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

Post-effective Amendment No. 1 to  
**FORM S-1 ON FORM S-3**  
REGISTRATION STATEMENT UNDER  
THE SECURITIES ACT OF 1933

**ENSYSCE BIOSCIENCES, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or Other Jurisdiction of  
Incorporation or Organization)

**2834**

(Primary Standard Industrial  
Classification Code Number)

**82-2755287**

(I.R.S. Employer  
Identification Number)

**7946 Ivanhoe Avenue, Suite 201  
La Jolla, California 92037  
(858) 263-4196**

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

**Dr. Lynn Kirkpatrick  
President, Chief Executive Officer & Director  
7946 Ivanhoe Avenue, Suite 201  
La Jolla, California 92037  
(858) 263-4196**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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 General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

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.



ENSYSC E BIOSCIENCES, INC.

**Up to 7,455,627 Shares of Common Stock Underlying the Series A Warrants, Series B Warrants and Placement Agent Warrants**

This prospectus relates to the issuance by us and the resale by the selling security holders named in this prospectus (the “*Selling Securityholders*”) of up to an aggregate of 7,455,627 shares of our common stock, par value \$0.0001 per share (“*common stock*”), which consists of (i) up to 3,601,752 shares of common stock that are issuable to certain Selling Securityholders upon the exercise of Series A Warrants to purchase shares of our common stock at a per share exercise price of \$1.06 that we issued to certain Selling Securityholders in the closing of a private placement that occurred on February 14, 2024 (the “*Series A Warrants*”); (ii) up to 3,601,752 shares of common stock that are issuable to certain Selling Securityholders upon the exercise of Series B Warrants to purchase shares of our common stock at a per share exercise price of \$1.06 that we issued to certain Selling Securityholders in a closing of a private placement that occurred on February 14, 2024 (the “*Series B Warrants*”); and (iii) up to 252,123 shares of common stock that are issuable to certain Selling Securityholders upon the exercise of certain Placement Agent Warrants (the “*Placement Agent Warrants*,” and together with the Series A Warrants and the Series B Warrants, the “*2024 Warrants*”). See “*Description of Capital Stock — Warrants — 2024 Warrants*” beginning on page 12 of this prospectus.

Our registration of the securities covered by this prospectus does not mean that either we or the Selling Securityholders will issue, offer or sell, as applicable, any of the securities being registered. The Selling Securityholders may offer, sell, or distribute all or a portion of the securities being registered publicly or through private transactions at prevailing market prices or at negotiated prices. We will not receive any of the proceeds from the sales of our common stock by the Selling Securityholders pursuant to this prospectus. We will, however, receive the net proceeds of any 2024 Warrants if exercised for cash. We will bear all costs, expenses and fees in connection with the registration of these securities, including with regard to compliance with state securities or “blue sky” laws. The Selling Securityholders will bear all commissions and discounts, if any, attributable to their sale of shares of our common stock. See “*Plan of Distribution*” beginning on page 17 of this prospectus.

Our common stock is listed on The Nasdaq Capital Market under the symbol “ENSC” and certain warrants we previously issued (the “*Public Warrants*”) are quoted on the OTC Pink Open Market under the symbol “ENSCW.” On April 18, 2024, the last reported sale price of our common stock on The Nasdaq Capital Market was \$0.5802 per share and the closing bid price for our Public Warrants as quoted on the OTC Pink Open Market was \$0.036.

You should read this prospectus and any prospectus supplement or amendment carefully before you invest in our securities.

**Our business and investing in our securities involve a high degree of risk. See “*Risk Factors*” beginning on page 6 of this prospectus.**

**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.**

Prospectus dated [\_\_\_\_], 2024.

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GLOSSARY

**Definitions:**

2013 Framework	Financial reporting criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013)
2021 Notes	The senior secured convertible promissory notes in the aggregate original principal amount of \$15.9 million, sold in two closings on September 24, 2021 and November 5, 2021, respectively, pursuant to the Securities Purchase Agreement entered into on September 24, 2021
2021 Omnibus Incentive Plan	Ensysce Biosciences, Inc. Amended and Restated 2021 Omnibus Incentive Plan, as amended
2021 Securities Purchase Agreement	Securities Purchase Agreement, dated as of September 24, 2021, between the Company and certain institutional investors
2022 Notes	The senior secured convertible promissory notes in the aggregate original principal amount of \$8.48 million, sold in two closings on June 30, 2022 and August 8, 2022, respectively, pursuant to the Securities Purchase Agreement entered into on June 30, 2022
2022 Securities Purchase Agreement	Securities Purchase Agreement, dated as of June 30, 2022, between the Company and certain institutional investors
2023 Notes	The senior secured convertible promissory notes in the aggregate principal amount of \$1.836 million, sold in two closings on October 25, 2023 and November 28, 2023, respectively, pursuant to the Securities Purchase Agreement entered into on October 23, 2023
2023 Securities Purchase Agreement	Securities Purchase Agreement, dated as of October 23, 2023, between the Company and certain investors
2024 Warrants	The Series A Warrants and Series B Warrants, issued February 14, 2024, exercisable for an aggregate of 7,203,504 shares of common stock and Placement Agent Warrants exercisable for an aggregate of 252,123 shares of common stock
ADFs	Abuse deterrent formulations
ADHD	Attention deficit hyperactivity disorder
Aggregate Limit	Up to \$60 million of gross proceeds with respect to the GEM Agreement
ANDA	Abbreviated New Drug Application
API	Active pharmaceutical ingredient

AUC	Area under the concentration time curve
Board	Board of Directors of Ensysce, or a committee thereof, as applicable
BTD	Breakthrough Therapy Designation granted by the FDA
Business Combination	The definitive merger agreement among LACQ, Merger Sub and Former Ensysce, dated January 31, 2021, providing for, among other things, and subject to terms and conditions therein, the business combination between LACQ and Former Ensysce pursuant to the merger of Merger Sub with and into Former Ensysce, with Former Ensysce continuing as the surviving entity and as a wholly-owned subsidiary of LACQ
CARA	Comprehensive Addiction and Recovery Act
CDC	Center for Disease Control
CDER	Center for Drug Evaluation and Research
cGMP	Current Good Manufacturing Practice
Cmax	Maximum plasma concentration
CMC	Chemistry, manufacturing, and controls
CMOs	Contract manufacturing organizations
CNS	Central nervous system
Company	Ensysce Biosciences, Inc. and its consolidated subsidiaries
COVID-19	Novel coronavirus disease
Covistat	A subsidiary renamed EBIR, Inc.
CROs	Contract research organizations
CSA	Controlled Substances Act
CSOS	Controlled Substance Ordering System
DEA	United States Drug Enforcement Agency
Draw Down Limit	400% of the average daily trading volume for the 30 trading days immediately preceding the date the Company delivers the draw down notice with respect to the GEM Agreement
DSCSA	Title II of the Federal Drug Quality and Security Act of 2013, known as the Drug Supply Chain Security Act
EB	Ensysce Biosciences, Inc. prior to its merger with Signature Acquisition Corp. pursuant to the EB-ST Agreement.
EBIR	Previously known as Covistat, Inc., EBIR, Inc. is a clinical stage pharmaceutical company that is developing a compound utilized in the Company's overdose protection program for the treatment of COVID-19 and 79.2%-owned subsidiary of the Company
EB-ST Agreement	Agreement and Plan of Merger, dated as of December 28, 2015, by and among Signature, SAQ, and EB
EMA	European Medicines Agency

Ensysce	Ensysce Biosciences Inc.
EPO	European Patent Office
ETASU	Elements to assure a products safe use
Exchange Act	Securities Exchange Act of 1934, as amended
FDA	United States Food and Drug Administration
FDC Act	Federal Food, Drug and Cosmetic Act, as amended
Former Ensysce	Ensysce Biosciences, Inc., a Delaware corporation, prior to the consummation of the merger with and into Merger Sub
GAAP	Generally Accepted Accounting Principles in the United States of America
GCP	Good Clinical Practices
GEM Agreement	Share Purchase Agreement between the Company, GEM Global, and GYBL, dated as of December 29, 2020, including a Registration Rights Agreement between the same parties and dated as of the same date
GEM Global	GEM Global Yield LLC SCS
GEM Warrants	4,608 shares of common stock that may be issued upon the exercise of warrants issued to GYBL under the terms of the GEM Agreement at a reset exercise price of \$1.06 per share
GMP	Good Manufacturing Practices
GYBL	GEM Yield Bahamas Limited
Hatch-Waxman Act or Hatch-Waxman Amendments	Drug Price Competition and Patent Term Restoration Act of 1984
HHS	United States Department of Health and Human Services
IMPDs	Investigational Medicinal Product Dossiers
IND	Investigational New Drug
Investor Notes	The notes, with an aggregate principal amount of \$1.836 million, issued under the October 2023 Securities Purchase Agreement
Investor Warrants	The warrants issued under the October 2023 Securities Purchase Agreement
IRB	Institutional Review Board
JOBS Act	Jumpstart Our Business Startups Act of 2012
LACQ	Leisure Acquisition Corp., a Delaware Corporation
LACQ Warrants	Warrants that relate to the Business Combination or were issued prior to it and are exercisable for 21,993 shares of our common stock at a weighted average exercise price of \$2,725.90 per share
May 2023 Securities Purchase Agreement	Securities Purchase Agreement, dated as of May 10, 2023, between the Company and certain institutional investors
Merger	The merger of Merger Sub with and into Former Ensysce, with Former Ensysce continuing as the surviving entity and a wholly owned subsidiary of LACQ, which changed its name to Ensysce Biosciences, Inc. following consummation of the Merger.
Merger Agreement	Agreement and Plan of Merger, dated as of January 31, 2021, by and among LACQ, Merger Sub and Former Ensysce, providing for, among other things, and subject to the terms and conditions therein, a business combination between Former Ensysce and LACQ pursuant to the proposed merger of Merger Sub with and into Former Ensysce, with Former Ensysce surviving the transaction as a wholly-owned subsidiary of LACQ, which changed its name to Ensysce Biosciences, Inc. following consummation of the Merger
Merger Sub	EB Merger Sub, Inc., a Delaware corporation, a wholly-owned subsidiary of LACQ prior to the consummation of the Merger
MPAR®	Multi-Pill Abuse Resistance
MPAR® Grant	Research and development grant related to the development of its MPAR® overdose prevention technology awarded to the Company by NIH through NIDA in September 2018
Nasdaq	The Nasdaq Stock Market LLC
NCE	New Chemical Entity
NDA	New Drug Application
NIDA	National Institute of Drug Abuse
NIH	National Institutes of Health
NME	New molecular entity
October 2023 Securities Purchase Agreement	Securities Purchase Agreement, dated as of October 23, 2023, between the Company and certain investors
Orange Book	FDA's publication Approved Drug Products with Therapeutic Equivalence Evaluations

