **Anti-Takeover Effects of Provisions of our Charter, our Bylaws and Delaware Law**

Some provisions of Delaware law and our Charter and Bylaws contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with the Board. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

### ***Delaware Anti-takeover Statute***

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, beneficially owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by Board, such as discouraging takeover attempts that might result in a premium over the market price of our Common Stock.

### ***Undesignated Preferred Stock***

The ability to authorize undesignated preferred stock makes it possible for the Board to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to institute a change of control of our company. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

### ***Special Stockholder Meetings***

Our Charter provides that a special meeting of stockholders may only be called by the Board.

### ***Requirements for Advance Notification of Stockholder Nominations and Proposals***

Our Bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the Board or a committee of the Board.

### ***Elimination of Stockholder Action by Written Consent***

Our Bylaws eliminate the right of stockholders to take action by written consent any action required to be taken at any annual or special meeting of our stockholders.

### ***Classified Board; Election and Removal of Directors; Filling Vacancies***

The Board is divided into three classes. The directors in each class serve for a three-year term, one class being elected each year by our stockholders. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of Common Stock outstanding will be able to elect all of our directors. Our Charter provides for the removal of any of our directors only for cause and requires a stockholder vote by the holders of at least a 66-2/3% of the outstanding shares of our capital stock entitled to vote in the election of directors or class of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. Furthermore any new directorships or vacancies in the Board, including new directorships resulting from any increase in the number of directors to serve on the whole board and/or any unfilled vacancies by reason of death, resignation, disqualification, removal for cause, failure to elect or otherwise with respect to any director, may be filled by only the vote of a majority of the remaining directors then in office, although less than a quorum, or by the sole remaining director. This system of electing and removing directors and filling vacancies may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of our directors.

### ***Choice of Forum***

Our Charter provides that, unless a majority of the Board, acting on our behalf, consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court located within the State of Delaware or, if no court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our Charter, our Bylaws or as to which the Delaware General Corporation Law confers jurisdiction to the Court of Chancery of the State of Delaware; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our Charter also provides that the federal district courts of the United States of America are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act.

We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, these provisions may have the effect of discouraging lawsuits against our directors and officers. The exclusive forum provision would not apply to suits brought to enforce any liability or duty created by the Exchange Act.

Our exclusive forum provision does not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders are not deemed to have waived our compliance with these laws, rules and regulations.

Although our Charter contains the choice of forum provisions described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

### ***Amendment of Charter Provisions***

Our Charter grants us the right to amend, alter, change or repeal any provision in our Charter in the manner prescribed by the DGCL (the “Delaware General Corporation Law”). Under Section 242 of the DGCL, our Charter requires a greater vote, a proposed amendment to our Charter must be approved by the affirmative vote of a majority of the voting power of the outstanding stock entitled to vote thereon and a majority of the outstanding stock of each class entitled to vote as a class.

### ***Amendment of Bylaw Provisions***

Our Bylaws grant the Board the authority to amend, alter, repeal, or adopt new Bylaws in accordance with the procedures outlined in the Bylaws themselves. The Board can make such changes by a majority vote of all Board members at any regular or special meeting. Additionally, stockholders have the right to amend, alter, repeal, or adopt new bylaws by an affirmative vote of at least 50% of the outstanding shares of capital stock entitled to vote in the election of directors.

The provisions of the Delaware General Corporation Law, our Charter and our Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

## Warrants

### *Listed Warrants*

Exercising a total of 250 Listed Warrants entitles the holder thereof to purchase one share of Common Stock at an aggregate price of \$2,875.00 per share, subject to adjustment as discussed below, at any time after November 27, 2022. The Listed 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 Listed 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 Listed 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 Listed 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.

We will use our best efforts to maintain a current prospectus relating to those shares of Common Stock until the Listed Warrants expire, 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 Listed Warrants who exercise their Listed 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 Listed Warrants become exercisable, we may call the Listed Warrants for redemption (other than the warrants issued to LMFAO Sponsor, LLC, the “Sponsor,” in a private placement simultaneously with the closing of the Business Combination, 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 \$4,500.00 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 Listed 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 Listed 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 \$4,500.00 redemption trigger price (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations, and the like) as well as the \$2,875.00 warrant exercise price after the redemption notice is issued.

If we call the Listed 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 Listed Warrants on a “cashless basis,” our management will consider, among other factors, our cash position, the number of Listed 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 Listed Warrants. If our management takes advantage of this option, all holders of Listed Warrants would pay the exercise price by surrendering their Listed 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 Listed Warrants, multiplied by the difference between the exercise price of the Listed 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 Listed 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 Listed 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 Listed Warrants after our initial business combination. If we call our Listed Warrants for redemption and our management does not take advantage of this option, the 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 Listed 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 Listed 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 Listed Warrants are convertible), other than: (a) as described above; or (b) certain ordinary cash dividends, 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 Listed Warrants is adjusted, as described above, the warrant exercise price will be adjusted (to the nearest cent) 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 Listed 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 Listed Warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the Listed 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 Listed Warrants would have received if such holder had exercised their Listed 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 Listed Warrants when an extraordinary transaction occurs during the exercise period of the Listed Warrants pursuant to which the holders of the Listed Warrants otherwise do not receive the full potential value of the Listed Warrants.

The Listed Warrants were issued in registered form under a warrant agreement between Continental Stock Transfer and Trust Company, as warrant agent, and us. The description of the Listed Warrants set forth herein is a summary and does not purport to be complete. The warrant agreement provides that the terms of the Listed 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 50% of the then outstanding Listed Warrants to make any change that adversely affects the interests of the registered holders of Listed Warrants.

The Listed 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 Listed 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 Listed Warrants and receive shares of Common Stock. After the issuance of shares of Common Stock upon exercise of the Listed 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.

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 City of New York, County of New York, 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.

#### **Listing**

Our Common Stock and Listed Warrants are traded on the Nasdaq Capital Market under the symbols “ICU” and “ICUCW,” respectively.

## DIRECTORS AND EXECUTIVE OFFICERS

The following table identifies our current directors and executive officers:

Name	Age	Position
Eric Schlorff	53	Chief Executive Officer and Class III Director
Michael Messinger	51	Chief Financial Officer
Kevin Chung, MD	53	Chief Medical Officer
Jennifer A. Baird	58	Class II Director and Chair of the Board
Bernadette N. Vincent	67	Class II Director
Kenneth Van Heel	62	Class III Director
John Neuman	60	Class I Director

### Directors

**Eric Schlorff** has served as a director and the Chief Executive Officer of SeaStar since July 2019 and as Chief Operating Officer from March 2019 to July 2019. Mr. Schlorff also previously served as a Director of SeaStar 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 The Dow Chemical Company, New Business Development of Pharmaceuticals at The Dow Chemical Company, Global Financial Analyst within the New Businesses division at The Dow Chemical Company, and Global Financial Analyst within Dow AgroSciences at The Dow Chemical Company. We believe that Mr. Schlorff is well-qualified to serve on the Board due to his intimate knowledge of our business operations, including the scientific basis, regulatory requirements and sales and marketing channels of the SCD products, as well as his extensive experience in financial planning and managing large and complex organizations.

**Jennifer Baird** has served as a director of SeaStar since June 2024 and as Chair of the Board since 2025. Since 2023, Ms. Baird has served as the Executive Chair of the Board of Directors for Culturewell, Co., an organization that delivers actionable insights for healthcare infection prevention through environmental sampling testing and germ risk assessments. From 2017 to 2022, Ms. Baird founded and served as the Chief Executive Officer of Fifth Eye Inc., an FDA-regulated software medical device company developing and commercializing healthcare-related clinical algorithms and predictive analytics using streaming physiologic parameter inputs (acquired by Airstrip Technologies, Inc.). From 2010 to 2017, Ms. Baird was the Chief Executive Officer of Accio Energy, Inc., an organization that focused on developing transformational renewable energy technology. In addition, Ms. Baird has co-founded other healthcare-based companies, including Accuri Cytometers, Inc. (acquired by Becton Dickinson) and Sonetics Ultrasound, Inc. Ms. Baird served in Chief Executive Officer-director roles for each of Fifth Eye, Inc., Accio Energy, Inc., Accuri Cytometers Inc., and Sonetics Ultrasound, Inc. Ms. Baird has served as a director for Hope Clinic, a nonprofit, since 2009. Ms. Baird has a Bachelor of Arts in Organizational Psychology/Leadership from the University of Michigan and a Master of Business Administration from Kellogg Graduate School of Management Northwestern University. Ms. Baird became NACD Directorship Certified® in 2025. We believe that Ms. Baird is well-qualified to serve on the Board due to her leadership, healthcare industry, executive management, and governance expertise and that her service will enhance the ability of the Board to provide effective support and oversight of the Company's operations.

