

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

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)

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
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(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: From time to time 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 registration statement 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, 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.

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

The information in this preliminary prospectus is not complete and may be changed. The securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated January 30, 2023.

PRELIMINARY PROSPECTUS



ENSYSCE BIOSCIENCES, INC.

**Up to 1,750,000 Shares of Common Stock and Shares of Common Stock Underlying Notes
Up to 522,094 Shares of Common Stock Underlying 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 2,272,094 shares of our common stock, par value \$0.0001 per share ("common stock"), which consists of (i) up to 1,750,000 shares of common stock that are issuable to certain of the Selling Securityholders (A) that are party to the Securities Purchase Agreement, dated June 30, 2022 (the "Securities Purchase Agreement") upon the conversion of \$299,471 aggregate principal amount of our secured convertible 6% original issue discount promissory notes (the "Investor Notes"), plus accrued and unpaid interest thereon, based upon a conversion price of \$0.7512 per share and (B) that are party to a share purchase agreement, dated December 29, 2020 (the "GEM Agreement") pursuant to which shares were paid as a commitment fee (the "Commitment Fee") owed under to the GEM Agreement; (ii) up to 55,306 shares of common stock that are issuable upon the exercise of warrants (the "GEM Warrants") that we issued pursuant to the GEM Agreement and (iii) up to 466,788 shares of common stock that are issuable to the Selling Securityholders that are party to the Securities Purchase Agreement upon the exercise of warrants to purchase shares of our common stock that we issued to these selling stockholders in the private placement that closed in connection with the Securities Purchase Agreement (the "Investor Warrants"). The aggregate principal amount of the Investor Notes was previously \$8,480,000, of which \$299,471 presently remains outstanding. The number of shares issued in payment of the Commitment Fee was 533,334. See "Description of Common Stock — GEM Agreement", "— 2022 Secured Convertible Promissory Notes" and "— Warrants" beginning on page 4 of this prospectus.

During 2021, we entered into a securities purchase agreement and issued investor notes and investor warrants to the same Selling Securityholders as those party to the Securities Purchase Agreement. The resale of our common stock pursuant to those instruments was registered by means of a separate registration statement and prospectus. During 2021, pursuant to the GEM Agreement, we issued the GEM Warrants to the same Selling Securityholder that is a party to the GEM Agreement. The resale of our common stock pursuant to the GEM Warrants was registered by means of a separate registration statement and prospectus.

On June 30, 2021, we consummated the transactions contemplated by that certain Agreement and Plan of Merger, dated as of January 31, 2021 (the "Merger Agreement"), by and among the Company, Leisure Acquisition Corp. ("LACQ") and EB Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of LACQ ("Merger Sub"), with the Company surviving the merger as a wholly-owned subsidiary of LACQ (the "Merger"). The Merger, together with the other transactions contemplated by the Merger Agreement and the related agreements, are referred to herein as the "Business Combination Transactions." In connection with the consummation of the Business Combination Transactions, LACQ changed its name to "Ensysce Biosciences, Inc."

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 hereby registered. The Selling Securityholders may offer, sell, or distribute all or a portion of the securities hereby 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 Investor Warrants and GEM Warrants 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 11 of this prospectus.

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

Our common stock is listed on the Nasdaq under the symbol "ENSC" and our Public Warrants are listed on the OTC Pink Open Market under the symbol "ENSCW." On January 26, 2023, the closing sale price of our common stock as reported on Nasdaq was \$0.7694 and the closing sale price for our Public Warrants as reported on the OTC Pink Open Market was \$0.018.

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933, as amended, and, as such, have elected to comply with certain reduced disclosure and regulatory requirements.

Our business and investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 4 of this prospectus and in the other documents that are incorporated by reference in 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.

The date of this prospectus is [_____, 2023].

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using the “shelf” registration process. Under this shelf registration process, the Selling Securityholders may, from time to time, sell the securities offered by them described in this prospectus. We will not receive any proceeds from the sale by such Selling Securityholders of the securities offered by them described in this prospectus. This prospectus also relates to the issuance by us of the shares of common stock issuable upon the conversion of the Investor Notes and the exercise of the Investor Warrants and GEM Warrants. We will not receive any proceeds from the sale of shares of common stock underlying the Investor Notes, Investor Warrants and GEM Warrants pursuant to this prospectus, except with respect to amounts received by us upon the exercise of the Investor Warrants and GEM Warrants.