ODU Grant	Research and development grant related to the development of its TAAP/MPAR® <sup>TM</sup> abuse deterrent technology for Opioid Use Disorder awarded to the Company by NIH/NIDA in September 2019
PCT	Patent Cooperation Treaty

PDMA	U.S. Prescription Drug Marketing Act
PK	Pharmacokinetics
Prior Warrants	Warrants issued pursuant to the 2021 Securities Purchase Agreement and 2022 Securities Purchase Agreement, with the warrants issued in (i) 2021 exercisable for an aggregate of 4,518 shares of our common stock at an exercise price reset to \$3.64 per share and (ii) 2022 exercisable for an aggregate of 38,900 shares of our common stock at an exercise price reset to \$3.64 per share
PTA	Patent Term Adjustment
PTE	Patent Term Extension
Public Warrants	The redeemable warrants issued by us and sold as part of the units in the LACQ IPO (whether they were purchased in the LACQ IPO or thereafter in the open market). The Public Warrants are exercisable for an aggregate of approximately 41,666 shares of our common stock at an exercise price of \$2,760.00 per share
R&D	Research and Development
REMS	Risk evaluation and mitigation strategy
Reverse Splits	Reverse splits of our common stock, one-for-twenty effected on October 28, 2022, and one-for-twelve effected on March 31, 2023
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SAQ	Signature Acquisition Corp., a wholly-owned subsidiary of Signature
SEC	U.S. Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Signature	Signature Therapeutics Inc.
Societal	Societal CDMO
Societal Agreement	Manufacturing Agreement, dated September 19, 2019, by and between Societal (formerly Recro Gaineville LLC) and the Company
SUPPORT Act	Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act
TAAP	Trypsin Activated Abuse Protection
TEAEs	Treatment-emergent adverse events
USPTO	United States Patent and Trademark Office

## ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information other than the information that we have provided or incorporated by reference in this prospectus and your reliance on any unauthorized information or representation is at your own risk. This prospectus may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that the information contained in this prospectus is accurate only as of the date of this prospectus, and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or of any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus contains market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included in this prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “*Risk Factors*” contained in this prospectus. Accordingly, investors should not place undue reliance on this information.

The representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the U.S. Securities and Exchange Commission (the “SEC”) before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

Neither we nor the Selling Securityholders has authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any post-effective amendment, or any applicable prospectus supplement prepared by or on behalf of us or to which we have referred you. We and the Selling Securityholders take no responsibility for and can provide no assurance as to the reliability of, any other information that others may give you. Neither we, nor the Selling Securityholders, will make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any post-effective amendment and any applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover.

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

We own or have rights to trademarks, trade names and service marks that we use in connection with the operation of our business. In addition, our name, logos and website name and address are our trademarks or service marks. Solely for convenience, in some cases, the trademarks, trade names and service marks referred to in this prospectus are listed without the applicable ®, ™ and SM symbols, but we will assert, to the fullest extent under applicable law, our rights to these trademarks, trade names and service marks. Other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

On June 30, 2021, we consummated the transactions contemplated by the Merger Agreement, with the Company surviving in the Merger. In connection with the consummation of the Business Combination, LACQ changed its name to “Ensysce Biosciences, Inc.”

On October 28, 2022, we effected a one-for-twenty reverse split of our common stock (the “2022 Reverse Split”). On March 31, 2023, we effected a one-for-twelve reverse split of our common stock (the “2023 Reverse Split” and together with the 2022 Reverse Split the “Reverse Splits”). All share and per share information has been restated retroactively, giving effect to the Reverse Splits for all periods presented.

Unless the context indicates otherwise, references in this prospectus to the “Company,” “Ensysce,” “we,” “us,” “our,” and similar terms refer to Ensysce Biosciences, Inc. (f/k/a Leisure Acquisition Corp.) and its consolidated subsidiaries.

### CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes statements that express our opinions, expectations, beliefs, plans, objectives, assumptions, or projections regarding future events or future results and therefore are, or may be deemed to be, “*forward-looking statements*.” These forward-looking statements can generally be identified by the use of forward-looking terminology, including the terms “*believes*,” “*estimates*,” “*anticipates*,” “*expects*,” “*seeks*,” “*projects*,” “*intends*,” “*plans*,” “*may*,” “*will*,” or “*should*” or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this registration statement/prospectus and include statements regarding our intentions, beliefs or current expectations concerning, among other things, results of operations, financial condition, liquidity, prospects, growth, strategies and the markets in which we operate. Such forward-looking statements are based on available current market material and management’s expectations, beliefs and forecasts concerning future events impacting our company. Factors that may impact such forward-looking statements include:

- the risk that our common stock will be delisted from Nasdaq;
- our ability to continue as a going concern for the next twelve months;
- our estimates regarding expenses, revenue, capital requirements and timing and availability of and the need for additional financing will almost certainly not match actual amounts and timing;
- the risk that our lead product candidate PF614 and PF614-MPAR may not be successful in limiting or impeding abuse, overdose, or misuse or providing additional safety upon commercialization;
- reliance by us on third-party contract research organizations, or CROs, for our research and development activities and clinical trials;
- the need for substantial additional funding to complete the development and commercialization of our product candidates;
- the risk that our clinical trials may fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third parties;
- the risk that the potential product candidates that we develop may not progress through clinical development or receive required regulatory approvals within expected timelines or at all;
- the risk that clinical trials may not confirm any safety, potency, or other product characteristics described or assumed in this prospectus;
- the risk that we will be unable to successfully market or gain market acceptance of our product candidates;
- the risk that our product candidates may not be beneficial to patients or successfully commercialized;
- the risk that we have overestimated the size of the target market, patients’ willingness to try new therapies, and the willingness of physicians to prescribe these therapies;
- effects of competition;
- the risk that third parties on which we depend for laboratory, clinical development, manufacturing, and other critical services will fail to perform satisfactorily;
- the risk that we will be unable to obtain and maintain sufficient intellectual property protection for our investigational products or will infringe the intellectual property protection of others;
- the loss of key members of our management team;
- changes in our regulatory environment;
- the ability to attract and retain key scientific, medical, commercial, or management personnel;
- changes in our industry;
- our ability to remediate any material weaknesses or establish and maintain effective internal controls over financial reporting;
- the risk that we may not be able to regain and maintain compliance with applicable listing standards of Nasdaq;
- other factors disclosed in this prospectus; and
- other factors beyond our control.

The forward-looking statements contained in this prospectus are based on our current expectations and beliefs concerning future developments and their potential effects on our company. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described under the heading “*Risk Factors*” in this prospectus. Should one or more of these risks or uncertainties materialize, or should any of the assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We will not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

### RISK FACTORS

*An investment in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described under “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 and any subsequent Quarterly Report on Form 10-Q and our other filings with the SEC, all of which are incorporated by reference herein, together with the Risk Factors set forth below, before making an investment decision. The occurrence of one or more of the events or circumstances described in these risk factors, alone or in combination with other events or circumstances, may have an adverse effect on our business, cash flows, financial*

condition and results of operations. You should also carefully consider the following risk factors in addition to the other information included in this registration statement/prospectus, including matters addressed in the section entitled “Cautionary Note Regarding Forward-Looking Statements.” We may face additional risks and uncertainties that are not presently known to us or that we currently deem immaterial, which may also impair our business or financial condition.

### **Risks Related to this Offering and Our Securities**

#### ***We need to raise additional capital after this offering to support our operations.***

We will not receive any of the proceeds from the sales of our common stock by the Selling Securityholders pursuant to this prospectus. We will, however, receive the net proceeds of any 2024 Warrants if exercised for cash.

We have incurred substantial losses since our inception. Net losses and negative cash flows have had, and will continue to have, an adverse effect on our stockholders’ equity and working capital. We expect to continue to incur significant losses for the foreseeable future as we continue our research and development of, and seek regulatory approvals for, our product candidates.

Our current cash on hand is sufficient to fund operations into the third quarter of 2024. The report of our independent registered public accounting firm on our financial statements for the years ended December 31, 2023 and 2022 contains explanatory language that substantial doubt exists about our ability to continue as a going concern. We have reduced expenses because we do not have access to sufficient cash and liquidity to finance our business operations as currently contemplated and may be compelled to reduce further general and administrative expenses and delay research and development projects until we are able to obtain sufficient financing. We may find it difficult to raise money on terms favorable to us or at all. The failure to obtain sufficient capital to support our operations would have a material adverse effect on our business, financial condition and results of operations. If sufficient financing is not received timely, we would then need to pursue a plan to license or sell assets, seek to be acquired by another entity, cease operations and/or seek bankruptcy protection.

