

PROSPECTUS



ENSYSC E BIOSCIENCES, INC.

**Up to 3,900,000 Shares of Common Stock Underlying Notes
Up to 1,083,475 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 4,983,475 shares of our common stock, par value \$0.0001 per share (“*common stock*”), which consists of (i) up to 3,900,000 shares of common stock that are issuable to certain of the Selling Securityholders that are party to the Securities Purchase Agreement, dated September 24, 2021 (the “*Securities Purchase Agreement*”) upon the conversion of \$1,365,000 aggregate principal amount of our secured convertible 6% original issue discount promissory notes (the “*Investor Notes*”), plus estimated accrued and unpaid interest thereon, based upon a conversion price of \$0.35 per share; and (ii) up to 1,083,475 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*”). See “*Description of Common Stock — 2021 Secured Convertible Promissory Notes*” beginning on page 5 of this prospectus.

During 2022, we entered into a securities purchase agreement and issued investor notes and investor warrants to the same Selling Securityholders. The resale of our common stock pursuant to those instruments 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 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 August 16, 2022, the closing sale price of our common stock as reported on Nasdaq was \$0.4813 and the closing sale price for our Public Warrants as reported on the OTC Pink Open Market was \$0.07.

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 August 30, 2022.

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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 or payment in shares of common stock to repay principal and interest on the Investor Notes and the exercise of the Investor Warrants. We will not receive any proceeds from the sale of shares of common stock underlying the Investor Notes and Investor Warrants pursuant to this prospectus, except with respect to amounts received by us upon the exercise of the Investor 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 these offerings. 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.*”

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

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This registration statement/prospectus includes statements that express Ensysce’s 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 Ensysce operates. Such forward-looking statements are based on available current market material and management’s expectations, beliefs and forecasts concerning future events impacting Ensysce. 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 its 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;
- The risk that we may not obtain stockholder approval of the issuance of common stock in excess of 19.99% of the issued and outstanding common stock;
- the risk that our clinical trials may fail to replicate positive results from earlier preclinical studies or clinical trials conducted by Ensysce 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 its 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;

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- 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 its 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;

- Our need for additional financing to fund its operations and research and development;
- 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 suspended from trading on Nasdaq;
- the ability to meet and maintain applicable listing standards of the Nasdaq;
- the ability to recognize the anticipated benefits of the Business Combination Transactions, which may be affected by, among other things, the factors described above;
- 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 Ensysce. 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.

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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 but not on the sale of the shares underlying the Investor Warrants. The Selling Securityholders will receive all of the proceeds from this offering. We will, however, receive the net proceeds of any Investor Warrants exercised for cash. Proceeds, if any, received from the exercise of such Investor Warrants will be used for working capital for general corporate purposes. No assurances can be given that any of such Investor 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 150,000,000 shares 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. We have requested that stockholders approve at a special stockholders’ meeting to be held in September 2022, our proposal to increase to 250,000,000 the authorized number of shares of common stock.

Common Stock

As of August 16, 2022, there were 38,377,900 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 dividends when, as and if declared by the Board out of funds legally available therefor.

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.

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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.

2021 Secured Convertible Promissory Notes

On September 24, 2021, 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 \$15.9 million for an aggregate purchase price of \$15 million. The Investor Notes, subject to an original issue discount of six percent (6%), have a term of twenty-one months and accrue interest at the rate of 5.0% per annum. As described below, the Investor Notes were initially convertible into the common stock, at a per share conversion price equal to \$5.87, a 30% 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 issued on September 24, 2021, on the first day of each month commencing on January 1, 2022, we were obligated to redeem one eighteenth (1/18th) 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. Under the Investor Notes issued on November 5, 2021, on the first day of each month commencing on February 1, 2022, we were obligated to redeem one eighteenth (1/18th) 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 \$0.78 and certain equity conditions are satisfied. 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. Our issuance of notes in 2022 to the Selling Securityholders constituted the issuance of equity at a price below the \$5.87 prior conversion price of the Investor Notes, resulting in a reduced conversion price of \$0.78 for the remaining outstanding balance of the Investor Notes, which balance totaled \$1.6 million as of August 11, 2022. See “Description of Our Common Stock—2022 Secured Convertible Promissory Notes” below. Further, to delay repayment in full of the Investor Notes which was required by the terms of the 2022 Investor Notes, defined below, upon the closing of the second tranche of the 2022 Investor Notes, we entered into an amendment of the Investor Notes, by which the conversion price and a related floor price were reduced to \$0.35 for the remaining outstanding balance of the Investor Notes as of August 8, 2022 for the period ending October 1, 2022. The amendment also provides that any outstanding balance on the Investor Notes, if any, must be repaid in cash by October 10, 2022.

We have registered with the SEC the resale of the remaining shares of common stock issuable upon conversion of the Investor Notes as well as the remaining shares of common stock issuable upon the exercise of the Investor Warrants, which registration rights are satisfied pursuant to the registration statement of which this prospectus forms a part and pursuant to a previously filed registration statement. 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.

2022 Secured Convertible Promissory Notes

On June 30, 2022, we entered into a securities purchase agreement (the “2022 Securities Purchase Agreement”) whereby we issued to the Selling Securityholders signatory thereto secured convertible promissory notes (the “2022 Investor Notes”) in the aggregate principal amount of \$8.48 million for an aggregate purchase price of \$8.0 million in two closings under the 2022 Securities Purchase Agreement, the first closing occurring on July 1, 2022 and the second occurring on August 8, 2022. The 2022 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 2022 Investor Notes are convertible into the common stock, at a per share conversion price equal to \$0.5450, a 10% premium to the average price of the common stock for the three trading days prior to the first closing under the 2022 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 2022 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 of the applicable 2022 Investor Notes, plus accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such 2022 Investor Note. Under the 2022 Investor Notes issued on August 8, 2022, commencing on November 1, 2022 and continuing monthly on the first day of each month beginning December 1, 2022, we are obligated to redeem one fifteenth (1/15th) of the original principal amount under the applicable 2022 Investor Note, plus accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such 2022 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 2022 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 \$0.1003 and certain equity conditions are satisfied. We may incur additional dilution from repayment of the 2022 Investor Notes in Common Stock or re-setting the conversion price of the 2022 Investor Notes if we issue equity at a price below the conversion price of the 2022 Investor Notes.