We may also file a prospectus supplement or post-effective amendment to the registration statement of which this prospectus forms a part that may contain material information relating to that offering. The prospectus supplement or post-effective amendment may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or post-effective amendment, you should rely on the prospectus supplement or post-effective amendment, as applicable. Before purchasing any securities, you should carefully read this prospectus, any post-effective amendment, and any applicable prospectus supplement, together with the additional information described under the heading “*Where You Can Find More Information.*”

Neither we, nor the Selling Securityholders, have 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. We and the Selling Securityholders will not 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 some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “*Where You Can Find More Information.*”

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

The registration statement of which this prospectus is a part includes common stock, in the amount of 1,750,000 shares issuable upon conversion of the Investor Notes, 466,789 shares issuable upon exercise of the Investor Warrants and 55,306 shares issuable upon exercise of the GEM Warrants, registered in registration statements declared effective by the Securities and Exchange Commission on September 23, 2021, August 4, 2022 and December 29, 2022. Following the effectiveness of the December 29, 2022 registration statement, the conversion price of the Investor Notes was temporarily reduced from a per share price of \$2.006 to \$0.7512 for the period from January 12, 2023 until May 12, 2023, which reduction increases the number of shares issuable to the holders of the Investor Notes beyond those previously registered. This has resulted in the registration of additional shares by means of this registration statement.

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

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This registration statement/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 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 of additional dilution from repayment of the Investor Notes in common stock or re-setting the conversion price of the Investor Notes or reduced proceeds from a reduction in the exercise price of the Investor Warrants and GEM Warrants;
- 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 registration statement/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 our business, operations, clinical development plans and timelines, and supply chain could be adversely affected by the effects of health epidemics, including the ongoing COVID-19 pandemic;
- 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 maintain effective internal controls over financial reporting;
- the risk that our common stock will be delisted from Nasdaq;
- the risk that we may not be able to regain or maintain compliance with applicable listing standards of Nasdaq;
- potential litigation associated with the Business Combination Transactions;
- other factors disclosed in this registration statement/prospectus; and
- other factors beyond our control.

The forward-looking statements contained in this registration statement/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 (some of which are beyond our control) 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*” that we describe in the reports we have filed and will file from time to time with the SEC after the date of 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

Investing in our securities involves risks. Before you make a decision to buy our securities, in addition to the risks and uncertainties discussed above under “Cautionary Note Regarding Forward-Looking Statements,” you should carefully consider the specific risks set forth in our most recent Annual Report on Form 10-K, or any updates in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, together with all other information appearing in or incorporated by reference into this prospectus or any applicable prospectus supplement. If any of these risks actually occur, it may materially harm our business, financial condition, liquidity and results of operations. As a result, the market price of our securities could decline, and you could lose all or part of your investment. Additionally, the risks and uncertainties described in this prospectus, any prospectus supplement or in any document incorporated by reference herein or therein are not the only risks and uncertainties that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may become material and adversely affect our business

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of shares of our common stock in this offering or from the conversion of the Investor Notes. We will receive proceeds from the exercise of the Investor Warrants and GEM Warrants but not on the sale of the shares underlying the Investor Warrants and GEM Warrants. The Selling Securityholders will receive all of the proceeds from this offering. We will, however, receive the net proceeds of any Investor Warrants and GEM Warrants exercised for cash. Proceeds, if any, received from the exercise of such Investor Warrants and GEM Warrants will be used for working capital for general corporate purposes. No assurances can be given that any of such Investor Warrants or GEM 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 COMMON 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 of common stock, \$0.0001 par value, and 1,500,000 shares of undesignated preferred stock, \$0.0001 par value. The following description summarizes the material terms of our capital stock. Because it is only a summary, it may not contain all the information that is important to you.

Common Stock

As of January 26, 2023, there were 11,450,403 shares of our common stock 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

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.

Preferred Stock

Our amended and restated certificate of incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our Board is authorized to fix the voting rights, if any, designations, powers, preferences, the relative, participating, optional or other special rights and any qualifications, limitations and restrictions thereof, applicable to the shares of each series. Our Board is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of our common stock and could have anti-takeover effects. The ability of our Board to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of us or the removal of existing management. We have no preferred stock outstanding as of the date hereof.