**Bernadette Vincent** has served as a director of SeaStar since June 2024. Ms. Vincent is currently CEO of WC Operations, LLC, (d.b.a., Winners Circle Group of Texas), a behavioral health organization that serves special needs children, adults and their families. She has also served on the Board of WC Operations, LLC since 2024. Ms. Vincent served in various roles at Satellite Healthcare Inc., a national non-profit kidney care company offering treatment options education, applied pragmatic research and clinical trials, and chronic, home and acute dialysis therapies, including as President & Chief Operating Officer from 2021 to 2023, as Chief Operating Officer from 2020 to 2021, and as Chief Field Operations Officer from 2018 to 2020. Prior to that from 2015 to 2017, Ms. Vincent served in various divisions as Chief Operating Officer for Mednax, Inc., a national medical group providing multi-specialty physician and health system services company. Prior to that, Ms. Vincent served in various leadership roles with Fresenius Medical Care North America. She was Group Vice President from 2008-2014, overseeing Acute, Chronic and Home Dialysis operations over the southeastern part of the United States. She served as Vice President of Operations from 2006-2008 and was a selected to participate in several advanced leadership development programs at Harvard Business School and INSEAD. She also oversaw clinical trials throughout her regions for End Stage Kidney Disease Care Populations, working with the Research Division of Fresenius Medical Care. Ms. Vincent's Board of Directors experience spanned from 2014-2023, where she served from 2018 to 2023, as a non-voting Board member for Satellite Healthcare Inc., serving on the Quality, Safety & Patient Experience; Government & Compensation, Executive & Strategy committees. Ms. Vincent served as a director for the National Kidney Foundation, California & Pacific Northwest chapter since 2021, and was Founder Board member for the Laureate Academy Charter School from 2014 to 2015, serving on the Finance Committee. Ms. Vincent holds a Bachelor of Science in Nursing from Dillard University and Master of Business Administration from Pepperdine University. We believe that Ms. Vincent is well-qualified to serve on the Board due to her healthcare industry expertise, as well as her research, business and governance experience, and that she will provide valuable insight and knowledge to the Company's operations.

**Kenneth Van Heel** has served as a director of SeaStar 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 through April 2025. 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. We believe that Mr. Van Heel is well-qualified to serve on the Board due to his extensive and deep experience in venture capital investment, financial analysis and reporting, risk management, strategic planning, and public company operations, as well as his expertise and skills in working with companies in the medical device and healthcare industries, which will provide valuable oversight and guidance to our governance.

**John Neuman** has served as a director of SeaStar since June 2024. Mr. Neuman, retired from Dow Chemical Company (“Dow”) in 2023 following 30 years of service. He retired as Vice President of Global Financial Accounting at Dow, directing a global team of more than 350 team members. His organization was responsible for ensuring efficient and accurate financial accounting and reporting for a network of more than 400 legal entities across the globe including preparing the financial filings with the U.S. Securities and Exchange Commission. Additionally, Mr. Neuman provided oversight and direction for Corporate Controllers and for Mumbai Global Accounting. He joined Dow in 1993, and held various positions in Finance, including roles in corporate auditing, corporate controllers, business finance and controllers. His business finance role included a five-year international assignment in Switzerland. His tenure at Dow included finance integration and reporting responsibilities for several M&A transactions, including the Rohm & Haas and Dow Corning acquisitions and the DowDuPont merger. Prior to joining Dow, Mr. Neuman worked as an audit manager for Deloitte & Touche LLP. He holds a degree in accounting from Michigan State University, is a CPA, and has served as a member of the MSU External Advisory Board for the Department of Accounting and Information Systems. We believe that Mr. Neuman is well-qualified to serve on the Board due to his extensive expertise in financial accounting, corporate governance, financial risk management, and strategic opportunities, as well as his proven track record of executing investment and business strategies for public companies, which will contribute to the Board’s ability to effectively manage our growth and commercial plans.

#### **Executive Officers**

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

**Michael Messinger** has served as Chief Financial Officer since November 14, 2025. Mr. Messinger has more than two decades of experience and leadership in financing and accounting for drug discovery and development organizations. He has served as a member of the board of directors of Filament Health Corp. since March 2024 and a strategic consultant to various biotechnology companies since January of 2024. Mr. Messinger most recently served as Chief Financial Officer of ContraFect Corporation, a biotechnology company focused on treatments for life-threatening bacterial infections in the hospital setting, from October 2018 to November 2023, where he led the company through multiple financing rounds, including investments from Pfizer Inc., and a contract with BARDA (Biomedical Advanced Research and Development Authority). Prior to becoming the Chief Financial Officer of ContraFect, Mr. Messinger held senior financial roles at ContraFect, Lexicon Pharmaceuticals, Inc. and Coelacanth Corporation. He started his career as an auditor at Ernst & Young LLP. Mr. Messinger received his B.B.A. degree in accounting from the University of Michigan.

**Kevin Chung, MD** has served as the Chief Medical Officer of SeaStar 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.

## CORPORATE GOVERNANCE

### General

Our Board has adopted a Code of Business Conduct and Ethics, and charters for our Nominating and Corporate Governance Committee, Audit Committee and Compensation Committee to assist the Board in the exercise of its responsibilities and to serve as a framework for the effective governance of the Company. You can access our current committee charters and our Code of Business Conduct and Ethics in the “Governance” section under “Governance Documents” of our investor relations page of our website located at *investors.seastarmedical.com*.

### Board Composition

Our Board currently consists of five members: Jennifer Baird, John Neuman; Bernadette Vincent; Eric Schlorff; and Kenneth Van Heel. As set forth in our Charter, the Board is currently divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our Charter provides that the authorized number of directors may be fixed from time to time by the Board, except as otherwise provided for or fixed relating to the rights of the holders of any series of Preferred Stock to elect additional directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our Board into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our Company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the total voting power of the outstanding shares of our capital stock entitled to vote in the election of directors.

### Independence of the Board

As required under Nasdaq listing standards, a majority of the members of a listed company’s Board must qualify as “independent,” as affirmatively determined by the Board. The Board consults with the Company’s counsel to ensure that the Board’s determinations are consistent with relevant securities and other laws and regulations regarding the definition of “independence,” including those set forth in pertinent listing standards of Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of his or her family members, and the Company, its senior management and its independent auditors, the Board has affirmatively determined that the following four directors, representing a majority of the members of the Board, are independent directors within the meaning of the applicable Nasdaq listing standards: Ms. Baird, Mr. Neuman, Ms. Vincent, and Mr. Van Heel. In making this determination, the Board found that none of these directors had a material or other disqualifying relationship with the Company. As Mr. Schlorff serves as our Chief Executive Officer, he is not independent. Additionally, in accordance with our Corporate Governance Guidelines, the Board determined that all members of the audit, compensation, and nominating and corporate governance committees of the Board are independent.

### Director Candidates

The Nominating and Corporate Governance Committee is primarily responsible for searching for qualified director candidates for election to the Board and filling vacancies on the Board. To facilitate the search process, the Nominating and Corporate Governance Committee may solicit current directors and executives of the Company for the names of potentially qualified candidates or ask directors and executives to pursue their own business contacts for the names of potentially qualified candidates. The Nominating and Corporate Governance Committee may also consult with outside advisors or retain search firms to assist in the search for qualified candidates or consider director candidates recommended by our stockholders. Once potential candidates are identified, the Nominating and Corporate Governance Committee reviews the backgrounds of those candidates, evaluates candidates’ independence from the Company and potential conflicts of interest and determines if candidates meet the qualifications desired by the Nominating and Corporate Governance Committee for candidates for election as a director.