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#### ***If we are unable to maintain compliance with the listing standards of Nasdaq, our common stock may become delisted, which could have a material adverse effect on our ability to raise funding, which could negatively impact our business, capital and financial condition.***

On November 13, 2023, we received notice from the Listing Qualifications department of Nasdaq stating that, due to our non-compliance with the \$2.5 million stockholders’ equity requirement set forth in Nasdaq Listing Rule 5550(b)(1) as of September 30, 2023, we were subject to delisting unless we timely request a hearing before the Nasdaq Hearings Panel (the “Panel”), which we did, resulting in a hearing that was held before the Panel in early February 2024. The Panel granted our request for continued listing until May 13, 2024. We intend to actively explore options to regain compliance with Nasdaq listing requirements; however, there can be no assurance that the Panel will grant our request for continued listing or that we will be able to evidence compliance prior to the expiration of any extension that may be granted to us by the Panel. We were not in compliance with Nasdaq listing standards and requirements for our common stock for approximately a one-year period ending in June 2023 and had been granted an exception through June 12, 2023 to meet a number of obligations before June 12, 2023 that had been imposed by Nasdaq. By letter dated June 13, 2023, Nasdaq advised us that we had regained compliance. Nasdaq requires that our common stock have a minimum bid price of at least \$1 per share (the “Minimum Bid Price”). On March 27, 2024, Nasdaq provided notice that we were not in compliance with the Minimum Bid Price requirement and that we have 180 calendar days for the bid price for our common stock to close at the Minimum Bid Price for a minimum of ten consecutive business days before September 23, 2024. There can be no assurance that we will be able to maintain compliance with all of Nasdaq’s listing requirements and standards in the future. If we do not meet all of those obligations, our common stock could be delisted by Nasdaq. If delisting occurs, it could be more difficult to buy or sell our securities and to obtain accurate quotations, and the price of our common stock could suffer a material decline. In addition, a delisting would impair our ability to raise capital through the public markets, could deter broker-dealers from making a market in or otherwise seeking or generating interest in our securities and might deter certain institutions and persons from investing in our securities. Any of these could negatively impact our financial condition or our ability to operate our business and maintain adequate capital.

#### ***If you purchase our securities in this offering you may experience future dilution as a result of future equity offerings or other equity issuances.***

In order to raise additional capital, we will need to offer and issue additional shares of our common stock or other securities convertible into or exchangeable for our common stock in the future. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

In addition, we have a significant number of warrants and stock options outstanding. Further, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

#### ***The market price of our common stock and the trading volume of our common stock has been and may continue to be, highly volatile, and such volatility could cause the market price of our common stock to decrease.***

During the past year, the market price of our common stock fluctuated from a low of \$0.58 per share to a high of \$7.20 per share, and our stock price continues to fluctuate. The market price and trading volume of our common stock may continue to fluctuate significantly in response to numerous factors, some of which are beyond our control, such as:

- our ability to grow our revenue and customer base;
- The announcement or the market introduction of new products or product enhancements by us or our competitors;
- the trading volume of our common stock;
- developments concerning regulatory oversight and approvals;
- variations in our and our competitors’ results of operations;
- changes in earnings estimates or recommendations by securities analysts, if our common stock is covered by analysts;
- successes or challenges in our collaborative arrangements or alternative funding sources;
- developments in the health care and life science industries;
- the results of product liability or intellectual property lawsuits;
- adverse effects on our business condition and results of operations from general economic and market conditions and overall fluctuations in the United States and international markets, including deteriorating market conditions due to investor concerns regarding inflation and Russia’s war on Ukraine;

- future issuances of common stock or other securities;
- the addition or departure of key personnel;
- announcements by us or our competitors of acquisitions, investments or strategic alliances; and
- general market conditions and other factors, including factors unrelated to our operating performance.

Further, the stock market in general and micro-cap clinical trial pharmaceutical issuers in particular, have recently experienced extreme price and volume fluctuations. Continued market fluctuations could result in extreme volatility in the price of our common stock, which could cause a decline in the value of our common stock and the loss of some or all of your investment.

***We have never paid dividends on our capital stock, and we do not anticipate paying dividends in the foreseeable future.***

We have never paid dividends on any of our capital stock and currently intend to retain any future earnings to fund the growth of our business. We may also enter into credit agreements or other borrowing arrangements in the future that will restrict our ability to declare or pay cash dividends on our common stock.

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## USE OF PROCEEDS

The Selling Securityholders will receive all of the proceeds from this offering. We will, however, receive the net proceeds of any 2024 Warrants if exercised for cash. Proceeds, if any, received from the exercise of such 2024 Warrants will be used for working capital for general corporate purposes. No assurances can be given that any of such 2024 Warrants will be exercised. The Selling Securityholders will pay any underwriting discounts and commissions and expenses incurred by the Selling Securityholders for brokerage, accounting, tax or legal services or any other expenses incurred by the Selling Securityholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including all registration and filing fees, and fees and expenses for our counsel and our independent registered public accountants.

## DESCRIPTION OF CAPITAL STOCK

The following summary of the material terms of our common stock and description of certain of our other securities is not intended to be a complete summary of the rights and preferences of our common stock or such other securities. We urge you to read the third amended and restated certificate of incorporation in its entirety for a complete description of the rights and preferences of our common stock. See “*Where You Can Find More Information.*”

Pursuant to the third amended and restated certificate of incorporation, our authorized capital stock consists of 250,000,000 shares of common stock, \$0.0001 par value, and 1,500,000 shares of undesignated preferred stock, \$0.0001 par value.

### Common Stock

As of April 18, 2024, 7,585,172 shares of our common stock were issued and outstanding.

Common stockholders of record are entitled to one vote for each share held on all matters to be voted on by stockholders. Unless specified in our amended and restated certificate of incorporation or bylaws, or as required by applicable provisions of the DGCL or applicable stock exchange rules, the affirmative vote of a majority of our shares of common stock that are voted is required to approve any such matter voted on by our stockholders. Our Board is divided into three classes, each of which will generally serve for a term of three years with only one class of directors being elected in each year. There is no cumulative voting with respect to the election of directors or any other matter, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors. Our stockholders are entitled to receive ratable dividends when, as and if declared by the Board out of funds legally available therefor.

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In the event of a liquidation, dissolution or winding up, our stockholders are entitled to share ratably in all assets remaining available for distribution to them after payment of liabilities and after provision is made for each class of stock, if any, having preference over the common stock. Our stockholders have no preemptive or other subscription rights. There are no sinking fund provisions applicable to the common stock.

### ***Certain Anti-Takeover Provisions of our Third Amended and Restated Certificate of Incorporation and our Bylaws***

Our third amended and restated certificate of incorporation and bylaws contain provisions that may delay, defer or discourage another party from acquiring control of us. These provisions, which are summarized below, discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board, which may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give the Board the power to discourage acquisitions that some stockholders may favor.

#### ***Classified Board***

Our third amended and restated certificate of incorporation provides that our Board is classified into three classes of directors. As a result, in most circumstances, a person can gain control of our Board only by successfully engaging in a proxy contest at two or more annual meetings.

#### ***Authorized but Unissued Shares***

Our authorized but unissued shares of common and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. However, the listing requirements of the Nasdaq, which apply if and so long as our common stock remains listed on the Nasdaq, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. Additional shares that may be used in the future may be issued for a variety of corporate purposes, including future public offerings, to raise additional capital, or to facilitate acquisitions. The existence of authorized but unissued and unreserved common stock and preferred stock could render it more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

#### ***Special Meetings of Stockholders***

Our bylaws provide that special meetings of our stockholders may be called only by a majority vote of our Board.

#### ***Advance Notice Requirements for Stockholder Proposals and Director Nominations***

Our bylaws provide that stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely, a stockholder's notice will need to be received by the company secretary at our principal executive offices not later than the close of business on the 90<sup>th</sup> day nor earlier than the close of business on the 120<sup>th</sup> day prior to the anniversary date of the immediately preceding annual meeting of stockholders. Pursuant to Rule 14a-8 of the Exchange Act, proposals seeking inclusion in our annual proxy statement must comply with the notice periods contained therein. Our bylaws also specify certain requirements as to the form and content of a stockholders meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

#### *Amendment of Charter or Bylaws*

The amendment, alteration or repeal of the provisions of the third amended and restated certificate of incorporation governing limitation of director liability, indemnification and advancement of expenses or the adoption of any provision or bylaw inconsistent with those provisions may only be effected by the affirmative vote of the stockholders holding at least sixty five percent (65%) of the voting power of our outstanding shares entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. The affirmative vote of the stockholders holding at least 65% of the voting power of all outstanding shares of our capital stock is required for any amendment of the indemnification provisions in the bylaws or adoption of a provision inconsistent with them.

#### *Exclusive Forum*

Under our charter, unless we consent in writing to the selection of an alternative forum, subject to certain limitations, the sole and exclusive forum will be the Court of Chancery of the State of Delaware (or, if such court does not have jurisdiction, the Superior Court of the State of Delaware, or, if the Superior Court of the State of Delaware also does not have jurisdiction, the United States District Court for the District of Delaware) for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders;
- any action asserting a claim against us arising pursuant to any provision of the DGCL, our charter or our bylaws (as either may be amended, restated, modified, supplemented or waived from time to time);
- any action to interpret, apply, enforce or determine the validity of our charter or our bylaws; and
- any action asserting a claim against us governed by the internal affairs doctrine.

For the avoidance of doubt, the foregoing provisions of our charter will not apply to any action or proceeding asserting a claim under the Securities Act or the Exchange Act. These provisions of our charter could limit the ability of our stockholders to obtain a favorable judicial forum for certain disputes with us or with our current or former directors, officers or other employees, which may discourage such lawsuits against us and our current or former directors, officers and employees. Alternatively, if a court were to find these provisions of our charter inapplicable to, or unenforceable in respect of, one or more of the types of actions or proceedings listed above, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition and results of operations.

#### *Delaware Anti-Takeover Statute*

We are subject to the provisions of Section 203 of the Delaware General Corporation Law (sometimes referred to as Section 203) regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under specified circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the outstanding voting stock owned by the stockholder)(1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors do not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of our common stock held by stockholders.

The provisions of Delaware law, our certificate of incorporation 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**

##### *Prior Warrants*

On September 24, 2021, we entered into the 2021 Securities Purchase Agreement, whereby we issued to the purchasers signatory thereto warrants to purchase 4,512 shares of the common stock in the aggregate (the "2021 Prior Warrants") in closings on September 24, 2021 and November 5, 2021. The 2021 Prior Warrants have a reset per share exercise price of \$3.637 and are exercisable for five years following issuance. Our obligations under the 2021 Prior Warrants are secured by all of our and our subsidiaries' assets and are guaranteed jointly and severally by our subsidiaries.

