

PROSPECTUS SUPPLEMENT NO. 1



This prospectus supplement amends and supplements the prospectus dated September 27, 2021, as supplemented or amended from time to time (the "Prospectus"), which forms a part of our Registration Statement on Form S-1 (No. 333-258609). This prospectus supplement is being filed to update and supplement the information in the Prospectus with the information contained in our Current Report on Form 8-K, filed with the U.S. Securities and Exchange Commission on November 10, 2021 (the "Current Report"). Accordingly, we have attached the Current Report to this prospectus supplement.

The Prospectus and this prospectus supplement relate to the issuance by us and the resale by the selling security holders named in the Prospectus (the "Selling Securityholders") of up to an aggregate of 27,132,398 shares of our common stock, par value \$0.0001 per share ("common stock"), which consists of (i) up to 500,000 shares of common stock that are issuable upon the exercise of 500,000 warrants issued to DelMorgan Group LLC ("DelMorgan") under the terms of the Email Agreement, dated January 31, 2021, among Ensysce Biosciences, Inc. (the "Company") and DelMorgan, as amended by the First Amendment to the Email Agreement, dated June 7, 2021 (the "Email Agreement"), (ii) up to an aggregate of approximately 10,000,000 shares of common stock that are issuable upon the exercise of 10,000,000 warrants (the "Public Warrants") issued in connection with the initial public offering of our predecessor company, Leisure Acquisition Corp., a Delaware corporation ("LACQ"), (the "LACQ IPO"), (iii) up to an aggregate of 6,325,000 shares of common stock that are issuable upon the exercise of 6,325,000 warrants issued in connection with a private placement that closed simultaneously with the consummation of the LACQ IPO (the "Private Placement Warrants"), (iv) up to an aggregate of 1,000,001 shares of common stock that are issuable upon the exercise of 1,000,001 warrants issued in exchange for outstanding loans under the Expense Advancement Agreement dated December 1, 2017 among LACQ, Hydra Management, LLC ("Hydra"), Matthews Lane Capital Partners LLC ("MLCP" and together with Hydra, the "Sponsors"), and HG Vora Capital Management LLC on behalf of one or more funds or accounts managed by it (the "Strategic Investor") (the "Expense Advancement Agreement"), (v) up to an aggregate of 566,288 shares of common stock that are issuable upon exercise of 566,288 warrants issued in exchange for previously outstanding loans under the Expense Advancement Agreement dated December 5, 2019 between LACQ and Gateway Holdings Limited, as amended (the "GTWY Expense Advancement Agreement") (collectively with the warrants described in (iv) herein, the "other private warrants"), (vi) up to an aggregate of 510,001 shares of common stock that are issuable upon exercise of 510,001 warrants issued at the closing of the business combination (as defined below) in exchange for outstanding loans under the Expense Advancement Agreement, (vii) up to 1,106,108 shares of common stock that are issuable upon exercise of 1,106,108 warrants issued at the closing of the business combination (as defined below) in connection with the GEM Agreement (as defined below) (the "GEM Warrants"), (viii) 125,000 shares of common stock issuable in satisfaction of \$2,000,000 of deferred underwriting fees payable to the underwriters, (ix) 500,000 shares of common stock issuable to DelMorgan under the terms of the Email Agreement, (x) 5,000,000 shares of common stock purchased by the Sponsors and Strategic Investor in a private placement prior to the LACQ IPO (the "founder shares"), (xi) up to an aggregate of 500,000 shares of common stock issuable to David J. Kovacs and Mercury FundingCo, LLC (David Tanzer, Managing Member) (together, the "Consultants"), and (xii) up to 1,000,000 shares of common stock that are issuable upon the exercise of 1,000,000 warrants issued to the Consultants.

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, LACQ and EB Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of LACQ ("Merger Sub"), with the Company surviving such 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 "Transactions." In connection with the consummation of the Transactions, LACQ changed its name to "Ensysce Biosciences, Inc."

Our registration of the securities covered by the Prospectus and this prospectus supplement 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 such sales of our common stock or warrants by the Selling Securityholders pursuant to the Prospectus and this prospectus supplement, except with respect to amounts received by us upon exercise of the Warrants to the extent such Warrants are 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. Most of the Selling Securityholders are subject to lock-up arrangements. See "Plan of Distribution" beginning on page 128 of the Prospectus.

You should read the Prospectus, this prospectus supplement and any additional 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 November 15, 2021, the closing sale price of our common stock as reported on Nasdaq was \$2.14 and the closing sale price for our Public Warrants as reported on the OTC Pink Open Market was \$0.20.

This prospectus supplement updates and supplements the information in the Prospectus and is not complete without, and may not be delivered or utilized except in combination with, the Prospectus, including any amendments or supplements thereto. This prospectus supplement should be read in conjunction with the Prospectus and if there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement.

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.

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**Our business and investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 9 of the Prospectus and in the other documents that are incorporated by reference in the Prospectus.**

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

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The date of this prospectus supplement is November 16, 2021.