In evaluating the suitability of individual candidates (both new candidates and current Board members), the Nominating and Corporate Governance Committee, in recommending candidates to the Board, and the Board, in approving and recommending for election (and, in the case of vacancies, appointing) such candidates, will consider candidates who have a high level of personal and professional integrity, strong ethics and values and the ability to make mature business judgments. In evaluating director candidates, the Nominating and Corporate Governance Committee and the Board may also consider the following criteria as well as any other factor that they may deem to be relevant: the candidate’s experience in corporate management, such as serving as an officer or former officer of a publicly held company; the candidate’s experience as a board member of another publicly held company; the candidate’s professional and academic experience relevant to the Company’s industry; the strength of the candidate’s leadership skills; the candidate’s experience in finance and accounting and/or executive compensation practices; and whether the candidate has the time required for preparation, participation and attendance at Board meetings and committee meetings, if applicable. In addition, the Board will consider whether there are potential conflicts of interest with the candidate’s other personal and professional pursuits. In addition, the Board monitors the mix of specific experience, qualifications and skills of its directors in order to assure that the Board, as a whole, has the necessary tools to perform its oversight function effectively in light of the Company’s business and structure. Although the Board does not have a formal written diversity policy with respect to the evaluation of director candidates, in its evaluation of director candidates, the Nominating and Corporate Governance Committee will consider factors including, without limitation, issues of judgment, diversity, age, skills, background and experience, and with respect to diversity, such factors as gender, race, ethnicity, experience, and area of expertise, as well as other individual qualities and attributes that contribute to the total diversity of viewpoints and experience represented on the Board.

Stockholders may recommend individuals to the Nominating and Corporate Governance Committee for consideration as potential director candidates by submitting the names of the recommended individuals, together with appropriate biographical information and background materials as set forth in our Bylaws, to the Nominating and Corporate Governance Committee, c/o Corporate Secretary, SeaStar Medical Holding Corporation, 3513 Brighton Blvd, Suite 410, Denver, CO 80216. In the event there is a vacancy, and assuming that appropriate biographical and background material has been provided on a timely basis, the Nominating and Corporate Governance Committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates recommended by other sources.

### **Communications from Interested Parties**

Anyone who would like to communicate with, or otherwise make his or her concerns known directly to the chairperson of any of the Audit, Nominating and Corporate Governance, and Compensation Committees, or to the non-management or independent directors as a group, may do so by addressing such communications or concerns to c/o Corporate Secretary, SeaStar Medical Holding Corporation, 3513 Brighton Blvd, Suite 410, Denver, CO 80216, which will forward such communications to the appropriate party. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

### **Board Leadership Structure**

The Board has not implemented a policy requiring the positions of the Chair 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. Ms. Baird serves as the Chair of the Board. The Board believes that having an independent director serving as the Chair 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.

### **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 is 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.

### **Executive Sessions of Non-Management Directors**

As provided in the Corporate Governance Guidelines, the non-management directors meet, without management directors or management present on a regularly scheduled basis. If the non-management directors include directors who are not considered independent, the independent directors must also meet in executive session the conclusion of each board meeting. Our Chair of the Board, Jennifer Baird currently presides over executive sessions.

## **Code of Business Conduct and Ethics**

We have adopted a Code of Business Conduct and Ethics applicable to our directors, executive officers and employees. The Code of Business Conduct and Ethics is available on our website at <https://investors.seastarmedical.com/corporate-governance/documents-charters/>. The Company will disclose any amendments to, or waivers of, provisions of our Code of Business Conduct and Ethics on our website.

## **Insider Trading Policy**

We are committed to promoting high standards of ethical business conduct and compliance with applicable laws, rules, and regulations. As part of this commitment, we have adopted an Insider Trading Policy governing transactions in our securities by our directors, employees, contractors, consultants, and other personnel providing services to us, that we believe is reasonably designed to promote compliance with insider trading laws, rules and regulations, and Nasdaq listing standards. While the Company has not adopted a formal policy governing insider trading restrictions on the Company itself, as a matter of practice the Company generally observes the same procedures and restrictions, including the potential existence of material non-public information, with respect to transactions by the Company in its securities, including repurchases of Common Stock.

## **Anti-Hedging Policy**

Our Board has adopted an Insider Trading Policy, which applies to all of our directors, officers and employees. The policy prohibits our employees and directors from engaging in any hedging transactions (including transactions involving options, puts, calls, prepaid variable forward contracts, equity swaps, collars and exchange funds or other derivatives) that are designed to hedge or speculate on any change in the market value of the Company's equity securities.

## **Attendance by Members of the Board at Meetings**

During the fiscal year ended December 31, 2025, the Board held 15 meetings of the Board. During the fiscal year ended December 31, 2025, other than Allan Collins, each director attended at least 75% of the aggregate of (i) all meetings of the Board and (ii) all meetings of the committees on which the director served during the period in which he or she served as a director.

Each director is expected to spend the time and effort necessary to properly discharge his or her responsibilities. Accordingly, a director is expected to attend all meetings of the Board and meetings of the committees on which the director sits (including separate meetings of the independent directors), with the understanding that, on occasion, a director may be unable to attend a meeting. We do not maintain a formal policy regarding director attendance at the Annual Meeting; however, we encourage our directors to attend the Annual Meeting.

## COMMITTEES OF THE BOARD

Our Board has established three standing committees — Audit, Compensation, and Nominating and Corporate Governance — each of which operates under a written charter that has been approved by our Board.

The members of each of the Board committees and committee Chairpersons are set forth in the following chart.

Name	Audit	Compensation	Nominating and Corporate Governance
Jennifer A. Baird	X	Chair	Chair
Kenneth Van Heel	X	X	
John Neuman	Chair		X
Bernadette N. Vincent		X	X

### 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 currently consists of John Neuman, Jennifer Baird and Kenneth Van Heel, with Mr. Neuman serving as chair of the Audit Committee. Rule 10A-3 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Nasdaq rules require that our audit committee must be composed entirely of independent members. Each of John Neuman, Jennifer Baird and Kenneth Van Heel 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 John Neuman qualifies as an “audit committee financial expert,” as such term is defined in Item 407(d)(5) of Regulation S-K. Following the completion of the Annual Meeting, we expect John Neuman, Jennifer Baird, and Kenneth Van Heel to continue to serve as members of the Audit Committee, with Mr. Neuman serving as the chair of the Audit Committee.

## **Compensation Committee**

Our Compensation Committee is responsible for, among other things:

- reviewing and approving the compensation of our executive officers;
- reviewing and recommending to our Board the compensation of our directors;
- overseeing the development and implementation of compensation plan programs;
- establishing and administering our incentive compensation and equity-based plans and approving or recommending to our Board for approval amendments to 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 currently consists of Jennifer Baird, Kenneth Van Heel and Bernadette Vincent, with Ms. Baird 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. Following the completion of the Annual Meeting, we expect Jennifer Baird, Kenneth Van Heel, and Bernadette Vincent to continue to serve as members of the Compensation Committee, with Ms. Baird serving as the chair of the 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
- our stockholder engagement plan, if any, and overseeing relations with stockholders.

Our Nominating and Corporate Governance Committee currently consists of Jennifer Baird, John Neuman and Bernadette Vincent, with Ms. Baird serving as the chair of the Nominating and Corporate Governance Committee. Following the completion of the Annual Meeting, we expect Jennifer Baird, John Neuman and Kenneth Van Heel to continue to serve as members of the Nominating and Corporate Governance Committee, with Ms. Baird serving as the chair of the Nominating and Corporate Governance Committee.

## EXECUTIVE COMPENSATION

### Overview

This section discusses the material components of the executive compensation program for SeaStar's executive officers who are named below. As a smaller reporting 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 2025, SeaStar's "named executive officers," were as follows:

- Eric Schlorff, Chief Executive Officer
- Michael Messinger, Chief Financial Officer
- Kevin Chung, Chief Medical Officer
- David Green, Former Chief Financial Officer

### 2025 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 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 2025 and 2024" below for the base salary amounts received by the named executive officers in fiscal 2025 and 2024.

#### *Long-Term Equity Incentive Awards*

To further focus SeaStar's named executive officers on its long-term performance, SeaStar may grant equity compensation in the form of stock options and restricted stock units. Restricted stock units were granted to Messrs. Chung and Green during the year ended December 31, 2025, and restricted stock units were granted to Messrs. Schlorff, Chung and Green during the year-ended December 31, 2024. For more information, see "Summary Compensation Table for Fiscal Years 2025 and 2024," "Outstanding Equity Awards at December 31, 2025," and "Employee Benefit and Equity Compensation Plans" below.