On July 1, 2022 and August 8, 2022, we completed closings under the 2022 Securities Purchase Agreement, whereby we issued to the purchasers signatory thereto warrants (the “2022 Prior Warrants”) to purchase 38,900 shares of the common stock in the aggregate. The 2022 Prior Warrants have a reset per share exercise price of \$3.637 and are exercisable for five years following issuance. Our obligations under the Prior Warrants are secured by all of our and our subsidiaries’ assets and are guaranteed jointly and severally by our subsidiaries.

#### **Other Warrants**

On December 9, 2022, we issued warrants, pursuant to a registered offering, to purchase 549,993 shares of our common stock in the aggregate with a per share exercise price of \$12.81. The warrants are exercisable for five years from the date of issuance.

On February 2, 2023, we issued warrants to purchase 297,619 shares of our common stock with an exercise price of \$8.58 per share. These warrants expire five and one-half years after the original issue date. On February 2, 2023, we also issued warrants to purchase 20,832 shares of our common stock with exercisable price of \$12.60 per share. These warrants expire five years after the original issue date.

On May 12, 2023, we issued: (i) warrants of five-year duration to purchase 1,800,876 shares of our common stock in the aggregate with an exercise price of \$3.637 per share; (ii) warrants of eighteen-month duration to purchase 1,800,876 shares of our common stock with an exercise price of \$3.637 per share and (iii) warrants of five-year duration to purchase 126,061 shares of our common stock with an exercise price of \$4.8588 per share. On May 12, 2023, we also issued pre-funded warrants to purchase 222,072 shares of our common stock with an exercise price of \$0.0001 per share. As described below under “Description of Capital Stock—Warrants–2024 Warrants”, the warrants to purchase 3,601,752 shares of our common stock with an exercise price of \$3.637 were subsequently repriced and exercised.

On October 25, 2023, we completed the first of two closings under the October 2023 Securities Purchase Agreement, whereby we issued to the selling securityholders signatory thereto warrants (the “Investor Warrants”) to purchase 1,255,697 shares of common stock in the aggregate. On November 28, 2023, we completed the second closing and issued Investor Warrants to purchase 2,511,394 shares of common stock. The Investor Warrants are exercisable for five years from the date of issuance at a per share common stock exercise price of \$1.5675. Investor Warrants to purchase 2,443,187 shares of common stock were outstanding as of March 31, 2024. Our obligations under the Investor Warrants are secured by all of our and our subsidiaries’ assets and are guaranteed jointly and severally by our subsidiaries.

Over time, we have issued, to a number of third parties, other warrants that may be exercised for common stock. Some of these warrants are traded on the OTC Pink Open Market under the symbol “ENSCW”.

#### **2024 Warrants**

On February 12, 2024, we entered into an inducement offer letter agreement (the “Inducement Letter”) with certain holders (the “Holders”) of certain of its existing warrants to purchase up to an aggregate of 3,601,752 shares of the common stock issued to the Holders on May 12, 2023 and having an exercise price of \$3.637 per share (the “Existing Warrants”). Pursuant to the Inducement Letter, the Holders agreed to exercise for cash their Existing Warrants to purchase an aggregate of 3,601,752 shares of common stock at a reduced exercise price of \$1.31 per share in consideration of our agreement to issue new unregistered Series A Warrants to purchase up to 3,601,752 shares of common stock and new unregistered Series B Warrants to purchase up to 3,601,752 shares of common stock. The Series A Warrants have an exercise price of \$1.06 per share, are exercisable immediately upon issuance and have a term equal to eighteen months from the date of issuance. The Series B Warrants have an exercise price of \$1.06 per share, are exercisable immediately upon issuance and will expire on May 12, 2028. In connection with the execution of the Inducement Letter, we issued to a placement agent unregistered warrants to purchase up to 252,123 shares of common stock (the “Placement Agent Warrants”). The Placement Agent Warrants expire on May 12, 2028, and have an exercise price of \$1.6375 per share of common stock (equal to 125% of the reduced exercise price per Existing Warrant).

#### **Convertible Promissory Notes**

##### **2021 Secured Convertible Promissory Notes**

On September 24, 2021, we entered into a securities purchase agreement (the “2021 Securities Purchase Agreement”) whereby we issued to the purchasers signatory thereto the 2021 Notes in the aggregate principal amount of \$15.9 million for an aggregate purchase price of \$15 million. Our obligations under the 2021 Securities Purchase Agreement are secured by all of our and our subsidiaries’ assets and are guaranteed jointly and severally by our subsidiaries.

We have registered with the SEC the resale of the shares of common stock issuable upon conversion of the 2021 Notes, as well as the shares of common stock issuable upon the exercise of the 2021 Prior Warrants (as defined above). The remaining balance of the 2021 Notes was repaid in October 2022.

##### **2022 Secured Convertible Promissory Notes**

On June 30, 2022, we entered into a securities purchase agreement (the “2022 Securities Purchase Agreement”) whereby we issued to the purchasers signatory thereto the 2022 Notes in the aggregate principal amount of \$8.48 million for an aggregate purchase price of \$8.0 million in two closings under the 2022 Securities Purchase Agreement, the first closing occurring on July 1, 2022 and the second occurring on August 8, 2022. Our obligations under the 2022 Securities Purchase Agreement are secured by all of our and our subsidiaries’ assets and are guaranteed jointly and severally by our subsidiaries. Principal and interest under the 2022 Notes have been satisfied in full.

We have registered with the SEC the resale of the shares of common stock issuable upon conversion of the 2022 Notes, as well as the shares of common stock issuable upon the exercise of the 2022 Prior Warrants (as defined above). The remaining balance of the 2022 Notes was repaid in the first quarter of 2023.

##### **2023 Secured Convertible Promissory Note**

On October 23, 2023, we entered into a securities purchase agreement (the “October 2023 Securities Purchase Agreement”) whereby at the first of two closings, on October 25, 2023, we issued to certain investors, including our Chairman, Investor Notes in the principal amount of \$612,000 for a purchase price of \$566,667. At the second closing, on November 28, 2023, we issued additional Investor Notes in the principal amount of \$1,224,000 for a purchase price of \$1,133,333, which increased the aggregate principal amount raised under the 2023 Securities Purchase Agreement to \$1,836,000 for an aggregate purchase price of \$1,700,000. The Investor Notes, subject to an original issue discount of eight percent (8%), have a term of six months and accrue interest at the rate of 6.0% per annum. The Investor Notes are convertible into the common stock, at a per share conversion price equal to \$1.5675. The conversion price is subject to customary anti-dilution adjustments upon (among other triggering events) the occurrence of a change of control transaction and certain dilutive transactions, including share dividends and splits occurring following the issuance of the promissory note. Under the Investor Notes, commencing 90 days after issuance (January 2024), we are obligated to redeem one third (1/3<sup>rd</sup>) of the original principal amount under the applicable Investor Note, plus accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such Investor Note. The balance of accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such Investor Note is due in two installments, the first at 120 days after issuance and the second at 150 days after issuance. We are required to pay the monthly redemption amount in cash with a premium of ten percent or, at the election of a purchaser at any time, some or all of the principal amount and interest may be paid by conversion of the Investor Note into shares of common stock. Our failure to pay any redemption amount in cash would amount to an event of default under the Investor Notes. If any event of default occurs, the outstanding principal amount of the Investor Notes, plus accrued but unpaid interest, liquidated damages

and other amounts owing through the date of acceleration, become, at an Investor Note holder's election, immediately due and payable, at the Investor Note holder's election in cash at the mandatory default amount set forth in the Notes or in shares of common stock at the mandatory default amount set forth in the Notes. All Investor Notes, other than those issued to our Chairman, were repaid in full, at a premium, in February 2024.

If we receive proceeds from any Subsequent Financings while an Investor Note is outstanding, the Investor Note holder may require us to first use up to 30% of the gross proceeds of the Subsequent Financing to repay the outstanding balance of such Investor Note with a 110% premium.

The Investor Notes may not be converted to the extent that, after giving effect to such conversion, the Purchaser, together with its affiliates and any other person acting as a group as defined pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (the affiliates and such persons, the "Attribution Parties"), would beneficially own in excess of 4.99% of the number of shares of the common stock outstanding immediately prior to, and immediately after giving effect to, the conversion of all or any portion of the Investor Notes (the "Beneficial Ownership Limitation"). The Purchasers may adjust the Beneficial Ownership limitation at any time, upon 61 days' notice, provided that the Beneficial Ownership Limitation may not be adjusted above 9.99% of the number of shares of common stock outstanding immediately prior to, and immediately after giving effect to, the conversion of all or any portion of the Investor Notes.

We registered with the SEC the resale of the shares of common stock issuable upon conversion of the Investor Notes, as well as the shares of common stock issuable upon the exercise of the Investor Warrants. The Investor Notes contain certain covenants, and events of default and triggering events, respectively, which would require repayment of the obligations outstanding pursuant to such instruments. Our obligations under the Investor Notes are secured by all of our and our subsidiaries' assets and guaranteed jointly and severally by our subsidiaries.

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## SELLING SECURITYHOLDERS

This prospectus relates to the resale by the Selling Securityholders from time to time of up to 7,455,627 shares of our common stock underlying the 2024 Warrants. The Selling Securityholders may offer and sell some, all or none of the common stock set forth below pursuant to this prospectus and any accompanying prospectus supplement. As used in this prospectus, the term "Selling Securityholders" includes the persons listed in the table below, together with any additional selling securityholders listed in a subsequent amendment to this prospectus, and their pledgees, donees, transferees, assignees, successors, designees and others who later come to hold any of the Selling Securityholders' interests in the common stock, other than through a public sale.