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**SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

**FORM 8-K**

**CURRENT REPORT**  
Pursuant to Section 13 or 15(d)  
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 10, 2021 (November 5, 2021)

**Ensysce Biosciences, Inc.**  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

001-38306  
(Commission  
File Number)

82-2755287  
(I.R.S. Employer  
Identification Number)

7946 Ivanhoe Avenue, Suite 201  
La Jolla, California  
(Address of principal executive offices)

92037  
(Zip Code)

(858) 263-4196  
Registrant's telephone number, including area code

N/A  
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation to the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	ENSC	The Nasdaq Stock Market LLC
Warrants to purchase one share of Common Stock	ENSCW	The Nasdaq Stock Market LLC

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 13(a) of the Exchange Act.

**Item 1.01. Entry into a Material Definitive Agreement.**

On September 24, 2021, Ensysce Biosciences, Inc. ("Ensysce" or the "Company") entered into a Securities Purchase Agreement (the "SPA") for an aggregate financing of \$15 million with institutional investors. A first closing under the SPA occurred on September 24, 2021 and was reported in a Current Report filed on September 27, 2021. This Current Report discloses that a second closing under the SPA occurred on November 5, 2021. At the first closing, the Company issued to the investors (i) senior secured convertible promissory notes in the aggregate principal amount of \$5.3 million for an aggregate purchase price of \$5 million (collectively, the "Notes") and (ii) warrants (collectively, the "Warrants") to purchase 361,158 shares of the Company's common stock, par value \$0.0001 per share (the "Common Stock") in the aggregate. At the second closing, the Company issued to the institutional investors referenced above, (i) Notes in the aggregate principal amount of \$10.6 million for an aggregate purchase price of \$10 million and (i) Warrants to purchase 722,317 shares of the Common Stock in the aggregate.

The Notes, subject to an original issue discount of six percent (6%), have a term of twenty-one months from the date of issuance and accrue interest at the rate of 5.0% per annum. The Notes are 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 SPA. Under the Notes, on the first day of each month, the Company is obligated to redeem (i) an amount equal to ninety-two percent (92%) of the average of the three lowest VWAPs (as defined in the SPA) in the ten trading days prior to such date or (ii) an amount in cash with a premium of eight percent of the one eighteenth (1/18th) of the original principal amount under the applicable Note, plus accrued but unpaid interest, liquidated damages and any other amounts then owing to the holder of such Note. This redemption obligation of the Company commences on January 1, 2022 for the Notes issued in the first closing and February 1, 2022 for the Notes issued in the second closing. The Company may elect to pay all or part of the redemption amount 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 SPA) 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 the Company 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.

The Warrants have an exercise price of \$7.63, a 30% premium to the conversion price and are exercisable for five years following issuance. The Company will issue, to the purchasers signatory to the SPA, Warrants to purchase up to a number of shares of Common Stock equal to forty percent (40%) of the shares of Common Stock issuable to each purchaser under the SPA upon conversion of the Note such purchaser holds on each of the first and second closing date under the SPA.

The Company has registered with the Securities and Exchange Commission (the "SEC") the resale of the shares of Common Stock issuable upon conversion of the Notes as well as the shares of Common Stock issuable upon the exercise of the Warrants pursuant to the Registration Rights Agreement, dated September 24, 2021, by and among the Company and the purchasers signatory to the SPA. The second closing on November 5, 2021 occurred on the 2<sup>nd</sup> trading day after the registration statement had been declared effective by the SEC on November 3, 2021.

The Notes contain certain covenants, and events of default and triggering events, respectively, which would require repayment of the obligations outstanding pursuant to such instruments. The obligations of the Company pursuant to the Notes are (i) secured by all assets of the Company and all subsidiaries of the Company pursuant to the Security Agreement and Patent Security Agreement, each dated September 24, 2021, by and among the Company, the subsidiaries of the Company and the holders of the Notes and (ii) guaranteed jointly and severally by the subsidiaries of the Company pursuant to the Subsidiary Guarantee, dated September 24, 2021, by and among the Company, the subsidiaries of the Company and the purchasers signatory to the SPA.

### Item 2.03. Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant

The information provided under Item 1.01 in this Current Report on Form 8-K is incorporated by reference into this Item 2.03.

### Item 3.02. Unregistered Sales of Equity Securities

The information set forth in Item 1.01 of this Current Report on Form 8-K is incorporated herein by reference. The Notes and the Warrants were issued without registration under the Securities Act of 1933, as amended (the "Securities Act"), based on the exemption from registration afforded by Section 4(a)(2) of the Securities Act.

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### Item 7.01. Regulation FD Disclosure.

On November 8, 2021, we issued a press release announcing the financing transaction described in this Current Report on Form 8-K. A copy of the press release is furnished herewith as Exhibit 99.1.

The information under this Item 8.01, including Exhibit 99.1, is deemed "furnished" and not "filed" under Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

### Cautionary Statements

This filing includes "forward-looking statements." All statements other than statements of historical facts included or incorporated herein may constitute forward-looking statements. Actual results could vary significantly from those expressed or implied in such statements and are subject to a number of risks and uncertainties. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, the Company can give no assurance that such expectations will prove to be correct. The forward-looking statements involve risks and uncertainties that affect the Company's operations, financial performance, and other factors as discussed in the Company's filings with the SEC. Among the factors that could cause results to differ materially are those risks discussed in the periodic reports the Company files with the SEC. You are urged to carefully review and consider the cautionary statements and other disclosures made in those filings, specifically those under the heading "Risk Factors." The Company does not undertake any duty to update any forward-looking statement except as required by law.