#### *Incentive Compensation*

SeaStar 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 2025 and 2024" below for the bonus amounts received by the named executive officers in fiscal year 2025 and 2024.

SeaStar periodically enters into agreements to grant short- and long-term cash or stock 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 periodically awards its named executive officers annual bonuses from a discretionary bonus pool. The Compensation Committee determined not to award any bonus in 2025 other than a one-time bonus to Mr. Green.

## Timing of Certain Equity Awards

Equity awards are discretionary and are generally granted to our named executive officers upon approval during the first quarter of the Compensation Committee and Board of Directors each year. Awards to non-employee directors, if any, are generally granted following approval at the May meeting of the Compensation Committee and Board of Directors each year. However, depending on the availability of shares authorized under the 2022 Equity Incentive Plan, the approval, if any, or timing of the approval of grants could deviate from above. We did not grant any stock options, stock appreciation rights or similar awards under the 2022 Equity Incentive Plan in the period beginning four business days before the filing of a periodic report on Form 10-Q, Form 10-K, or Form 8-K that disclosed material nonpublic information, and ending one business day after the filing or furnishing of such information. Our Compensation Committee did not take material nonpublic information into account when determining the timing and terms of equity awards in 2025, and we do not time the disclosure of material nonpublic information for the purpose of affecting the value of executive compensation.

## Summary Compensation Table

The following table sets forth information for the years ended December 31, 2025 and 2024, regarding compensation awarded to or earned by SeaStar's named executive officers.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards <sup>(4)</sup> (\$)	Option Awards <sup>(5)</sup> (\$)	Non- Equity Incentive Plan (\$)	Total (\$)
Eric Schlorff	2025	\$ 406,500	\$ —	\$ —	\$ —	\$ —	\$ 406,500
Chief Executive Officer	2024	\$ 420,000	\$ 16,139 <sup>(1)</sup>	\$ 142,350 <sup>(6)</sup>	\$ —	\$ —	\$ 578,489
Michael Messinger	2025	\$ —	\$ —	\$ —	\$ —	\$ 30,000 <sup>(8)</sup>	\$ 30,000
Chief Financial Officer	2024	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Kevin Chung	2025	\$ 345,000	\$ —	\$ 22,500 <sup>(7)</sup>	\$ —	\$ —	\$ 367,500
Chief Medical Officer	2024	\$ 350,000	\$ 12,250 <sup>(2)</sup>	\$ 32,850 <sup>(6)</sup>	\$ —	\$ —	\$ 395,100
David Green	2025	\$ 231,250	\$ —	\$ 22,500 <sup>(7)</sup>	\$ —	\$ —	\$ 253,750
Chief Financial Officer (former)	2024	\$ 363,702	\$ 249,675 <sup>(3)</sup>	\$ 395,650	\$ —	\$ —	\$ 1,009,027

- (1) This amount reflects payment of a portion of the 2024 annual performance bonus earned but not paid until 2025 due to the Company's financial condition, with the remainder of the 2024 bonus voluntarily rescinded in June 2025. The 2024 bonus was previously not disclosed because it had been previously rescinded in its entirety.
- (2) Amounts reflect (i) \$9,450 payment of a portion of the 2024 annual performance bonus earned but not paid until 2025 due to the Company's financial condition, with the remainder of the 2024 bonus voluntarily rescinded in June 2025, and (ii) a one-time holiday bonus of approximately \$2,800 provided to all employees except for the Chief Executive Officer. The 2024 bonus was previously not disclosed because it had been previously rescinded in its entirety.
- (3) Amounts reflect bonuses paid for a combination of (i) \$136,875 paid for the full 2024 annual performance bonus earned but not paid until 2025 due to the Company's financial condition, and (ii) \$110,000 paid related to certain targeted 2024 financing results, but not paid until 2025 due to the Company's financial condition. The 2024 bonus was previously not disclosed because it had been previously rescinded in its entirety.
- (4) Amounts reflect the grant date fair value of restricted stock units granted in each reported fiscal year calculated in accordance with FASB ASC Topic 718, without taking into account any estimated forfeitures related to service-vesting conditions. The grant date fair value was determined using the closing share price of the Company's Common Stock on the date of grant.
- (5) Amounts reflect the grant date fair value of options granted, if any, calculated in accordance with FASB ASC Topic 718, without taking into account any estimated forfeitures related to service-vesting conditions. No options were granted in 2025 or 2024.
- (6) The restricted stock units granted in November 2024 vest in three equal annual installments of 33.33%, beginning on July 1, 2025, with the final installment vesting on July 1, 2027.
- (7) The restricted stock units granted on April 2025 vest in three equal installments of 33.33%, beginning on April 1, 2026, with the final installment vesting on April 1, 2028.
- (8) Amounts reflect payment of a monthly fee of \$15,000 to perform services as a non-employee fractional Chief Financial Officer. Mr. Messinger commenced his services in November 2025.
- (9) On August 13, 2025, the Board of Directors of SeaStar Medical Holding Corporation terminated the employment of David Green, the Company's Chief Financial Officer and Treasurer effective August 14, 2025.

## 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, dated April 21, 2022, 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 and the opportunity to participate in the executive bonus plan approved by the Compensation Committee. In addition, Mr. Schlorff is eligible to receive an annual discretionary bonus, 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 Mr. Schlorff individually. Mr. Schlorff also is eligible to participate in the benefit plans that are generally available to all Company employees.

Under the 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.

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.

#### *Michael Messinger*

Pursuant to the terms of the consulting agreement between Mr. Messinger and the Company, dated October 31, 2025 (the "Consulting Agreement"), Mr. Messinger receives a monthly fee of \$15,000, and the Company can terminate the Consulting Agreement at any time with 30 days' notice.

#### *Kevin Chung, MD*

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. In addition, Dr. Chung is 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.

## Outstanding Equity Awards at December 31, 2025

The following table presents information regarding outstanding equity awards held by SeaStar's named executive officers as of December 31, 2025.

Name	Option Awards <sup>(1)</sup>				Stock Awards <sup>(2)</sup>	
	Number of Securities Underlying Unexercised Options (#) Exercisable	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 <i>Chief Executive Officer</i>	72 <sup>(3)</sup> 336 <sup>(4)</sup> 399 <sup>(5)</sup>	— — —	\$ 2,500.00 \$ 132.50 \$ 460.00	3/1/2029 2/20/2030 4/6/2033	4,333 <sup>(6)</sup> — —	\$ 10,399
Michael Messinger <i>Chief Financial Officer</i>	— —	— —			— —	
Kevin Chung, MD <i>Chief Medical Officer</i>	266 <sup>(5)</sup>	—	\$ 460.00	4/6/2033	1,000 <sup>(6)</sup> 1,500 <sup>(7)</sup>	\$ 6,000

- (1) This column provides information pertaining to all outstanding stock options held by our named executive officers as of December 31, 2025, both vested and unvested (if any), as of December 31, 2025.
- (2) This column provides information pertaining to unvested restricted stock units held by our named executive officers as of December 31, 2025.
- (3) The option was granted on October 28, 2022, and vested 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. As of December 31, 2025, the option was fully vested and exercisable.
- (4) The option was granted on October 28, 2022, and vested 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, 2021. As of December 31, 2024, the option was fully vested and exercisable.
- (5) The option was granted on April 6, 2023, and became fully vested on April 6, 2024, the first anniversary of the date of grant.
- (6) The restricted stock units granted in November 2024 vest in three equal annual installments of 33.33%, beginning on July 1, 2025, with the final installment vesting on July 1, 2027.
- (7) These restricted stock units granted in April 2024 vest with respect to (i) twenty-five percent (25%) upon the completion of one (1) year of service from date of hire (January 10, 2024), and (ii) the balance of the units vest in a series of thirty-six successive equal monthly installments upon completion of each additional month of service over a thirty-six (36)-month period from the one-year anniversary of the hire date (January 10, 2024), subject to the terms of the award agreement.