The table below lists the Selling Securityholders and provides information about the beneficial ownership of the shares of common stock held by each Selling Securityholder. The second column lists the number of shares of common stock owned by each Selling Securityholder, based on exercise of the 2024 Warrants and other warrants held by each selling securityholder, without regard to any limitations on exercises contained therein. The third column lists the shares of common stock being offered by this prospectus by the Selling Securityholders. This prospectus generally covers the resale of the maximum number of shares of common stock issuable upon exercise of the 2024 Warrants, determined as if the 2024 Warrants had been exercised in full, in each case without regard to any limitations on the exercise of the 2024 Warrants. The fourth column assumes the sale of all shares offered by the Selling Securityholders by this prospectus. In the fifth column, the applicable percentage ownership of common stock beneficially owned is based on approximately 7,329,172 shares of common stock outstanding as of March 22, 2024, accounting for any limitations on the exercise of warrants contained therein.

We have determined beneficial ownership in accordance with the rules of the SEC and beneficial ownership generally includes voting or investment power over securities. We have prepared the table based on information given to us by, or on behalf of, the Selling Securityholders.

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Please see the section titled "Plan of Distribution" in this prospectus for further information regarding the Selling Securityholders' methods of distributing these shares.

Name	Shares Owned Prior to Offering	Shares Underlying 2024 Warrants Registered for Sale Hereby	Shares Owned After Offering	Percent Beneficially Owned After Offering
3i, Fund (1)	3,564,316	1,543,608	2,021,708	4.99%
Anson Investments Master Fund LP (2)	1,250,444	1,234,884	15,560	*
Anson East Master Fund LP (3)	313,140	308,724	4,416	*
Sabby Volatility Warrant Master Fund, Ltd. (4)	4,688,685	4,116,288	572,457	4.99%
Michael Vasinkevich (5)	336,707	161,674	175,033	2.30%
James Cappuccio (5)	99,766	47,904	51,862	*
Noam Rubinstein (5)	83,337	31,515	51,862	*
Craig Schwabe (5)	17,721	8,509	9,212	*
Charles Worthman (5)	5,250	2,521	2,729	*

\* Less than 1%

(1) Consists of (i) 1,543,608 shares of common stock issuable upon the exercise of Series A Warrants and Series B Warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to an Inducement Agreement entered into in February 2024, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, (ii) 2,000,000 shares of common stock issuable upon the exercise of warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the October 2023 Securities Purchase Agreement, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, (iii) 19,450 shares of common stock, issuable upon the exercise of warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the 2022 Securities Purchase Agreement, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, and (iv) 2,258 shares of common stock, issuable upon the exercise of warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the 2021 Securities Purchase Agreement, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding. The maximum number of shares to be sold includes all shares of common stock issuable upon exercise of warrants without giving effect to such beneficial ownership limitation. The business address of 3i, LP is 2 Wooster Street, 2<sup>nd</sup> 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 or indirectly by 3i Management, LLC and 3i, LP. Mr. Tarlow disclaims any beneficial ownership of the securities beneficially owned directly by 3i, LP and indirectly by 3i Management, LLC.

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(2) Consists of (i) 1,234,884 shares of common stock issuable upon the exercise of Series A Warrants and Series B Warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to an Inducement Agreement entered into in February 2024, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, and (ii) 15,560 shares of common stock issuable upon the exercise of warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the 2022 Securities Purchase Agreement, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99% or 9.99%, as applicable, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that upon at least 61 days' prior notice to us, such holder may increase or decrease such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding. The maximum number of shares to be sold includes all shares of common stock issuable upon exercise of warrants without giving effect to such beneficial ownership limitation. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP ("Anson"), hold voting and dispositive power over the shares of common stock held by Anson. Tony Moore is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Moore, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these shares of common stock except to the extent of their pecuniary interest therein. The principal business address of Anson is Maples Corporate Services Limited, PO Box 309, Uglund House, Grand Cayman, KY1-1104, Cayman Islands.

(3) Consists of (i) 308,724 shares of common stock issuable upon the exercise of Series A Warrants and Series B Warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to an Inducement Agreement entered into in February 2024, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, and (ii) 4,416 shares of common stock issuable upon the exercise of warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the 2022 Securities Purchase Agreement. The maximum number of shares to be sold includes all shares of common stock issuable upon exercise of warrants without giving effect to such beneficial ownership limitation. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson East Master Fund LP ("Anson East"), hold voting and dispositive power over the shares of common stock held by Anson East. Tony Moore is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Moore, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these shares of common stock except to the extent of their pecuniary interest therein. The principal business address of Anson East is Maples Corporate Services Limited, PO Box 309, Uglund House, Grand Cayman, KY1-1104, Cayman Islands.

(4) Consists of (i) 281,782 shares of common stock, (ii) 4,116,288 shares of common stock issuable upon the exercise of Series A Warrants and Series B Warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to an Inducement Agreement entered into in February 2024, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding, and (iii) 166,667 shares of common stock issuable upon exercise of warrants issued December 9, 2022 and 124,008 shares of common stock issuable upon the exercise of warrants issued February 6, 2023, which warrants are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such warrants will not have the right to exercise any portion thereof if such holder, together with its affiliates, would beneficially own in excess of 4.99%, of the number of shares of common stock outstanding immediately after giving effect to such exercise, provided that such holder may decrease such limitation and further provided that upon at least 61 days' prior notice to us, such holder may increase such limitation up to a maximum of 9.99% of the number of shares of common stock outstanding. The maximum number of shares to be sold includes all shares of common stock issuable upon exercise of warrants without giving effect to such beneficial ownership limitation. Sabby Management, LLC is the investment manager of Sabby Volatility Warrant Master Fund, Ltd. and shares voting and investment power with respect to these shares in this capacity. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of Sabby Volatility Warrant Master Fund, Ltd. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein.

(5) Each of the Selling Securityholders is affiliated with H.C. Wainwright & Co., LLC, a registered broker dealer and has a registered address of c/o H.C. Wainwright & Co., LLC, 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned consists of shares of common stock issuable upon exercise of placement agent warrants, which were received as compensation. The Selling Securityholder acquired the placement agent warrants in the ordinary course of business and, at the time the placement agent warrants were acquired, the Selling Stockholder had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

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## PLAN OF DISTRIBUTION

Each Selling Securityholder, and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their Company securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which such securities are traded or in private transactions. These sales may be at fixed or negotiated prices.

A Selling Securityholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker dealer solicits purchasers;
- block trades in which the broker dealer will attempt to sell the securities 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;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- in transactions through broker dealers that agree with the Selling Securityholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Securityholders may also sell securities under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker dealers engaged by the Selling Securityholders may arrange for other brokers dealers to participate in sales. Broker dealers may receive commissions or discounts from the Selling Securityholders (or, if any broker dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the Selling Securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Securityholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Securityholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Securityholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Securityholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities.

Because Selling Securityholders may be deemed to be “underwriters” within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. The Selling Securityholders have advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the Selling Securityholders.

We agreed to keep this prospectus effective for the Selling Securityholders for common stock resold following exercise of the 2024 Warrants (the “*resale securities*”) at all times until no holder of the 2024 Warrants holds any 2024 Warrants or resale securities. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Securityholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of securities of the common stock by the Selling Securityholders or any other person. We will make copies of this prospectus available to the Selling Securityholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

## LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Troutman Pepper Hamilton Sanders LLP. Any underwriters or agents will be advised about other issues relating to the offering by counsel to be named in the applicable prospectus supplement.

## EXPERTS

The consolidated financial statements of Ensysce Biosciences Inc. as of December 31, 2023 and 2022 and for the years ended, included in this prospectus, have been audited by Moss Adams LLP, an independent registered public accounting firm, as stated in their report (which report expresses an unqualified opinion and includes an explanatory paragraph relating to a going concern uncertainty), which is included herein. Such consolidated financial statements are included in reliance upon the report of such firm given their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of the registration statement on Form S-3 filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated herein by reference for a copy of such contract, agreement or other document.

We are currently subject to the reporting requirements of the Exchange Act, and in accordance therewith file periodic reports, proxy statements and other information with the SEC. Our SEC filings are available to you on the SEC's website at <http://www.sec.gov> and in the "Investors" section of our website at [www.ensysce.com](http://www.ensysce.com). Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

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## DOCUMENTS INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that 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. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2023 filed with the SEC on March 15, 2024;
- Our Current Reports on Form 8-K filed with the SEC on [February 14, 2024](#), [March 15, 2024](#) and [March 29, 2024](#) (in each case other than any portions thereof deemed furnished and not filed);
- All other reports filed with the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act, since the end of the fiscal year covered by the Annual Report on Form 10-K referenced above; and
- The [Form 8-A](#) filed with the SEC on November 28, 2017 by our predecessor corporation, Leisure Acquisition Corp., included a description of common stock that was updated with the filing of our: (i) Third Amended and Restated Certificate of Incorporation as [Exhibit 3.1](#) to our Current Report on Form 8-K, which was filed with the SEC on July 7, 2021 and (ii) Certificate of Amendment to Third Amended and Restated Certificate of Incorporation that was filed as [Exhibit 3.1\(b\)](#) to our Registration Statement on Form S-1 (File No. 333-268038), which was filed with the SEC on October 28, 2022.

We also incorporate by reference any future filings (other than any filings or portions of such reports that are not deemed "filed" under the Exchange Act in accordance with the Exchange Act and applicable SEC rules, including current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made 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 the effectiveness of the registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents by writing or telephoning us at the following address or phone number. Ensysce Biosciences, Inc., 7946 Ivanhoe Avenue, Suite 201, La Jolla, California 92037, telephone number (858) 263-4196. You may also access this information on our website at [www.ensysce.com](http://www.ensysce.com) by viewing the "SEC Filings" subsection of the "Investors" menu. No additional information is deemed to be part of or incorporated by reference into this prospectus.

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Up to 7,455,627 Shares of Common Stock Underlying the Series A Warrants, Series B Warrants and Placement Agent Warrants



ENSYSCE BIOSCIENCES, INC.

PROSPECTUS

[\_\_\_\_\_] , 2024

## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

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

The following is a statement of estimated expenses payable by the registrant, other than placement agent fees and expenses, in connection with the offering described in this registration statement. All amounts are estimates except the SEC registration fee and FINRA filing fee.

SEC registration fee	\$	2,279
Accounting fees and expenses		15,000
Legal fees and expenses		25,000
Miscellaneous		—

**Item 14. Indemnification of Directors and Officers.**

Section 102(b)(7) of the Delaware General Corporation Law (the “DGCL”) allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. The registrant’s third amended and restated certificate of incorporation provides for this limitation of liability.