We have registered with the SEC the resale of the shares of common stock issuable upon conversion of the 2022 Investor Notes as well as the shares of common stock issuable upon the exercise of the warrants issued under the 2022 Securities Purchase Agreement (the “2022 Investor Warrants”). The 2022 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 2022 Investor Notes are secured by all of our and our subsidiaries’ assets and guaranteed jointly and severally by our subsidiaries.

Warrants

Investor Warrants

On September 24, 2021, we entered into the Securities Purchase Agreement, whereby we issued to the Selling Securityholders warrants to purchase 1,083,475 shares of the common stock in the aggregate (the “2021 Investor Warrants”). The 2021 Investor Warrants had an exercise price of \$7.63, 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 \$0.78.

On July 1, 2022, we completed the first closing under the 2022 Securities Purchase Agreement, whereby we issued to the Selling Securityholders signatory thereto the 2022 Investor Warrants to purchase 4,667,890 shares of the common stock in the aggregate. The 2022 Investor Warrants have an exercise price of \$0.7085, a 30% premium to the conversion price, and are exercisable for five years following issuance.

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".

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

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

Delaware Anti-Takeover Statute

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

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

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

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

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

SELLING SECURITYHOLDERS

This prospectus relates to the resale by the Selling Securityholders from time to time of up to 4,983,475 shares of our common stock. The Selling Securityholders may from time to time offer and sell any or all of the common stock set forth below pursuant to this prospectus and any accompanying prospectus supplement. As used in this prospectus, the term "Selling Securityholders" includes the persons listed in the table below, together with any additional selling securityholders listed in a subsequent amendment to this prospectus, and their pledgees, donees, transferees, assignees, successors, designees and others who later come to hold any of the Selling Securityholders' interests in the common stock, other than through a public sale.

Except as set forth in the footnotes below, the following table sets forth, based on written representations from the Selling Securityholders, certain information as of August 16, 2022 regarding the beneficial ownership of our common stock by the Selling Securityholders and the shares of common stock being offered by the selling security holders. The applicable percentage ownership of common stock is based on approximately 38,377,900 shares of common stock outstanding as of August 16, 2022. Information with respect to shares of common stock owned beneficially after the offering assumes the sale of all of the shares of common stock registered hereby. The Selling Securityholders may offer and sell some, all or none of their shares of common stock.

Except as set forth in the footnotes below, none of the Selling Securityholders has had a material relationship with us other than as a stockholder, noteholder and warrant holder at any time within the past three years or has ever been an officer or director of one of our affiliates. Each of the Selling Securityholders has acquired (or will acquire) the shares of our common stock to be resold hereunder in the ordinary course of business and, at the time of acquisition, none of the Selling Securityholders was a party to any agreement or understanding, directly or indirectly, with any person to distribute the shares of common stock to be resold by such Selling Securityholder under the registration statement of which this prospectus forms a part.

Because a Selling Securityholder may sell, some or none of the shares of common stock that it holds that are covered by this prospectus, and because the offering contemplated by this prospectus is not underwritten, no estimate can be given as to the number of shares of our common stock that will be held by a Selling Securityholder upon the termination of the offering. The information set forth in the following table regarding the beneficial ownership after the resale of shares is based upon the assumption that the Selling Securityholders will sell all of the shares of common stock covered by this prospectus.

We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the Selling Securityholders have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws. Except as otherwise described below, based on the information provided to us by the Selling Securityholders, no selling securityholder is a broker-dealer or an affiliate of a broker dealer.

Please see the section titled "Plan of Distribution" in this prospectus for further information regarding the selling securityholder's method of distributing these shares.

Name	Shares Underlying the Investor Notes				Shares Underlying the Investor 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
3i, LP (1)	—	3,900,000	—	—	541,737	541,737	—	—
Anson Investments Master Fund LP (2)	—	—	—	—	406,303	406,303	—	—
Anson East Master Fund LP (3)	—	—	—	—	135,435	135,435	—	—

(1) Consists of (i) 3,900,000 shares of common stock issuable upon the conversion of up to \$1,365,000 of the principal amount of secured convertible promissory notes remaining that were or will be issued, to the Selling Securityholder pursuant to the Securities Purchase Agreement, plus accrued and unpaid interest thereon, based upon a conversion price of \$0.35 per share, 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 541,737 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 406,303 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 ("AIMF"), hold voting and dispositive power over the shares of common stock held by AIMF. 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 AIMF is Walkers Corporate Limited, Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands.
- (3) Consists of 135,435 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 Investments East Master Fund LP ("AEMF"), hold voting and dispositive power over the shares of common stock held by AEMF. 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 AEMF is Walkers Corporate Limited, Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands.

PLAN OF DISTRIBUTION

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

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

- ordinary brokerage transactions and transactions in which the broker dealer solicits purchasers;
- block trades in which the broker dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker dealer as principal and resale by the broker dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- in transactions through broker dealers that agree with the Selling Securityholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

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

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

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

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

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. 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 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. 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 Annual Report on Form 10-K for the year ended December 31, 2021, 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 and for the quarter ended [June 30, 2022](#), filed with the SEC on August 11, 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](#) and [August 9, 2022](#) (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.

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.

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