## ***Compensation Recovery Policy***

On December 1, 2023, the Compensation Committee adopted a compensation clawback policy (the “Clawback Policy”) in compliance with the final rules promulgated by the SEC under Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Rule 10D-1 and Nasdaq (together, the “Clawback Rules”) that provides for the recovery of certain incentive-based compensation in the event we are required to restate our financial statements. The Clawback Policy provides that, in the event of the restatement of any financial reporting required under the securities laws or other similar laws or regulations, our board of directors (or applicable committee thereof) will take such actions as necessary to recover the portion of any incentive-based compensation that was granted, earned or vested based wholly or in part on the attainment of a financial reporting measure which was received by the executive officer that was in excess of the amount that he or she would have received had our financial results been calculated under the restated financial statements; provided that such compensation was paid to or awarded to the executive officer, or which vested (or became eligible to vest) during the Clawback Period. “Clawback Period” under the Clawback Policy is defined as the three completed fiscal years immediately prior to the date on which our board of directors or management determine we are required to (or we are otherwise legally directed to) prepare an accounting restatement and any transition period between the last day of our previous fiscal year end and the first day of our new fiscal year (that results from a change in our fiscal year) within or immediately following such three-year period; provided that any transition period between the last day of our previous fiscal year end and the first day of its new fiscal year that comprises a period of nine to 12 months will be deemed a completed fiscal year.

## **Employee Benefit and Equity Compensation Plans**

The principal features of SeaStar Medical’s existing employee benefit and equity incentive plans are summarized below.

### ***Equity Incentive Plans***

#### **2022 Equity Incentive Plan**

The 2022 Equity Incentive Plan was originally adopted by our Board on August 22, 2022, was approved by our stockholders as of October 18, 2022, and was subsequently amended and approved by our stockholders effective September 6, 2023, and replaced the existing 2019 Stock Incentive Plan. The 2022 Equity Incentive Plan was later further amended and approved by our stockholders effective June 4, 2024 and July 3, 2025. Please see Proposal 2 for further information about the 2022 Equity Incentive Plan and proposed amendments to the 2022 Equity Incentive Plan.

***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**

Annual compensation for our non-employee directors is composed of cash and equity-based compensation. Cash compensation paid to our non-employee directors consists of an annual retainer and supplemental retainers for the chairs and members of Board committees. Equity-based compensation for 2025 consisted of awards granted under the 2022 Equity Incentive Plan in the form of restricted stock units, at the election of each director. In accordance with our Director Compensation Program, each non-employee director is entitled to an annual retainer of \$40,000 for service on the Board. The Board chair is entitled to an additional retainer of \$40,000. Non-employee directors receive a \$8,000 annual fee for service on the Audit Committee and a \$6,000 annual fee for service on each other committee. In addition, non-employee directors receive an additional supplemental retainer for service as committee chair of \$8,000 for the Audit Committee and \$6,000 for each of the other committees. All of our directors are reimbursed for reasonable out-of-pocket expenses incurred for attending meetings of the Board or its committees and for other reasonable expenses related to the performance of their duties as directors.

For 2025, members of SeaStar’s board of directors earned director fees and were granted options and restricted stock unit awards as set forth below.

Name	Fees Earned or Paid in Cash <sup>(1)</sup> (\$)	Stock Awards <sup>(2)</sup> (\$)	Option Awards (\$)	All Other Compensation (\$)	Total (\$)
Jennifer A. Baird	54,450	1,941(3)	\$ —	—	56,391
Bernadette N. Vincent	24,150	1,941(3)	\$ —	—	26,091
Kenneth Van Heel	43,792	1,941(3)	\$ —	—	45,733
John Neuman	32,400	1,941(3)	\$ —	—	34,341
Rick Barnett <sup>(4)</sup>	27,533	—	\$ —	—	27,533
Allan Collins <sup>(5)</sup>	13,500	—	\$ —	—	13,500

(1) Amounts reflect the director fees earned during fiscal year 2025, not necessarily paid given the Company's cash constraints during a portion of the year. In addition, this does not reflect the Board's decision in June of 2025, to waive and rescind any earned but unpaid director fees as of June 2025.

(2) Amounts reflect the grant date fair value of restricted stock units granted to our non-employee directors calculated in accordance with FASB ASC Topic 718 and accordingly determined on the basis of the closing selling price per share of our Common Stock on the award date and does not take into account any estimated forfeitures related to service-vesting conditions. For information regarding assumptions underlying the valuation of equity awards, see Notes 2 and 10 to our audited financial statements in the 2025 Annual Report.

(3) Restricted stock units were granted July 1, 2025, vesting 100% on July 1, 2026.

(4) On July 14, 2025, Rick J. Barnett resigned as a director of the Company.

(5) On March 25, 2025, Allan Collins resigned as a director of the Company.

### Equity Compensation Plan Information

The following table sets forth additional information as of December 31, 2025, about shares of our Common Stock that may be issued upon the exercise of options and other rights under our existing equity compensation plans and arrangements. The information includes the number of shares covered by, and the weighted average exercise price of, outstanding options and other rights and the number of shares remaining available for future grants excluding the shares to be issued upon exercise of outstanding options, warrants, and other rights.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights <sup>(1)</sup>	Weighted-Average Exercise Price of Outstanding Options, Warrants, and Rights <sup>(2)</sup>	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	27,682	\$ 487.69	164,175
Equity compensation plans not approved by security holders	—	\$ —	—
Total	27,682	\$ 487.69	164,175

(1) Includes (i) 689 shares underlying stock options outstanding under SeaStar Medical Inc.’s 2019 Stock Incentive Plan and (ii) 26,993 shares to be issued in connection with outstanding stock options and RSUs granted under the 2022 Equity Incentive Plan.

(2) Reflect the weighted-average exercise prices of stock options outstanding (see Note 10 — Stock Based Compensation Awards of our Annual Report on Form 10-K for the fiscal year ended December 31, 2025).

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding the beneficial ownership of Common Stock on March 31, 2026, 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 3,993,719 shares of Common Stock outstanding as of March 31, 2026.

<b>Name and Address of Beneficial Owner</b>	<b>Number of Shares Beneficially Owned</b>	<b>% of Class</b>
<b><i>Five Percent Holders</i></b>		
Intracoastal Capital, LLC <sup>(1)</sup>	398,066	9.99%
<b><i>Directors and Named Executive Officers<sup>(2)</sup></i></b>		
Eric Schlorff <sup>(3)</sup>	6,329	*
Kevin Chung <sup>(4)</sup>	4,087	*
Michael Messinger	1,750	*
John Neuman	8,267	*
Kenneth Van Heel <sup>(5)</sup>	4,687	*
Jennifer A. Baird	2,687	*
Bernadette N. Vincent	267	*
All directors and officers as a group (7 persons)	28,074	*

\* Less than 1%

- (1) The information regarding the number of shares beneficially owned or deemed to be beneficially owned by Intracoastal Capital LLC (“Intracoastal”), is based on the Schedule 13G/A filed by Intracoastal on February 13, 2026. According to the Schedule 13G, Intracoastal, Mitchell P. Kopin and Daniel B Asher beneficially have shared voting and dispositive power over up to 398,066 shares comprising up to 398,066 warrants exercisable for common stock. According to our records, Intracoastal holds an aggregate of 533,785 warrants to purchase common stock (the “Intracoastal Warrants”). The shares beneficially owned reflect that the Intracoastal Warrants are subject to a beneficial ownership limitation of 9.99%, which such limitation restricts Intracoastal from exercising that portion of the Intracoastal Warrants that would result in Intracoastal and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The address of Intracoastal and Mr. Kopin is 245 Palm Trail, Delray Beach, Florida 33483 and the address of Mr. Asher is 1011 Lake Street, Suite 311, Oak Park, Illinois 60301.
- (2) 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.
- (3) Includes 807 shares of Common Stock issuable upon the exercise of vested options with a weighted-average exercise price of \$505.65, within 60 days of March 31, 2026.
- (4) Includes 266 shares of Common Stock issuable upon the exercise of vested options with a weighted-average exercise price of \$460.00 within 60 days of March 31, 2026, and 500 shares of Common Stock issuable upon the vesting of restricted stock units within 60 days of March 31, 2026.
- (5) Includes 146 shares of Common Stock issuable upon the exercise of vested options with a weighted-average exercise price of \$243.53 within 60 days of March 31, 2026.
- (6) Includes 1,219 shares of Common Stock issuable upon the exercise of vested options with a weighted-average exercise price of \$464.29, within 60 days of March 31, 2026, and 533 shares of Common Stock issuable upon the vesting of restricted stock within 60 days of March 31, 2026.