GEM Agreement

Under the GEM Agreement between us, GEM Global Yield LLC SCS (“*GEM Global*”) and GEM Yield Bahamas Limited (“*GYBL*”), dated as of December 29, 2020, including a Registration Rights Agreement between the same parties and dated as of the same date, we may draw down up to \$60 million of gross proceeds from GEM Global in exchange for shares of our common stock at a price equal to 90% of the average closing bid price of the shares of our common stock on Nasdaq for a 30 day period, subject to meeting the terms and conditions of the GEM Agreement. This equity line facility is available for a period of 36 months from the closing date of the Merger. There are limitations on the amount and frequency of the draws that we can make pursuant to the GEM Agreement, which include the requirement that (i) there be an effective registration statement and (ii) size restrictions relating to our trading volume. To date, we have not drawn under the GEM Agreement.

In addition, upon the closing of the Merger, GYBL became entitled to a commitment fee in the form of freely tradeable shares of our common stock in an amount equal to \$1.2 million to be paid in two tranches. The commitment fee for the first tranche, which is equal to 67% of the commitment fee, or \$800,000, was paid in July 2022 and the Commitment Fee for the second tranche, which is equal to the remaining 33% of the commitment fee, or \$400,000, was paid in January 2023. The shares of our common stock issued to satisfy the Commitment Fee payable to GYBL are being registered for resale in this offering.

2022 Secured Convertible Promissory Notes

On June 30, 2022, we entered into the Securities Purchase Agreement whereby we issued to the Selling Securityholders signatory thereto the Investor Notes in the aggregate principal amount of \$8.5 million for an aggregate purchase price of \$8.0 million. The Investor Notes, subject to an original issue discount of six percent (6%), have a term of eighteen 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 \$10.90, a 10% premium to the average price of the common stock for the three trading days prior to the first closing under the Securities Purchase Agreement. 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 subsequent equity issuances, share dividends and splits occurring following the issuance of the promissory note. Under the Investor Notes, commencing on September 29, 2022 and continuing monthly on the first day of each month beginning November 1, 2022, we are obligated to redeem one fifteenth (1/15th) 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. We may elect to pay all or part of the redemption amount in cash with a premium of eight percent or in conversion shares of common stock based on a conversion price equal to the lesser of (i) the conversion price and (ii) 92% of the average of the three lowest VWAPs (as defined in the Securities Purchase Agreement) during the ten (10) consecutive trading days ending on the trading day that is immediately prior to the applicable redemption date, but in no event may we pay the redemption amount in conversion shares of common stock unless the conversion price is at least equal to \$2.006 and certain equity conditions are satisfied. On January 12, 2023, the parties to Investor Notes executed a letter agreement (the “Letter Agreement”) to, among other things, reduce the conversion price for the period January 12, 2023 to May 12, 2023 to \$0.7512 and require the registration of additional shares should those previously registered be insufficient. As of January 26, 2023, we have repaid \$6.6 million of principal on the Investor Notes through issuance of 5.8 million shares of common stock and repaid \$1.1 million of principal through cash payments. An additional \$0.5 million of cash payments are deferred until May 12, 2023 under terms of the Letter Agreement. The remaining principal balance is \$0.3 million. We may incur additional dilution from repayment of the Investor Notes in Common Stock or re-setting the conversion price of the Investor Notes if we issue equity at a price below the conversion price of the Investor Notes. Because of our issuance of equity in December 2022, the conversion price of the Investor Notes was reset to \$2.006. Because of the Letter Agreement, the conversion price of the Investor Notes was reset to \$0.7512 for the period January 12, 2023 to May 12, 2023.

We are obligated to pay additional cash as true-up payments in the event that we pay interest or redemption amounts in shares of common stock that are valued below \$2.006 or the lower conversion price of \$0.7512 in effect between January 12, 2023 and May 12, 2023. The true-up payments compensate for the difference between the value of a share and the conversion price in effect at the time of redemption, multiplied by the number of shares paid. The holders of the Investor Notes may, each month while the Investor Notes are outstanding, accelerate redemption amounts, resulting in an aggregate of up to four redemption amounts per month. Each accelerated redemption amount, like the monthly redemption amount, is one fifteenth (1/15th) of the original principal amount. We are required to pay accelerated redemption amounts in additional shares. Therefore, acceleration of redemption amounts accelerates the conversion of the Investor Notes into shares of common stock. If those conversion shares are valued below \$2.006 (or \$0.7512 between January 12, 2023 and May 12, 2023), then we will be required to pay additional cash as true-up payments at a time when we may not have the cash to satisfy any deficiency. Pursuant to the Letter Agreement, any true-up payments we owe based on the \$0.7512 conversion price will be deferred until May 12, 2023.