Section 145 of the DGCL, provides, among other things, that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided 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. A Delaware corporation may indemnify any persons who were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys’ fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided 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, provided further that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys’ fees) which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify such person under Section 145.

The registrant’s amended and restated bylaws provide that it must indemnify and advance expenses to its directors and officers to the full extent authorized by the DGCL.

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The registrant has entered into indemnification agreements with each of its directors and executive officers. Such agreements may require the registrant, among other things, to advance expenses and otherwise indemnify its executive officers and directors against certain liabilities that may arise by reason of their status or service as executive officers or directors, to the fullest extent permitted by law.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, any provision of the registrant’s third amended and restated certificate of incorporation, the registrant’s amended and restated bylaws, agreement, vote of stockholders or disinterested directors or otherwise. Notwithstanding the foregoing, the registrant shall not be obligated to indemnify a director or officer in respect of a proceeding (or part thereof) instituted by such director or officer, unless such proceeding (or part thereof) has been authorized by the board of directors pursuant to the applicable procedure outlined in the registrant’s amended and restated bylaws.

Section 174 of the DGCL provides, among other things, that a director, who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held jointly and severally liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing the minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

The registrant maintains and expects to maintain standard policies of insurance that provide coverage (1) to its directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to the registrant with respect to indemnification payments that the registrant may make to such directors and officers.

These provisions may discourage stockholders from bringing a lawsuit against the registrant’s directors for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit the registrant and its stockholders. Furthermore, a stockholder’s investment may be adversely affected to the extent the registrant pays the costs of settlement and damage awards against officers and directors pursuant to these indemnification provisions.

The registrant believes that these provisions, the insurance and the indemnity agreements are necessary to attract and retain talented and experienced officers and directors.

**Item 15. Recent Sales of Unregistered Securities.**

Set forth below is information regarding shares of securities sold by us within the past three years. Also included is the consideration received by us for such shares and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed. Share and per share amounts reported in this Item 15 have been retroactively restated to reflect the Reverse Splits.

- On June 7, 2021, LACQ entered into exchange agreements with each of the holders of (i) LACQ’s warrants issued by LACQ to Hydra Management, LLC (“Hydra”), Matthews Lane Capital Partners LLC (“MLCP” and together with Hydra, the “Sponsors”), and its strategic investor, HG Vora Capital Management LLC (“HG Vora”) (the “Private Placement Warrants”) and (ii) other private warrants held by the Sponsors, HG Vora, certain members of former LACQ management and unaffiliated parties. Pursuant to the exchange agreements, each of these holders exchanged their warrants for new private warrants. In connection with this exchange, an aggregate of 34,964 Private Placement Warrants and other private warrants were exchanged for new private warrants in a transaction exempt from registration under the Act pursuant to Section 3(a)(9) of the Act.
- On June 7, 2021, we issued 2,083 warrants exercisable for up to 2,083 shares of common stock to DelMorgan Group LLC (the “DelMorgan”) under the terms of the Email Agreement, dated January 31, 2021, among us and DelMorgan, as amended by the First Amendment to the Email Agreement, dated June 7, 2021 (the “Email Agreement”).

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- On June 30, 2021, we issued warrants to the Sponsors and HG Vora to purchase 2,125 shares of common stock that are issuable upon exercise of 2,125 warrants in exchange for outstanding loans under an expense advancement agreement, as amended, among LACQ, the Sponsors and HG Vora.

- On June 30, 2021, we issued 4,608 warrants with a 36-month term to purchase 4,608 shares of our common stock at a strike price per share equal to \$2,402.40, to GEM Yield Bahamas Limited (“GYBL”). The strike price has subsequently been reduced pursuant to the terms of the warrants.
- On June 30, 2021, we issued 520 shares of common stock to the underwriters in LACQ’s initial public offering to satisfy deferred underwriting fees payable to such underwriters.
- On July 22, 2021, we entered into agreements with consultants to issue up to 6,250 shares of common stock in the form of non-transferable warrants with a five-year term to purchase 4,166 shares of common stock at a strike price per share equal to \$1,507.20 and up to 2,083 shares of common stock based on certain service and market price conditions.
- On September 24, 2021, we entered into a Securities Purchase Agreement (the “2021 SPA”) whereby we issued to the purchasers signatory thereto 2021 Notes in the aggregate principal amount of \$15.9 million for an aggregate purchase price of \$15 million in two closings under the 2021 SPA, the first closing occurring on September 24, 2021 and the second occurring on November 5, 2021. The 2021 Notes, subject to an original issue discount of six percent (6%), had a term of twenty-one months and accrued interest at the rate of 5.0% per annum. The 2021 Notes were initially convertible into the common stock, at a per share conversion price equal to \$1,408.80, but the conversion price was subsequently reduced. In these transactions we also issued warrants to purchase 4,512 shares of the common stock in the aggregate at an exercise price per share of \$1,831.20, which was subsequently reduced to \$187.20. We have registered with the SEC the resale of the shares of common stock issuable upon conversion of the Investor Notes as well as the shares of common stock issuable upon the exercise of the warrants. Effective May 12, 2023, we reduced the per share exercise price of the warrants to \$3.637 by amending the warrants in return for an additional offering price of \$0.125 per amended warrant, such reduction disclosed in a prospectus supplement filed with the SEC on May 12, 2023.
- On February 18, 2022, we issued 208 shares of common stock to MZHCI, LLC in connection with our execution of an investor relations consulting agreement with MZHCI, LLC on December 20, 2021, through which we receive ongoing stock market support services and other consulting services. The issuance of our shares was a private transaction between MZHCI, LLC and us. We received no proceeds in connection with our issuance of those 208 shares.
- On June 30, 2022, we entered into a Securities Purchase Agreement for an aggregate financing of \$8.0 million with institutional investors. The Company issued to the investors (i) 2022 Notes in the aggregate principal amount of \$8.48 million for an aggregate purchase price of \$8.0 million and (ii) warrants to purchase 38,900 shares of the Company’s common stock in the aggregate at an exercise price of \$170.04 per share, which was subsequently reduced to \$24.07. The first funding of \$4.0 million occurred on July 1, 2022 and the second funding of \$4.0 million occurred on August 9, 2022. Pursuant to the 2022 Notes, shares of Company common stock were issued to these investors in satisfaction of principal and interest payments. The conversion price of the 2022 Notes (and exercise price of the related warrants) was subsequently reset lower such that a greater amount of principal on the 2022 Notes could be extinguished for shares. The proceeds are being used for working capital purposes subject to certain customary restrictions. Effective May 12, 2023, we reduced the per share exercise price of the warrants to \$3.637 by amending the warrants in return for an additional offering price of \$0.125 per amended warrant, such reduction disclosed in a prospectus supplement filed with the SEC on May 12, 2023.

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- On October 19, 2022, we issued 1,187 shares of common stock to Dr. Lynn Kirkpatrick and 2,651 shares of Company common stock to Dr. Bob Gower (collectively, the “K&G Shares”). The K&G Shares were issued in satisfaction (reimbursement) of an obligation to a third-party vendor previously incurred by the Company that was paid by Drs. Kirkpatrick and Gower. The reimbursement replaced registered but restricted shares on a one-for-one basis with unregistered and restricted shares. The aggregate market value of the K&G Shares on the transfer date was \$191,618. The transaction involved the receipt by two insiders of unregistered and restricted shares of common stock.
- On January 4, 2023, we issued 44,444 shares of common stock to Gem Yield Bahamas Limited as final payment of a commitment fee due in the form of cash or freely tradeable shares under a share purchase agreement, dated December 29, 2020. The final payment of the commitment fee was due in the form of freely tradeable shares 18 months after the public listing date of the common stock. The final payment of \$400,000 of the commitment fee was converted into shares of common stock at a price per share of approximately \$9.00.
- On February 2, 2023, we issued warrants to purchase up to 297,619 shares of our common stock in a private placement that occurred concurrently with a registered direct offering of an identical number of shares of our common stock. The warrants were issued in the same amounts and to the same purchasers in the registered direct offering. Each warrant is exercisable for five and one-half years from the date of issuance for one share of our common stock at an exercise price of \$8.58 per share. We engaged H.C. Wainwright & Co., LLC (the “placement agent”), as our exclusive placement agent in connection with the offering of our shares pursuant to the registered direct offering and for the offering of the warrants pursuant to the private placement. In connection with that February 2, 2023 public and private offerings, the placement agent received: (i) a placement agent fee of \$210,000, (ii) reimbursement of accountable expenses of \$50,000, (iii) reimbursement of non-accountable expenses of \$35,000, (iv) reimbursement of \$15,950 for clearing expenses and (v) warrants exercisable for five years to purchase 20,832 shares of common stock with a per share exercise price of \$12.60.
- On October 23, 2023, we entered into a Securities Purchase Agreement for an aggregate financing of \$1.7 million with investors. At the first closing, which occurred on October 25, 2023, the Company issued to the investors (i) senior secured convertible promissory notes in the aggregate principal amount of \$612,000 for an aggregate purchase price of \$566,667 and (ii) warrants to purchase 1,255,697 shares of the Company’s common stock in the aggregate. At the second closing, which occurred on November 28, 2023, the Company issued to the investors referenced above, (i) additional notes in the aggregate principal amount of \$1,224,000 for an aggregate purchase price of \$1,133,333 and (ii) additional warrants to purchase 2,511,394 shares of common stock in the aggregate. The combined notes are subject to an original issue discount of 8%, have a term of six months from their respective date of issuance and accrue interest at the rate of 6.0% per annum. The notes are convertible into common stock, at a per share conversion price equal to \$1.5675. Beginning ninety days following issuance of the respective notes, the Company is obligated to redeem one third of the original principal amount under the applicable note, plus accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such note. The balance of accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such note is due over the remainder of the note term. The Company is required to pay the redemption amount in cash with a premium of 10% or, at the election of the purchaser at any time, some or all of the principal amount and interest may be paid by conversion of shares under the note into common stock based on a conversion price equal to \$1.5675. The warrants have an exercise price of \$1.5675, the same as the conversion price, and are exercisable for five years following issuance, issuance to occur on each of the first and second closing dates. The resale of shares of common stock issuable upon conversion of the notes and exercise of the warrants were registered by means of a registration statement declared effective by the SEC.
- On February 12, 2024, we entered into an inducement offer letter agreement (the “**Inducement Letter**”) with certain holders (the “**Holders**”) of certain of our existing warrants to purchase up to an aggregate of 3,601,752 shares of common stock issued to the Holders on May 12, 2023 and having an exercise price of \$3.637 per share (the “**Existing Warrants**”). The shares of common stock issuable upon exercise of the Existing Warrants are registered pursuant to an effective registration statement on Form S-1 (File No. 333-271480). Pursuant to the Inducement Letter, the Holders agreed to exercise for cash their Existing Warrants to purchase an aggregate of 3,601,752 shares of common stock at a reduced exercise price of \$1.31 per share in consideration of our agreement to issue new unregistered Series A Warrants (the “**Series A Warrants**”) to purchase up to 3,601,752 shares of common stock and new unregistered Series B Warrants (the “**Series B Warrants**”) to purchase up to 3,601,752 shares of common stock (collectively, the “**New Warrant Shares**”). The Series A Warrants have an exercise price of \$1.06 per share, are exercisable immediately upon issuance and have a term equal to eighteen months from the date of issuance. The Series B Warrants have an exercise price of \$1.06 per share, are exercisable immediately upon issuance and will expire on May 12, 2028. We have filed a registration statement providing for the resale of the New Warrant Shares issuable upon the exercise of the Series A Warrants and Series B Warrants. We were assisted by a placement agent on a best-efforts basis, and compensated the placement with, among other things, unregistered warrants to purchase up to 252,123 shares of common stock. The warrants to the placement agent expire on May 12, 2028, and have an exercise price of \$1.6375 per share of Common Stock (equal to 125% of the reduced exercise price per Existing Warrant).