### **Delinquent Section 16(a) Reports**

Section 16(a) of the Exchange Act requires the Company’s directors and executive officers, and persons who own more than ten percent of a registered class of the Company’s equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of common stock and other equity securities of the Company. Officers, directors and greater than ten percent stockholders are required by SEC regulation to furnish the Company with copies of all Section 16(a) forms they file.

To our knowledge, based solely on our review of such reports filed on EDGAR and the written representations of reporting persons, we believe that for the year ended December 31, 2025, all required reports were filed on a timely basis under Section 16(a), except for the following reports filed late due to administrative errors: (i) John Neumann had three late Form 4 filings (constituting eight late transactions), (ii) Jennifer Baird had two late Form 4 filings (constituting three late transactions), (iii) Kenneth Van Heel had one late Form 4 filing (constituting two late transactions), (iv) Bernadette Vincent had one late Form 4 filing (constituting three late transactions), and (v) Michael Messinger had one late Form 3 filing.

## CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

### Certain Relationships and Related Person Transactions

Other than as described in “— *Executive Compensation*” there have been no transactions since January 1, 2024 to which we were or will be a party in which the amount involved exceeds \$120,000 and in which any director, nominee for director, executive officer, beneficial holder of more than 5% of our capital stock or any member of their immediate family or any entity affiliated with any of the foregoing persons had or will have a direct or indirect material interest.

### 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.

#### **Limitation on Liability and Indemnification of Directors and Officers**

Our Charter limits the liability for directors to the fullest extent permitted under the Delaware General Corporation Law ("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:

1. for any transaction from which the director derives an improper personal benefit;
2. for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
3. for any unlawful payment of dividends or redemption of shares; or
4. 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.

## LEGAL MATTERS

The validity of the securities offered by this prospectus has been passed upon for us by Dorsey & Whitney LLP, Salt Lake City, Utah.

## EXPERTS

The consolidated financial statements as of December 31, 2025 and 2024 and for the years then ended incorporated by reference in this prospectus have been so included in reliance on the report of WithumSmith+Brown, PC, an independent registered public accounting firm, which report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern, given on the authority of said firm as experts in auditing and accounting.

## 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](http://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.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement. We incorporate by reference into this prospectus the following information (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2025, filed with the SEC on March 25, 2026;
- Our Current Report on [Form 8-K](#) filed with the SEC January 20, 2026; and
- The description of our Common Stock set forth in our registration statement on [Form 8-A/A](#) filed with the SEC on October 31, 2022, as updated by [Exhibit 4.3](#) to the Registrant’s Annual Report on [Form 10-K](#) for the year ended December 31, 2024, filed with the SEC on March 27, 2025, and any amendment or report filed with the SEC for the purposes of updating such description.

We also incorporate by reference into this prospectus all documents (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, as well as after the date of this prospectus until we file a post-effective amendment that indicates the termination of the offering of the shares of our Common Stock made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with this prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents to SeaStar Medical Holding Corporation, 3513 Brighton Blvd., Suite 410, Denver, CO 80216; telephone: (844) 427-8100.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.



**Up to 1,091,730 Shares of Common Stock**

**Offered by the Selling Securityholders**

**PROSPECTUS**

**, 2026**

**You should rely only on the information contained. We have not authorized anyone to provide you with different information. You should not assume that the information contained 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.**

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## PART II - INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses payable by us in connection with the registration and sale of the securities being registered. All expenses incurred with respect to the registration of the Common Stock will be borne by us. All amounts are estimated except the Securities and Exchange Commission registration fee.

SEC registration fee	\$	1,007
Accounting fees and expenses	\$	12,500
Printing and miscellaneous expenses	\$	10,000
Legal fees and expenses	\$	30,000
Total	\$	<u>53,507</u>

### Item 14. Indemnification of Directors and Officers

We are incorporated under the laws of the State of Delaware. Under Delaware law, a corporation may indemnify any person who was or is a party or is threatened to be made a party to an action (other than an action by or in the right of the corporation) by reason of his or her service as a director or officer of the corporation, or his or her service, at the corporation's request, as a director, officer, employee or agent of another corporation or other enterprise, against expenses (including attorneys' fees) that are actually and reasonably incurred by him or her ("Expenses"), and judgments, fines and amounts paid in settlement that are actually and reasonably incurred by him or her, in connection with the defense or settlement of such action, 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 corporation's best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was unlawful. Although Delaware law permits a corporation to indemnify any person referred to above against Expenses in connection with the defense or settlement of an action 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 corporation's best interests, if such person has been judged liable to the corporation, indemnification is only permitted to the extent that the Court of Chancery (or the court in which the action was brought) determines that, despite the adjudication of liability, such person is entitled to indemnity for such Expenses as the court deems proper. The DGCL also provides for mandatory indemnification of any director, officer, employee or agent against Expenses to the extent such person has been successful in any proceeding covered by the statute. In addition, the DGCL provides the general authorization of advancement of a director's or officer's litigation expenses in lieu of requiring the authorization of such advancement by the board of directors in specific cases, and that indemnification and advancement of expenses provided by the statute shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement or otherwise.

Our amended and restated bylaws and restated certificate of incorporation provide for indemnification of our directors and officers and for advancement of litigation expenses to the fullest extent permitted by current Delaware law.

We maintain a policy of directors and officers liability insurance which reimburses us for expenses which we may incur in connection with the foregoing indemnity provisions and which may provide direct indemnification to directors and officers where we are unable to do so.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the above, we have 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.

### Item 15. Recent Sales of Unregistered Securities

#### *Convertible Note Financing*

##### *The Original and Amended Institutional Investor SPA*

On March 15, 2023, we entered into a Securities Purchase Agreement ("SPA") with Investor D (the "Investor D SPA"), whereby we agreed to issue a series of four senior unsecured convertible notes, with principal proceeds totaling up to \$9.8 million, and warrants to purchase shares of our common stock.

On March 15, 2023, we issued the first senior unsecured convertible note (the "First Investor D Note") in the amount of approximately \$3.3 million, convertible into 4,831 shares of our common stock at an initial conversion price of \$675.00. The First Investor D Note was issued at an 8.0% discount, bore interest at 7.0% per annum, had a maturity date of June 15, 2024, and required monthly installments of principal and interest. The First Investor D Note was redeemable, in whole or part, at our discretion. In addition, we issued warrants to purchase 1,314 shares of common stock with a strike price of \$742.50 (the "First Investor D Note Warrants"). The First Investor D Note Warrants had an initial exercise price of \$742.50 per share of common stock, an expiration date five years from their issuance date, and contained a cashless exercise provision.

On May 12, 2023, we issued the second senior unsecured convertible note (the "Second Investor D Note") in the amount of approximately \$2.2 million, convertible into 3,221 shares of common stock at an initial conversion price of \$675.00. The Second Investor D Notes were issued at an 8.0% discount and bore interest at 7.0% per annum and had maturity dates of June 15, 2024 and August 12, 2024. The Second Investor D Notes were redeemable, in whole or in part, at any time at our discretion. In addition, we issued warrants to purchase 877 shares of common stock (the "Second Investor D Note Warrants"). The Second Investor D Note Warrants had an initial exercise price of \$742.50 per share of common stock, an expiration date five years from their issuance date, and contained cashless exercise provisions.

### *First Amendment to the Investor D SPA*

On August 7, 2023, we entered into an amendment to the Investor D SPA, whereby the provisions of the third closing were amended (the “First Amended Investor D SPA”). The institutional investor had the discretion to purchase additional shares of our common stock in an aggregate principal amount of \$2.0 million (the “Third Investor D Note”). The Third Investor D Note consisted of four tranches which closed on August 7, 2023, August 30, 2023, September 26, 2023, and November 27, 2023, respectively. Each tranche of the Third Investor D Note was issued at an 8.0% discount, bore interest at 7.0% per annum and required monthly installments of principal and interest. Each tranche of the Third Investor D Notes was convertible into 10,869 shares of common stock at an initial conversion price of \$50.00, in a principal amount of \$0.5 million, and included a warrant to purchase up to 2,956 shares of common stock with an exercise price of \$50.00 per share of common stock. The four tranches of the Third Investor D Notes had maturity dates of November 6, 2024, November 29, 2024, December 25, 2024, and February 26, 2025, respectively.