We have agreed to register 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, which registration rights are being satisfied pursuant to the registration statement of which this prospectus forms a part. 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.

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 Selling Securityholders signatory thereto secured convertible promissory notes (the 2021 Investor Notes”) in the aggregate principal amount of \$15.9 million for an aggregate purchase price of \$15 million. The 2021 Investor 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 Investor Notes were fully satisfied on October 11, 2022.

We have registered with the SEC the resale of the shares of common stock issuable upon conversion of the 2021 Investor Notes as well as the shares of common stock issuable upon the exercise of the warrants issued under the 2021 Securities Purchase Agreement (the “2021 Investor Warrants”).

Warrants

Investor Warrants

On June 30, 2022, we entered into the Securities Purchase Agreement, whereby we issued to the Selling Securityholders signatory thereto the Investor Warrants to purchase 466,788 shares of common stock in the aggregate. The Investor Warrants had an exercise price of \$14.17, a 30% premium to the conversion price, and are exercisable for five years following issuance. Because we have issued securities at a price below the exercise price, the exercise price has been reset to a price of \$2.006.

On September 24, 2021, we entered into the 2021 Securities Purchase Agreement, whereby we issued to the Selling Securityholders signatory thereto the 2021 Investor Warrants to purchase 54,174 shares of common stock in the aggregate. The 2021 Investor Warrants had an exercise price of \$152.60, a 30% premium to the conversion price, and are exercisable for five years following issuance. As a result of our entering into the 2022 Securities Purchase Agreement, the exercise price of the 2021 Investor Warrants was reduced to \$15.60.

GEM Warrants

We issued the GEM Warrants with a 36-month term at the closing of the Merger granting GYBL the right to purchase 55,306 shares of our common stock (an amount equal to 4% of the total number of our common stock outstanding as of the closing date of the Merger (subject to adjustments described below), calculated on a fully diluted basis), at a strike price per share that has been reset lower over time to a price per share of \$0.7512. Any failure by us to timely transfer the shares under the GEM Warrants pursuant to GYBL's exercise will entitle GYBL to compensation in addition to other remedies. The number of shares underlying the GEM Warrants as well as the strike price is subject to adjustment for recapitalizations, reorganizations, change of control, stock split, stock dividend and reverse stock splits. The strike price is subject to adjustment for issuances by us of additional common shares at a price per share less than the strike price

Other Warrants

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

On December 9, 2022, in connection with the sale of shares of our common stock pursuant to a registration statement filed with the SEC, we issued warrants to purchase 6,600,000 shares of our common stock at an exercise price of \$1.40 per share of common stock. These warrants are not traded on any market.

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

The third amended and restated certificate of incorporation and our 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.

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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 90th day nor earlier than the close of business on the 120th 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 an provision inconsistent with them.

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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;

3i, LP (1)	400,000	400,000	—	—	233,394	233,394	—	—
Anson Investments Master Fund LP (2)	—	—	—	—	186,716	186,716	—	—
Anson East Master Fund LP (3)	—	—	—	—	46,678	46,678	—	—

- (1) Consists of (i) 400,000 shares of common stock issuable upon the conversion of up to \$299,471 principal amount of secured convertible promissory notes that were issued to the Selling Securityholder pursuant to the Securities Purchase Agreement, plus accrued and unpaid interest thereon, based upon a conversion price of \$10.90 per share subsequently reduced to \$2.006 per share, and temporarily reduced to \$0.7512, which shares underlying the secured convertible promissory notes are subject to, as applicable, certain beneficial ownership limitations, which provide that a holder of such secured convertible promissory notes will not have the right to convert 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 conversion, 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, and (ii) and 233,394 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 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 business address of 3i, LP is 140 Broadway, 38th Floor, New York, NY 10005. 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.
- (2) Consists of 186,716 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 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. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP ("Anson Master"), hold voting and dispositive power over the shares of common stock held by Anson Master. Bruce Winson 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. Winson, 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 Master is Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.
- (3) Consists of 46,678 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 Securities Purchase Agreement. 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. Bruce Winson 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. Winson, 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, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