Except as otherwise stated, none of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise set forth above, we believe each of these transactions was exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D promulgated thereunder) as transactions by an issuer not involving any public offering or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

**Item 16. Exhibits and Financial Statement Schedules.**

(a) *Exhibits.*

**Exhibit Index**

No.	Description of Exhibit
2.1†	<a href="#">Agreement and Plan of Merger, dated January 31, 2021, by and among Leisure Acquisition Corp., Ensysce Biosciences, Inc. and EB Merger Sub, Inc. (incorporated by reference to Exhibit 2.1 filed with the registrant’s Registration Statement on Form S-4 (File No.333-254279) initially filed on March 15, 2021).</a>
3.1(a)	<a href="#">Third Amended and Restated Certificate of Incorporation of Ensysce Biosciences, Inc. (incorporated by reference to Exhibit 3.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on July 7, 2021).</a>
3.1(b)	<a href="#">Certificate of amendment to Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1(b) filed with the registrant’s Registration Statement on Form S-1 (File No. 333-268038) on October 28, 2022).</a>
3.1(c)	<a href="#">Certificate of Second Amendment to Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on October 27, 2022).</a>
3.1(d)	<a href="#">Certificate of Third Amendment to Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on March 30, 2023).</a>
3.1(e)	<a href="#">Certificate of Designation of the Series A Preferred Stock of Ensysce Biosciences, Inc., dated February 1, 2023 (incorporated by reference to Exhibit 3.1 to the registrant’s Registration Statement on Form 8-A, filed on February 1, 2023, File No. 000-56516).</a>
3.1(f)	<a href="#">Certificate of Amendment to Certificate of Designation of the Series A Preferred Stock of Ensysce Biosciences, Inc., dated February 7, 2023 (incorporated by reference to Exhibit 3.2 to the Company’s Registration Statement on Form 8-A/A (Amendment No. 1), filed on February 7, 2023, File No. 000-56516).</a>
3.2(a)	<a href="#">Amended and Restated Bylaws of Ensysce Biosciences, Inc. (incorporated by reference to Exhibit 3.2 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on July 7, 2021).</a>
3.2(b)	<a href="#">Amendment, dated October 5, 2023, to Amended and Restated Bylaws of Ensysce Biosciences, Inc. (incorporated by reference to Exhibit 3.2(b) filed with the registrant’s Registration Statement on Form S-1 (File No. 333-275456) on November 9, 2023).</a>
4.1	<a href="#">Warrant Agreement, dated December 1, 2017, between the Leisure Acquisition Corp. and Continental Stock Transfer &amp; Trust Company (incorporated by reference to Exhibit 4.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on December 5, 2017).</a>
4.2	<a href="#">Investor Rights Agreement between Ensysce Biosciences, Inc. and the Investors listed on the signature pages thereto dated as of May 11, 2018 (incorporated by reference to Exhibit 4.6 filed with the registrant’s Registration Statement on Form S-4 (File No.333-254279) initially filed on March 15, 2021).</a>
4.3	<a href="#">Form of Warrant Certificate issued to previous holders of Private Placement Warrants and other private warrants (incorporated by reference to Exhibit 4.8 filed with the registrant’s Registration Statement on Form S-4 (File No.333-254279) initially filed on March 15, 2021).</a>
4.4	<a href="#">Form of Senior Secured Convertible Promissory Note issued by the Company pursuant to and in accordance with the Securities Purchase Agreement (incorporated by reference to Exhibit 4.6 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) initially filed on September 27, 2021).</a>
4.5	<a href="#">Form of Common Stock Purchase Warrant to be issued by the Company pursuant to and in accordance with the Securities Purchase Agreement (incorporated by reference to Exhibit 4.7 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) initially filed on September 27, 2021).</a>
4.6	<a href="#">Form of Senior Secured Convertible Promissory Note issued by Ensysce Biosciences, Inc. pursuant to and in accordance with a 2022 Securities Purchase Agreement (incorporated by reference to Exhibit 4.6 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on August 9, 2022).</a>
4.7	<a href="#">Form of Common Stock Purchase Warrant issued by Ensysce Biosciences, Inc. pursuant to and in accordance with a 2022 Securities Purchase Agreement (incorporated by reference to Exhibit 4.7 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on August 9, 2022).</a>
4.8	<a href="#">Form of warrant delivered by Ensysce Biosciences, Inc. in December 2022 in connection with an underwritten offering (incorporated by reference to Exhibit 4.10 filed with the registrant’s Post-Effective Amendment No. 1 to the registrant’s Registration Statement on Form S-1 (File No. 333-268038) filed December 8, 2022).</a>
4.9	<a href="#">Form of pre-funded warrant delivered by Ensysce Biosciences, Inc. in December 2022 in connection with an underwritten offering (incorporated by reference to Exhibit 4.11 filed with the registrant’s Post-Effective Amendment No. 1 to the registrant’s Registration Statement on Form S-1 (File No. 333-268038) filed December 8, 2022).</a>
4.10	<a href="#">Form of warrant issued in connection with a private placement conducted concurrently with a public offering (incorporated by reference to Exhibit 4.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on February 7, 2023).</a>
4.11	<a href="#">Form of warrant issued to a placement agent or its designees in connection with a private placement conducted concurrently with a public offering (incorporated by reference to Exhibit 4.2 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on February 7, 2023).</a>
4.12	<a href="#">Form of common warrant (incorporated by reference to Exhibit 4.12 filed with the registrant’s Post-Effective Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-271480) on May 17, 2023).</a>
4.13	<a href="#">Form of pre-funded warrant (incorporated by reference to Exhibit 4.13 filed with the registrant’s Post-Effective Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-271480) on May 17, 2023).</a>
4.14	<a href="#">Form of placement agent warrant (incorporated by reference to Exhibit 4.14 filed with the registrant’s Post-Effective Amendment on Form S-1 (File No. 333-271480) on May 17, 2023).</a>
4.15	<a href="#">Form of warrants amended in connection with the execution of a Securities Purchase Agreement on May 10, 2023 (incorporated by reference to Exhibit 4.15 filed with the registrant’s Post-Effective Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-271480) on May 17, 2023).</a>
4.16	<a href="#">Form of common warrant issued in October 2023 and November 2023 (incorporated by reference to Exhibit 4.16 filed with the registrant’s Registration Statement on Form S-1 (File No. 333-275456) on November 9, 2023).</a>
4.17	<a href="#">Form of October 2023 Secured Convertible Promissory Note (incorporated by reference to Exhibit 4.6 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on October 24, 2023).</a>
4.18	<a href="#">Form of Series A/B common stock purchase warrant issued February 14, 2024 (incorporated by reference to Exhibit 4.1 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on February 14, 2024).</a>
4.19	<a href="#">Form of placement agent warrant issued February 14, 2024 (incorporated by reference to Exhibit 4.2 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on February 14, 2024).</a>
5***	<a href="#">Opinion of Troutman Pepper Hamilton Sanders LLP.</a>
10.1	<a href="#">Registration Rights Agreement, dated December 1, 2017, among Leisure Acquisition Corp. and certain securityholders (incorporated by reference to Exhibit 10.2 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on December 5, 2017).</a>
10.2	<a href="#">Warrant Purchase Agreement, dated December 1, 2017, between Leisure Acquisition Corp. and certain security holders (incorporated by reference to Exhibit 10.3 filed with the registrant’s Current Report on Form 8-K (File No. 001-38306) on December 5, 2017).</a>