Also on August 7, 2023, we entered into a side letter with Investor D (the “Letter Agreement”), pursuant to which we agreed to adjust the conversion price of the First and Second Investor D Notes to the lowest of (i) \$50.00, (ii) the closing sale price of common stock on the trading day immediately preceding the date of the conversion, and (iii) the average closing sale price of common stock for the five consecutive trading days immediately preceding the date of the conversion (the “Amended First Investor D Note” and “Amended Second Investor D Note”). We also agreed to issue a warrant to purchase up to 19,063 shares of common stock with an exercise price of \$50.00 per share of common stock as part of Letter Agreement (the “Investor D Letter Agreement Warrants”).

### *Second Amendment to the Investor D SPA*

On December 11, 2023, we entered into the Second Amendment to the Investor D SPA (the “Second Investor D SPA”) and closed on a fourth convertible note (the “Fourth Investor D Note”) in a principal amount of approximately \$1.1 million, which was convertible into shares of common stock at a conversion price of \$140.00 per share, beginning on the earlier of June 11, 2024 (or earlier upon mutual written agreement between us and the purchaser), or the date of an event of default, as defined in the Fourth Investor D Note, with a maturity date of March 11, 2025. We also issued two warrants, each to purchase up to 2,111 shares of our common stock with an exercise price of \$140.00 per share.

For the purposes of defining the collection of the various agreements and instruments by and between Investor D and us:

- the Investor D SPA, First Amended Investor D SPA, and Second Amended Investor D SPA are referred to as the “Original and Amended Investor D SPA”.
- All Investor D convertible notes issued and/or amended under the Original and Amended Investor D SPA are collectively referred to as the “Investor D Convertible Notes”.
- All warrants issued under the Original and Amended SPA or Letter Agreement are collectively referred to as the “Investor D Convertible Note Warrants”
- The Notes, Warrants, and shares of Common Stock issuable upon conversion of the Notes and upon exercise of such Warrants, have not been registered under 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.

### *January 2024 Securities Purchase Agreement*

On January 26, 2024, we entered into a Securities Purchase Agreement (the “January 2024 Purchase Agreement”) with a single institutional investor (the “January 2024 Purchaser”), pursuant to which we issued to the January 2024 Purchaser: (i) in a registered direct offering, 25,219 shares of our Common Stock and pre-funded warrants to purchase 18,145 shares of Common Stock, each with an exercise price of \$0.001 per share, and (ii) in a concurrent private placement, series A warrants to purchase up to 43,364 shares of Common Stock (the “Series A Common Warrants”) and series B warrants to purchase up to 21,682 shares of Common Stock (the “Series B Common Warrants,” and together with the Series A Common Warrants, the “January 2024 Common Warrants”), each with an exercise price of \$207.55 per share.

Maxim Group LLC (“Maxim”) acted as the placement agent on a “reasonable best efforts” basis in connection with the transactions pursuant to a placement agency agreement, dated January 26, 2024 (the “Placement Agency Agreement”), by and between us Maxim. Pursuant to the Placement Agency Agreement, we issued to Maxim warrants to purchase up to 2,169 shares of Common Stock, each with an exercise price of \$228.30 per share (the “January 2024 Placement Agent Warrants”).

The January 2024 Common Warrants and the January 2024 Placement Agent Warrants were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### ***July 2024 Securities Purchase Agreement***

On July 10, 2024, we entered into a Securities Purchase Agreement (the “July 2024 Purchase Agreement”) with certain institutional investors (the “July 2024 Purchasers”), pursuant to which we issued to the July 2024 Purchasers: (i) in a registered direct offering, 94,787 shares of our Common Stock, and (ii) in a concurrent private placement, warrants to purchase up to 94,787 shares of Common Stock (the “July 2024 Common Warrants”) at an exercise price of \$105.50 per share.

Wainwright acted as the placement agent on a “reasonable best efforts” basis in connection with the transactions pursuant to an engagement letter, dated May 17, 2024 (the “Engagement Letter”), by and between us and Wainwright. Pursuant to the Engagement Letter, we issued to Wainwright warrants to purchase up to 6,636 shares of Common Stock at an exercise price of \$131.875 per share (the “July 2024 Placement Agent Warrants”).

The July 2024 Common Warrants and the July 2024 Placement Agent Warrants were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### ***January 2025 Securities Purchase Agreement***

On January 31, 2025, we entered into a Securities Purchase Agreement (the “January 2025 Purchase Agreement”) with a single institutional investor (the “January 2025 Purchaser”), pursuant to which we issued to the January 2025 Purchaser: (i) in a registered direct offering, 71,300 shares of our Common Stock and pre-funded warrants to purchase 281,642 shares of Common Stock, each with an exercise price of \$0.01 per share, and (ii) in a concurrent private placement, warrants to purchase 352,942 shares of Common Stock (the “January 2025 Warrants”) at an exercise price of \$17.00 per share.

While Wainwright did not act as the placement agent, pursuant to the prior Engagement Letter, we issued to Wainwright warrants to purchase 24,706 shares of Common Stock at an exercise price of \$21.25 per share (the “January 2025 Placement Agent Warrants”).

The January 2025 Warrants and the January 2025 Placement Agent Warrants were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### ***Equity Line of Credit***

On April 25, 2025, we entered into a purchase agreement with Lincoln Park pursuant to which we have the right to sell to Lincoln Park up to \$15.0 million in shares of Common Stock, subject to certain limitations, from time to time over the 36-month period commencing on the commencement date. We issued 23,641 shares of Common Stock to Lincoln Park as consideration for its commitment to purchase shares of Common Stock under the Purchase Agreement (the “Commitment Shares”). In the Purchase Agreement, Lincoln Park represented to us, among other things, that it was an “accredited investor” (as such term is defined in Rule 501(a) of Regulation D under the Securities Act).

The Commitment Shares were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### ***July 10, 2025 Securities Purchase Agreement***

On July 10, 2025, we entered into a Securities Purchase Agreement (the “July 2025 Purchase Agreement”) with certain institutional investors (the “July 2025 Purchasers”), pursuant to which we issued to the July 2025 Purchasers: (i) in a registered direct offering, 484,124 shares of our Common Stock and pre-funded warrants to purchase 40,125 shares of Common Stock, each with an exercise price of \$0.01 per share, and (ii) in a concurrent private placement, warrants to purchase 524,249 shares of Common Stock (the “July 2025 Warrants”) at an exercise price of \$6.38 per share.

Wainwright acted as the placement agent in connection with the transactions pursuant to the Engagement Letter, by and between us and Wainwright. Pursuant to the Engagement Letter, we issued to Wainwright warrants to purchase up to 36,699 shares of Common Stock at an exercise price of \$9.538 per share (the “July 2025 Placement Agent Warrants”) in a private placement.

The July 2025 Warrants and the July 2025 Placement Agent Warrants were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### ***July 31, 2025 Securities Purchase Agreement***

On July 31, 2025, we entered into a Securities Purchase Agreement (the “August 2025 Purchase Agreement”) with certain institutional investors (the “August 2025 Purchasers”), pursuant to which we issued to the August 2025 Purchasers: (i) in a registered direct offering, 496,057 shares of our Common Stock, and (ii) in a concurrent private placement, warrants to purchase 496,057 shares of Common Stock (the “August 2025 Warrants”) at an exercise price of \$7.62 per share.

Wainwright acted as the placement agent in connection with the transactions pursuant to the Engagement Letter, by and between us and Wainwright. Pursuant to the Engagement Letter, we issued to Wainwright warrants to purchase up to 34,725 shares of Common Stock at an exercise price of \$11.088 per share (the “August 2025 Placement Agent Warrants”) in a private placement.

The August 2025 Warrants and the August 2025 Placement Agent Warrants were issued in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) thereof.

### **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.

#### ***(b) Financial statement schedules***

All schedules are omitted because the required information is inapplicable or the information is presented in the financial statements and the related notes.