Name	Shares Underlying the Commitment Fee under the GEM Agreement				Shares Underlying the GEM Warrants			
	Number Beneficially Owned Prior to Offering	Number Registered for Sale Hereby	Number Beneficially Owned After Offering	Percent Owned After Offering	Number Beneficially Owned Prior to Offering	Number Registered For Sale Hereby	Number Beneficially Owned After Offering	Percent Owned After Offering
	Gem Yield Bahamas Limited (1)	533,334	533,334	—	—	55,306	55,306	—

- (1) Consists of (i) 533,334 shares of common stock issued as payment of the Commitment Fee due to the Selling Securityholder pursuant to the GEM Agreement, and (ii) and 55,306 shares of common stock issuable upon the exercise of the GEM Warrants to purchase shares of common stock that were issued to the Selling Securityholder pursuant to the GEM Agreement, which GEM 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 9.99% 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 waive such 9.99% limitation. The business address of Gem Yield Bahamas Limited is 3 Bayside Executive Park, West Bay Street & Blake Road, P.O. Box N-4875, Nassau, The Bahamas.

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.

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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. The Company has agreed to indemnify the Selling Securityholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

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 under the Investor Notes and Investor Warrants holders until the earliest of (i) one (1) year from the date the Registration Statement is declared effective by the SEC, (ii) the date on which the securities may be resold by the Selling Securityholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (iii) the date on which all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. We agreed to keep this prospectus effective for the Selling Securityholder under the GEM Agreement until the date as of which such Selling Securityholder may sell all of the shares received as payment for the Commitment Fee, or received upon exercise of the GEM Warrants, without restriction pursuant to Rule 144(b)(1)(i). 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).

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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 and for the years ended December 31, 2021 and 2020, appearing in Ensysce’s Registration Statement on Form S-1 (File No. 333-268038), as amended, have been audited by Mayer Hoffman McCann P.C., independent registered public accounting firm, as set forth in their report (which report includes an explanatory paragraph regarding the existence of substantial doubt about Ensysce’s ability to continue as a going concern), and have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing, in giving said reports.

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. 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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INCORPORATION OF CERTAIN INFORMATION 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, 2021 filed with the SEC on March 31, 2022;
- Our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2022, filed with the SEC on [May 12, 2022](#), for the quarter ended June 30, 2022, filed with the SEC on [August 11, 2022](#) and for the quarter ended September 30, 2022, filed with the SEC on [November 14, 2022](#);
- Our Current Reports on Form 8-K filed with the SEC on [January 18, 2022](#), [January 27, 2022](#), [February 8, 2022](#), [May 5, 2022](#), [May 17, 2022](#), [June 17, 2022](#), [June 27, 2022](#), [July 6, 2022](#), [August 2, 2022](#), [August 9, 2022](#), [September 8, 2022](#), [September 16, 2022](#), [September 20, 2022](#), [October 27, 2022](#), [November 14, 2022](#), [December 8, 2022](#), [December 16, 2022](#), [January 13, 2023](#) and [January 19, 2023](#) (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. (“LACQ”), included a description of common stock that has been updated with the filing of our Third Amended and Restated Certificate of Incorporation as [Exhibit 3.1](#) to our Current Report on Form 8-K filed with the SEC on July 7, 2021.
- The financial statements included in our Registration Statement on Form S-1 initially filed with the SEC on [October 28, 2022](#) (333-268038), as amended, and included in the related prospectus filed with the SEC on [December 9, 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 below. You may also access this information on our website at 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.

Ensysce Biosciences, Inc.
7946 Ivanhoe Avenue, Suite 201
La Jolla, California 92037
(858) 263-4196

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following is a statement of estimated expenses payable by the registrant in connection with the offering described in this registration statement. All amounts are estimates except the SEC registration fee.

SEC expenses	\$	155
Accounting fees and expenses		*
Legal fees and expenses		*
Miscellaneous		*
Total ⁽¹⁾	\$	*

* To be provided by an amendment.

(1) Discounts, concessions, commissions and similar selling expenses attributable to the sale of shares of common stock covered by this prospectus will be borne by the selling securityholders. We will pay all expenses (other than discounts, concessions, commissions and similar selling expenses) relating to the registration of the shares with the Securities and Exchange Commission, as estimated in the table above.

Item 15. 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.

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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.

The registrant entered into indemnification agreements with each of its directors and executive officers. Such agreements 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 arising 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.

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Item 16. Exhibits.