- 10.3(a) [Form of Director and Officer Indemnity Agreement \(incorporated by reference to Exhibit 10.8 filed with the registrant's Registration Statement on Form S-1 \(File No.333-221330\) initially filed on November 3, 2017\).](#)
- 10.3(b) [Form of Indemnification Agreement executed by each of the Ensysce directors and executive officers \(incorporated by reference to Exhibit 10.6 filed with the registrant's Form 10-Q \(File No. 001-38306\) initially filed on November 15, 2021\).](#)
- 10.4+ [Executive Employment Agreement, by and between the Company and Dr. Lynn Kirkpatrick, dated September 14, 2021 \(incorporated by reference to Exhibit 10.44 filed with the registrant's Amendment Number 1 to its Registration Statement on Form S-1 \(File No.333-260478\) filed on October 29, 2021\).](#)
- 10.5 [Agreement and Plan of Merger by and among the Signature Therapeutics, Inc., Signature Acquisition Corp. and the Company dated December 28, 2015 \(incorporated by reference to Exhibit 10.21 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.6+ [Executive Employment Agreement, by and between the Company and Geoffrey Birkett, dated August 21, 2021 \(incorporated by reference to Exhibit 10.45 filed with the registrant's Amendment Number 1 to its Registration Statement on Form S-1 \(File No.333-260478\) filed on October 29, 2021\)](#)
- 10.7+ [Employment Agreement between the Company and David Humphrey dated February 11, 2021 \(incorporated by reference to Exhibit 10.26 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.8+ [Amendment to Offer Letter between the Company and David Humphrey dated February 23, 2021 \(incorporated by reference to Exhibit 10.27 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.9(a)+ [Amended and Restated 2021 Omnibus Incentive Plan, as further amended \(incorporated by reference to Annex A to the registrant's Definitive Proxy Statement on Schedule DEF 14A \(File No. 001-38306\) filed on July 14, 2023\).](#)
- 10.9(b)+ [Amended and Restated 2021 Omnibus Incentive Plan Form of Stock Option Grant Notice and Award Agreement \(incorporated by reference to Exhibit 10.22\(a\) filed with the registrant's Annual Report on Form 10-K \(File No. 001-38306\) filed on March 31, 2022\).](#)
- 10.9(c)+ [Form of Restricted Stock Unit Agreement under the Amended and Restated 2021 Omnibus Incentive Plan \(incorporated by reference to Exhibit 10.9\(c\) filed with the registrant's Registration Statement on Form S-1 \(File No. 333-275456\) on November 9, 2023\).](#)
- 10.10 [Share Purchase Agreement between the Company, GEM Global Yield LLC SCS and GEM Yield Bahamas Limited dated as of December 29, 2020, including a Registration Rights Agreement between the same parties and dated as of the same date and form of Warrant to Purchase Common Shares of Ensysce Biosciences, Inc. issued by the Company to GEM Yield Bahamas Limited \(incorporated by reference to Exhibit 10.29 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.11† [Technology Transfer Agreement by and among the Company, Covistat, Inc., Mucokinetic, Ltd., Roderick Hall and Peter Cole dated August 5, 2020 \(incorporated by reference to Exhibit 10.30 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.12 [Manufacturing Agreement between Societal CDMO \(formerly Recro Gaineville LLC\) and the Company dated September 11, 2019 \(incorporated by reference to Exhibit 10.35 filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.13(a) [Form of Exchange Agreement between Leisure Acquisition Corp. and the holders of Private Placement Warrants \(incorporated by reference to Exhibit 10.36\(a\) filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.13(b) [Form of Exchange Agreement to be entered into by the Company with each of the Sponsors and the Strategic Investor \(incorporated by reference to Exhibit 10.36\(b\) filed with the registrant's Registration Statement on Form S-4 \(File No.333-254279\) initially filed on March 15, 2021\).](#)
- 10.14(a)† [Securities Purchase Agreement, dated September 24, 2021 by and among the Company and the purchasers signatory thereto \(incorporated by reference to Exhibit 10.1 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on September 27, 2021\).](#)
- 10.14(b) [Registration Rights Agreement, dated September 24, 2021, by and among the Company and the parties signatory thereto \(incorporated by reference to Exhibit 10.2 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on September 27, 2021\).](#)
- 10.14(c) [Subsidiary Guarantee, dated September 24, 2021, by and among the Company and the purchasers signatory thereto \(incorporated by reference to Exhibit 10.3 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on September 27, 2021\).](#)

- 10.14(d)† [Security Agreement, dated September 24, 2021, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto \(incorporated by reference to Exhibit 10.4 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on September 27, 2021\).](#)
- 10.14(e) [Patent Security Agreement, dated September 24, 2021, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto \(incorporated by reference to Exhibit 10.5 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on September 27, 2021\).](#)
- 10.14(f) [Letter Agreement, dated December 27, 2021, by and among the Company and the parties signatory thereto \(incorporated by reference to Exhibit 10.6 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on December 27, 2021\).](#)
- 10.14(g) [Second Letter Agreement, dated January 16, 2022, by and among the Company and the parties signatory thereto \(incorporated by reference to Exhibit 10.7 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) initially filed on January 18, 2022\).](#)
- 10.15(a) [Securities Purchase Agreement, dated June 30, 2022, by and among the Company and the purchasers signatory thereto \(incorporated by reference to Exhibit 10.1 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on July 6, 2022\).](#)
- 10.15(b) [Registration Rights Agreement, dated June 30, 2022, by and among the Company and the parties signatory thereto \(incorporated by reference to Exhibit 10.2 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on July 6, 2022\).](#)
- 10.15(c) [Subsidiary Guarantee, dated June 30, 2022, by and among the Company and the purchasers signatory thereto \(incorporated by reference to Exhibit 10.3 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on July 6, 2022\).](#)
- 10.15(d) [Security Agreement, dated June 30, 2022, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto \(incorporated by reference to Exhibit 10.4 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on July 6, 2022\).](#)
- 10.15(e) [Patent Security Agreement, dated June 30, 2022, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto \(incorporated by reference to Exhibit 10.5 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on July 6, 2022\).](#)
- 10.15(f) [Letter Agreement, dated January 12, 2023, by and among the Company and the parties signatory thereto \(incorporated by reference to Exhibit 10.6 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on January 13, 2023\).](#)
- 10.16 [October 2023 Securities Purchase Agreement \(incorporated by reference to Exhibit 10.1 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on October 24, 2023\).](#)
- 10.17 [Form of Registration Rights Agreement \(incorporated by reference to Exhibit 10.2 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on October 24, 2023\).](#)
- 10.18 [Form of Subsidiary Guaranty \(incorporated by reference to Exhibit 10.3 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on October 24, 2023\).](#)
- 10.19 [Form of Security Agreement \(incorporated by reference to Exhibit 10.4 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on October 24, 2023\).](#)
- 10.20 [Form of Patent Security Agreement \(incorporated by reference to Exhibit 10.5 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on October 24, 2023\).](#)
- 10.21 [Form of Inducement Letter Agreement, dated as of February 12, 2024 \(incorporated by reference to Exhibit 10.1 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on February 14, 2024\).](#)
- 10.22 [Form of Waiver, dated February 12, 2024, under the Securities Purchase Agreement dated October 23, 2023 \(\(incorporated by reference to Exhibit 10.2 filed with the registrant's Current Report on Form 8-K \(File No. 001-38306\) on February 14, 2024\).](#)
- 14 [Company's Code of Business Conduct \(incorporated by reference to Exhibit 14 filed with the registrant's Annual Report on Form 10-K \(File No. 001-38306\) on March 30, 2023\).](#)
- 21.1 [List of Subsidiaries \(incorporated by reference to Exhibit 21 filed with the Registration Statement on Form S-1 \(333-268038\) filed on October 28, 2022\).](#)
- 23.1\*\*\* [Consent of Troutman Pepper Hamilton Sanders LLP \(included in Exhibit 5\).](#)
- 23.2\*\*\* [Consent of Moss Adams LLP.](#)
- 24.1\*\*\* [Power of Attorney \(included on signature page to this registration statement\).](#)

++Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)

- 101.SCH ++Inline XBRL Taxonomy Extension Schema Document
- 101.CAL ++Inline XBRL Taxonomy Extension Calculation Document
- 101.LAB ++Inline XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE ++Inline XBRL Taxonomy Extension Presentation Linkbase Document
- 101.DEF ++Inline XBRL Taxonomy Extension Definition Linkbase Document

\* Filed herewith.

\*\* To be filed by amendment.

\*\*\* Previously filed.

† Certain schedules (or similar attachments) to this Exhibit have been omitted in accordance with Regulation S-K Item 601(a)(5) or 601(b)(2), as applicable. The registrant agrees to furnish supplementally a copy of all omitted schedules to the Securities and Exchange Commission upon its request.

+ Denotes compensatory plans or arrangements or management contracts.

++ Pursuant to Rule 406T of Regulation S-T, this interactive data file is deemed not “filed” or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act, is deemed not “filed” for purposes of Section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

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## 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 the 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 a 20% change in the maximum aggregate offering price set forth in the “Calculation of Filing Fee Tables” or “Calculation of Registration Fee” table, as applicable, table in the effective registration statement); and (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.
- (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) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant’s annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) 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.
- (5) 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.
- (6) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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.

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## SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in San Diego, State of California, on April 19, 2024.

**ENSYSCE BIOSCIENCES, INC.**

By: /s/ Dr. Lynn Kirkpatrick

Name: Dr. Lynn Kirkpatrick

Title: President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities indicated on April 19, 2024

<u>Name</u>	<u>Title</u>
By: <u>/s/ Dr. Lynn Kirkpatrick</u> Dr. Lynn Kirkpatrick	President, Chief Executive Officer and Director (Principal Executive Officer)
By: <u>/s/ David Humphrey</u>	Chief Financial Officer, Secretary and Treasurer

<u>David Humphrey</u>	(Principal Financial and Accounting Officer)
By: <u><i>*/s/ Andrew Benton</i></u> Andrew Benton	Director
By: <u><i>*/s/ William Chang</i></u> William Chang	Director
By: <u><i>*/s/ Bob Gower</i></u> Bob Gower	Director and Chairman of the Board
By: <u><i>*/s/ Adam Levin</i></u> Adam Levin	Director
By: <u><i>*/s/ Steve Martin</i></u> Steve Martin	Director
By: <u><i>*/s/ Lee Rauch</i></u> Lee Rauch	Director
By: <u><i>*/s/ Curtis Rosebraugh</i></u> Curtis Rosebraugh	Director
*By: <u><i>/s/ Dr. Lynn Kirkpatrick</i></u> Dr. Lynn Kirkpatrick	As Attorney-In-Fact for the persons noted above with an asterisk