### **Item 17. Undertakings.**

The undersigned registrant hereby undertakes:

- (1) 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; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

- (2) 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.
- (3) 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.
- (4) 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.
- (5) 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:
  - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) 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;
  - (iii) 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
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (6) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the registration statement 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.
- (7) 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

Exhibit No.	Description
2.1†	<a href="#"><u>Agreement and Plan of Merger, dated as of April 21, 2022, by and among LMF Acquisition Opportunities, Inc., 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></a>
3.1	<a href="#"><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></a>
3.2	<a href="#"><u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.1 to Form 8-K filed by the registrant on September 20, 2023).</u></a>
3.3	<a href="#"><u>Second Certificate of Amendment of Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.1 to Form 8-K filed by the registrant on June 7, 2024).</u></a>
3.4	<a href="#"><u>Third Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.4 to Form 10-K filed by the registrant on March 27, 2025).</u></a>
3.5	<a href="#"><u>Fourth Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.5 to Form S-1 filed by the registrant on April 28, 2026).</u></a>
3.6	<a href="#"><u>Second Amended and Restated Bylaws of SeaStar Medical Holding Corporation (incorporated by reference to Exhibit 3.1 of Form 8-K filed by the registrant on April 18, 2024).</u></a>
4.1	<a href="#"><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></a>
4.2	<a href="#"><u>Specimen Warrant Certificate (incorporated by reference to Exhibit 4.1 to Form 8-K filed by the registrant on January 28, 2021).</u></a>
4.4	<a href="#"><u>Form of Series A Common Stock Purchase Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.2 of Form 8-K dated January 30, 2024).</u></a>
4.5	<a href="#"><u>Form of Series B Common Stock Purchase Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.3 of Form 8-K dated January 30, 2024).</u></a>
4.6	<a href="#"><u>Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of Form 8-K filed by the registrant on July 11, 2024).</u></a>
4.7	<a href="#"><u>Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.2 of Form 8-K filed by the registrant on July 11, 2024).</u></a>
4.8	<a href="#"><u>Form of Pre-Funded Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 of Form 8-K dated February 3, 2025).</u></a>
4.9	<a href="#"><u>Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 of Form 8-K filed by the registrant on February 3, 2025).</u></a>
4.10	<a href="#"><u>Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 of Form 8-K filed by the registrant on February 3, 2025).</u></a>
4.11	<a href="#"><u>Form of Pre-Funded Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 of Form 10-Q filed by the registrant on August 13, 2025).</u></a>
4.12	<a href="#"><u>Form of Series A Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 of Form 10-Q filed by the registrant on August 13, 2025).</u></a>
4.13	<a href="#"><u>Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.3 of Form 10-Q filed by the registrant on August 13, 2025).</u></a>
4.14	<a href="#"><u>Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.4 of Form 10-Q filed by the registrant on August 13, 2025).</u></a>
4.15	<a href="#"><u>Form of Pre-Funded Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 of Form 8-K filed by the registrant on July 14, 2025).</u></a>
4.16	<a href="#"><u>Form of Common Stock Purchase Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.2 of Form 8-K filed by the registrant on July 14, 2025).</u></a>
4.17	<a href="#"><u>Form of Placement Agent Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.3 of Form 8-K filed by the registrant on July 14, 2025).</u></a>
4.18	<a href="#"><u>Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of Form 8-K dated August 1, 2025).</u></a>

4.19	<a href="#"><u>Form of Placement Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.2 of Form 8-K dated August 1, 2025).</u></a>
5.1	<a href="#"><u>Opinion of Dorsey &amp; Whitney LLP (incorporated by reference to Exhibit 5.1 to Form S-1 filed by the registrant on August 8, 2025).</u></a>
10.1+	<a href="#"><u>Amended and Restated SeaStar Medical Holding Corporation 2022 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.7 of Form 10-Q filed by the registrant on August 13, 2025).</u></a>
10.2	<a href="#"><u>SeaStar Medical Holding Corporation 2022 Employee Stock Purchase Plan (incorporated by reference to Annex E to Form S-4 filed by the registrant on May 16, 2022).</u></a>
10.3	<a href="#"><u>Warrant Redemption Agreement, dated June 28, 2024, by and between SeaStar Medical Holding Corporation and an institutional investor (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on July 2, 2024).</u></a>
10.4	<a href="#"><u>Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on July 11, 2024).</u></a>
10.5	<a href="#"><u>At The Market Offering Agreement, dated August 20, 2024, by and between SeaStar Medical Holding Corporation, and H.C. Wainwright &amp; Co., LLC (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on August 21, 2024).</u></a>
10.6	<a href="#"><u>Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on February 3, 2025).</u></a>
10.7+	<a href="#"><u>Employment Agreement, dated May 18, 2022, by and between SeaStar Medical Holding Corporation and Kevin Chung (incorporated by reference to Exhibit 10.27 to Form S-4/A filed by the registrant on August 24, 2022).</u></a>
10.8+	<a href="#"><u>Form of Amended and Restated Employment Agreement, by and between SeaStar Medical Holding Corporation and Eric Schlorff (incorporated by reference to Exhibit 10.32 to Form S-4/A filed by the registrant on August 24, 2022).</u></a>
10.9	<a href="#"><u>Purchase Agreement, dated April 25, 2025, by and between SeaStar Medical Holding Corporation and Lincoln Park Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on April 25, 2025).</u></a>
10.10	<a href="#"><u>Registration Rights Agreement, dated April 25, 2025, by and between SeaStar Medical Holding Corporation and Lincoln Park Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on April 25, 2025).</u></a>
10.11	<a href="#"><u>Form of Confidential Bonus Release Agreement (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on June 11, 2025).</u></a>
10.12	<a href="#"><u>Securities Purchase Agreement (incorporated by reference to Exhibit 10.13 of Form S-1/A filed by the registrant on June 20, 2025).</u></a>
10.13	<a href="#"><u>Engagement Agreement, dated May 17, 2024, by and between SeaStar Medical Holding Corporation and H.C. Wainwright &amp; Co., LLC (incorporated by reference to Exhibit 10.14 of Form S-1/A filed by the registrant on June 20, 2025).</u></a>
10.14	<a href="#"><u>Amendment to the Engagement Agreement, dated April 1, 2025, by and between SeaStar Medical Holding Corporation and H.C. Wainwright &amp; Co., LLC (incorporated by reference to Exhibit 10.15 of Form S-1/A filed by the registrant on June 20, 2025).</u></a>
10.15	<a href="#"><u>Form of Securities Purchase Agreement by and among the Company and the Purchasers (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on July 14, 2025).</u></a>
10.16	<a href="#"><u>Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of Form -8-K filed by the registrant on August 1, 2025).</u></a>
10.17+	<a href="#"><u>Consulting Agreement dated October 31, 2025, by and between the Company and Michael Messinger (incorporated by reference to Exhibit 10.1 of Form 8-K filed by the registrant on November 12, 2025).</u></a>
21.1	<a href="#"><u>List of Subsidiaries (incorporated by reference to Exhibit 21.1 to Form 8-K filed by the registrant on November 4, 2022).</u></a>
23.1*	<a href="#"><u>Consent of WithumSmith+Brown, PC, independent registered public accounting firm.</u></a>
23.2	<a href="#"><u>Consent of Dorsey &amp; Whitney LLP (incorporated by reference to Exhibit 23.2 to Form S-1 filed by the registrant on August 8, 2025).</u></a>
24.1	<a href="#"><u>Power of Attorney (incorporated by reference to Exhibit 24.1 to Form S-1 filed by the registrant on August 8, 2025).</u></a>
107	<a href="#"><u>Filing Fee Table (incorporated by reference to Exhibit 107 to Form S-1 filed by the registrant on August 8, 2025).</u></a>

\* Filed herewith

+ Indicates management contract or compensatory plan or arrangement.

† 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.



**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement on Post-Effective Amendment No. 1 to Form S-1 of our report dated March 25, 2026, which includes an explanatory paragraph relating to SeaStar Medical Holding Corporation's ability to continue as a going concern, relating to the consolidated financial statements of SeaStar Medical Holding Corporation as of and for the years ended December 31, 2025 and 2024, which appears in SeaStar Medical Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2025.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ WithumSmith+Brown, PC

East Brunswick, New Jersey  
April 28, 2026