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
3.1(a)	<u>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)</u>
3.1(b)	<u>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)</u>
3.1(c)	<u>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)</u>
3.2	<u>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)</u>
5.1*	<u>Opinion of Troutman Pepper Hamilton Sanders LLP.</u>
23.1*	<u>Consent of Independent Registered Public Accounting Firm.</u>
23.2*	<u>Consent of Troutman Pepper Hamilton Sanders LLP (included in Exhibit 5.1).</u>
24.1*	<u>Powers of Attorney (incorporated by reference to the signature page hereto).</u>
107*	<u>Filing Fee Table</u>

* Filed herewith.

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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 Registration Fee" 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; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser: (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. 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 effective date, 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 effective date.
- (5) 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.
- (6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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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 January 30, 2023.

ENSYSCE BIOSCIENCES, INC.

By: /s/ Dr. Lynn Kirkpatrick

Name: Dr. Lynn Kirkpatrick

Title: President, Chief Executive Officer and Director

Each person whose signature appears below constitutes and appoints each of Dr. Lynn Kirkpatrick and David Humphrey, acting alone or together with another attorney-in-fact, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to sign any or all further amendments (including post-effective amendments) to this registration statement (and any additional registration statement related hereto permitted by Rule 462(b) promulgated under the Securities Act of 1933 (and all further amendments, including post-effective amendments, thereto)), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities indicated on January 30, 2023.

Name	Title
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> David Humphrey	Chief Financial Officer, Secretary and Treasurer (Principal Financial and Accounting Officer)
By: <u>/s/ Andrew Benton</u> Andrew Benton	Director
By: <u>/s/ William Chang</u> William Chang	Director

By: /s/ Bob Gower Director and Chairman of the Board
Bob Gower

By: /s/ Adam Levin Director
Adam Levin

By: /s/ Steve Martin Director
Steve Martin

By: /s/ Lee Rauch Director
Lee Rauch

By: /s/ Curtis Rosebraugh Director
Curtis Rosebraugh

Troutman Pepper Hamilton Sanders LLP
 Union Trust Building
 501 Grant Street, Suite 300
 Pittsburgh, Pennsylvania 15219

troutman.com

January 30, 2023

Ensysce Biosciences, Inc.
 7946 Ivanhoe Avenue,
 Suite 201
 La Jolla, California 92037

Ladies and Gentlemen:

We are acting as counsel to Ensysce Biosciences, Inc., a Delaware corporation (the "Company"), in connection with the registration statement on Form S-3 (the "Registration Statement"), filed with the Securities and Exchange Commission (the "SEC"), including a related prospectus included in the Registration Statement (the "Prospectus"), on January 30, 2023, relating to the registration under the Securities Act of 1933, as amended (the "Act"), of (a) the issuance of shares of common stock, \$0.0001 par value per share (the "Common Stock"), of the Company upon the conversion of secured convertible notes and the exercise of warrants issued by the Company, and (b) the resale of Common Stock issued by the Company held by certain stockholders of the Company, as follows:

- (i) the issuance of up to 1,216,666 shares (the "Note Shares") of Common Stock to be issued or potentially issuable upon the conversion of the remaining outstanding principal amount of \$299,471 of the original \$8,480,000 aggregate principal amount of the Company's secured convertible 6% original issue discount promissory notes (the "Investor Notes"), plus accrued and unpaid interest thereon, based upon a conversion price of \$0.7512 per share during the period January 12, 2023 to May 12, 2023 and \$2.006 per share thereafter after giving effect to certain potential anti-dilution adjustments (such as Note Shares issuable under the Investor Notes the "Investor Note Shares");
- (ii) the resale of up to 533,334 shares of Common Stock issued as payment of a \$400,000 commitment fee due under a share purchase agreement (the "GEM Agreement"), dated December 29, 2020 (the "Commitment Fee Shares");
- (iii) the issuance of up to 466,788 shares (the "Investor Warrant Shares," together with the Investor Note Shares, the "Investor Shares") of Common Stock to be issued or potentially issuable upon exercise of certain currently outstanding warrants of the Company to purchase Common Stock (the "Investor Warrants") by the holders thereof (after giving effect to certain potential anti-dilution adjustments);
- (iv) the issuance of up to 55,306 shares (the "GEM Warrant Shares" together with the Commitment Fee Shares the "GEM Shares") of Common Stock to be issued or potentially issuable upon exercise of warrants (the "GEM Warrants") issued in connection with the GEM Agreement by the holder thereof (after giving effect to certain potential anti-dilution adjustments); and
- (v) the resale of up to 2,272,094 shares of Common Stock, which consist of the (i) Investor Shares and (ii) GEM Shares.

This opinion is being furnished in accordance with the requirements of Item 16 of Form S-3 and Item 601(b)(5)(i) of Regulation S-K.

For purposes of the opinions we express below, we have examined the originals or copies, certified or otherwise identified, of (i) the Registration Statement, (ii) the Company's third amended and restated certificate of incorporation and the amended and restated bylaws of the Company, each as amended and/or restated to date, (iii) the Securities Purchase Agreement, and (iv) such other instruments and documents as we considered appropriate for purposes of the opinions hereafter expressed.

In connection with rendering the opinions set forth below, we have assumed without verification (i) the authenticity of all documents submitted to us as originals, (ii) the conformity to the originals of all documents submitted as certified, photostatic or electronic copies and the authenticity of the originals thereof, (iii) the legal capacity of natural persons, (iv) the genuineness of signatures not witnessed by us, including electronic signatures, (v) the due authorization, execution and delivery of all documents by all parties, other than the Company, and the validity, binding effect and enforceability thereof, and (vi) the truth, accuracy and completeness of the information, representations and warranties contained in the records, documents, instruments and certificates we have reviewed.

With respect to the Investor Notes, Investor Warrants, Commitment Fee Shares, GEM Warrant Shares and Investor Shares, we express no opinion to the extent that, notwithstanding the Company's current reservation of shares of Common Stock, future issuances of securities of the Company and/or antidilution adjustments to outstanding securities of the Company may cause the number of shares issuable upon conversion of the Investor Notes or exercise of the Investor Warrants or exercise of the GEM Warrants or payment of the Commitment Fee Shares for more shares of Common Stock than the number that then remain authorized but unissued. Further, we have assumed the conversion prices of the Investor Notes, the exercise prices of the Investor Warrants and GEM Warrants and the issue price of the Commitment Fee Shares will not be adjusted to an amount below the par value per share of the shares of Common Stock.

As to factual matters, we have relied upon the documents furnished to us by the Company, the certificates and other comparable documents of officers and representatives of the Company, statements made to us in discussions with the Company's management and certificates of public officials, without independent verification of their accuracy.

We are opining herein as to the General Corporation Law of the State of Delaware and we express no opinion with respect to any other laws. We are not opining as to the applicability thereto, or the effect thereon, of the laws of any other jurisdiction or, in the case of Delaware, any other laws, or as to matters of municipal law or the laws of any local agencies within any states (including "blue sky" or other state securities laws). With regard to our opinion concerning the Investor Notes, Investor Warrants and GEM Warrants constituting valid and binding obligations of the Company:

- (i) Our opinion is subject to, and may be limited by, (a) applicable bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors' rights generally, and (b) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law.
- (ii) Our opinion is subject to the qualification that the availability of specific performance, an injunction or other equitable remedies is subject to the discretion of the court before which the request is brought.

(iii) We express no opinion as to any provision of the Investor Notes, GEM Warrants and Investor Warrants that: (a) provides for liquidated damages, buy-in damages, monetary penalties, prepayment or make-whole payments or other economic remedies to the extent such provisions may constitute unlawful penalties, (b) relates to advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitations, trial by jury, or procedural rights, (c) restricts non-written modifications and waivers, (d) provides for the payment of legal and other professional fees where such payment is contrary to law or public policy, (e) relates to exclusivity, election or accumulation of rights or remedies, (f) authorizes or validates conclusive or discretionary determinations, or (g) provides that provisions of the Investor Notes and Investor Warrants are severable to the extent an essential part of the agreed exchange is determined to be invalid and unenforceable.

(iv) We express no opinion as to whether a state court outside of the State of Nevada or a federal court of the United States would give effect to the choice of Nevada law provided for in the Investor Note and Investor Warrants. We express no opinion as to whether a state court outside of the State of New York or a federal court of the United States would give effect to the choice of New York law provided for in the GEM Warrants. We also express no opinion as to compliance with any federal securities laws.

Based on the foregoing and in reliance thereon, and subject to the limitations, qualifications, assumptions, exceptions and other matters set forth herein, we are of the opinion that:

1. The Investor Shares have been duly authorized and, when issued and paid for upon conversion of the Investor Notes and exercise of the Investor Warrants in accordance with the terms of the Investor Notes and Investor Warrants, as applicable (including obtaining the requisite approval of the Company's stockholders pursuant to the rules of The Nasdaq Stock Market, which requisite approval has been obtained), will be validly issued, fully paid and nonassessable;

2. The Investor Notes and Investor Warrants constitute valid and legally binding obligations of the Company;

3. The Commitment Fee Shares have been duly authorized and, when resold in accordance with the GEM Agreement, will be validly issued, fully paid and nonassessable;

4. The GEM Warrant Shares have been duly authorized and, when issued and paid for upon exercise of the GEM Warrants in accordance with the terms of the GEM Warrants, will be validly issued, fully paid and nonassessable; and

5. The GEM Warrants constitute valid and legally binding obligations of the Company.

Our opinion is as of the date hereof and we have no responsibility to update this opinion for events and circumstances occurring after the date hereof or as to facts relating to prior events that are subsequently brought to our attention and we disavow any undertaking to advise you of any changes in law.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Registration Statement and in the Prospectus forming a part thereof and any supplement thereto. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the SEC promulgated thereunder.

Very truly yours,

/s/ Troutman Pepper Hamilton Sanders LLP

Troutman Pepper Hamilton Sanders LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 and related Prospectus of our report dated March 31, 2022, except with respect to the impact of the reverse stock split discussed in Notes 2 and 12, as to which the date is November 16, 2022 (which report includes an explanatory paragraph regarding the existence of substantial doubt about the ability of Ensysce Biosciences, Inc. (the “Company”) to continue as a going concern), relating to the consolidated financial statements of the Company as of December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, included in its Registration Statement on Form S-1 (File No. 333-268038), as amended, and to the reference to us under the heading “Experts” included in this Prospectus, which is part of this Registration Statement.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
January 30, 2023

Calculation of Filing Fee Tables

Form S-3
(Form Type)

Ensysce Biosciences, Inc.

(Exact Name of Each Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Unit(2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward	
Newly Registered Securities												
Fees to Be Paid	Equity	Common stock, par value \$0.0001 per share, underlying secured convertible notes	Rule 457(c)	1,750,000 ⁽³⁾	\$ 0.80	\$ 1,400,000	0.00011020	\$ 155				
Fees Previously Paid	Equity	Common stock, par value \$0.0001 per share, underlying warrants	Rule 457(c)	522,094	0.80	417,676	0.00011020	47				
Carry Forward Securities												
Carry Forward Securities	Equity	Common stock, par value \$0.0001 per share, underlying warrants	Rule 415(a) (6)	522,094	0.98	\$ 511,653	0.00011020	\$ 57	S-3	333-268858	December 29, 2022	\$47
Total Offering Amounts						\$	\$	202				
Total Fees Previously Paid							\$	519				
Total Fee Offsets							\$	47				
Net Fee Due						\$	\$	155				

- The shares of the Registrant's common stock, par value \$0.0001 per share (the "Common Stock"), offered hereby also include such presently indeterminate number of shares of Common Stock as a result of stock splits, stock dividends or similar transactions in accordance with Rule 416 under the Securities Act of 1933, as amended (the "Securities Act").
- Pursuant to Rule 457(c) under the Securities Act, and solely for the purpose of calculating the registration fee, the proposed maximum offering price per share is \$0.80, which is the average of the high and low prices of the Common Stock as reported on The NASDAQ Capital Market on January 26, 2023, which date is within five business days prior to filing this Registration Statement.
- Represents the resale of shares of Common Stock issuable or potentially issuable upon the conversion of certain secured convertible 6% original issue discount promissory notes in the aggregate principal amount remaining of \$299,471 (after giving effect to the 6% original issue discount and partial conversion of the original aggregate principal amount of \$8,480,000 previously registered) that were issued to investors in certain private transactions described herein, plus interest thereon at the rate of 6% per annum based on a conversion price of \$0.80 (after giving effect to certain potential anti-dilution adjustments), which is the average of the high and low prices of the Common Stock as reported on The NASDAQ Capital Market on January 26, 2023, which date is within five business days prior to filing this Registration Statement.
- Represents the resale of shares of Common Stock issuable or potentially issuance upon the exercise, at an exercise price of \$0.80 per share, of certain warrants to purchase shares of Common Stock that were issued to investors in certain private transactions described herein (after giving effect to certain potential anti-dilution adjustments), which is the average of the high and low prices of the Common Stock as reported on The NASDAQ Capital Market on January 26, 2023, which date is within five business days prior to filing this Registration Statement.