### Item 9.01. Financial Statements and Exhibits

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
4.6	<a href="#">Form of Senior Secured Convertible Promissory Note issued by the Company pursuant to and in accordance with the Securities Purchase Agreement (incorporated by reference to Exhibit 4.6 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
4.7	<a href="#">Form of Common Stock Purchase Warrant to be issued by the Company pursuant to and in accordance with the Securities Purchase Agreement (incorporated by reference to Exhibit 4.7 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
10.1*	<a href="#">Securities Purchase Agreement, dated September 24, 2021, by and among the Company and the purchasers signatory thereto (incorporated by reference to Exhibit 10.1 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
10.2	<a href="#">Registration Rights Agreement, dated September 24, 2021, by and among the Company and the parties signatory thereto (incorporated by reference to Exhibit 10.2 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
10.3	<a href="#">Subsidiary Guarantee, dated September 24, 2021, by and among the Company and the purchasers signatory thereto (incorporated by reference to Exhibit 10.3 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
10.4*	<a href="#">Security Agreement, dated September 24, 2021, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto (incorporated by reference to Exhibit 10.4 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
10.5*	<a href="#">Patent Security Agreement, dated September 24, 2021, by and among the Company, EBI OpCo, Inc., Covistat, Inc. and the other parties signatory thereto (incorporated by reference to Exhibit 10.5 filed with Ensysce Biosciences, Inc.'s Current Report on Form 8-K on September 27, 2021).</a>
99.1	<a href="#">Press Release, dated November 8, 2021.</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

\* Schedules, exhibits and similar supporting attachments to this exhibit are omitted pursuant to Item 601(b)(2) of Regulation S-K. We agree to furnish a supplemental copy of any omitted schedule or similar attachment to the SEC upon request.

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### SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: November 10, 2021

Ensysce Biosciences, Inc.

By: /s/ Lynn Kirkpatrick  
Name: Dr. Lynn Kirkpatrick  
Title: President and Chief Executive Officer

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Exhibit 99.1

### Ensysce Biosciences Announces Completion of \$15 Million Convertible Note Financing

**SAN DIEGO, Nov. 8, 2021** – Ensysce Biosciences, Inc. (“Ensysce” or the “Company”) (NASDAQ: ENSC, OTC: ENSCW), a clinical-stage biotech company with proprietary technology platforms to reduce the economic and social burden of prescription drug abuse and overdose, announced today that it has completed its previously announced private placement under a securities purchase agreement with institutional investors (“Investors”) for senior secured convertible notes (the “Notes”) and warrants exercisable for Ensysce common stock (the “Warrants”) for an aggregate investment of \$15 million. The final funding by the Investors of \$10 million, prior to fees and offering expenses, occurred on November 5, 2021.

The Notes are convertible into shares of Ensysce common stock at a conversion price of \$5.87, a 30% premium to the base price set at the time of the initial closing. The Notes have a maturity date of 21 months from the applicable closing date and will bear interest from date of issuance at 5.0% per annum, with monthly principal payments in cash or common stock beginning approximately 90 days after the initial closing. The Notes were issued with an original discount of six percent (6%). The Warrants have the right to purchase shares of common stock at an exercise price of \$7.63, a 30% premium to the conversion price. The Warrants are exercisable for five years following the date of issuance.

The total gross proceeds from the issuance of the Notes pursuant to the securities purchase agreement, totaling \$15 million before fees and expenses, will be used for general working capital purposes. The first closing on September 24, 2021 provided \$5 million of funding and the second closing on November 5, 2021 provided \$10 million of funding. At the second closing, the Company issued to the institutional investors referenced above, (i) Notes in the aggregate principal amount of \$10.6 million for an aggregate purchase price of \$10 million and (ii) Warrants to purchase 722,317 shares of the Company’s common stock at an exercise price of \$7.63.

“The completion of our financing provides us with additional and necessary proceeds to continue our advancement of our lead clinical trial programs, including completion of our PF614-102 bioequivalence study and our nasal and oral human abuse liability studies, as a well as to continue the clinical development of our overdose protection platform with our lead product PF614-MPAR,” said Dr. Lynn Kirkpatrick, CEO of Ensysce Biosciences. “We remain focused on our commitment to stem the prescription drug abuse epidemic by bringing our unique pipeline of products to the industry, which will ultimately provide safer options for both prescribers and patients.”

A registered broker-dealer is acting as the sole placement agent in connection with the offering.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful. This news release is being issued pursuant to and in accordance with Rule 135c under the Securities Act of 1933, as amended.

#### About Ensysce Biosciences:

Ensysce Biosciences, San Diego, CA is a clinical-stage biotech company using its proprietary technology platforms to develop safer prescription drugs. Leveraging its Trypsin Activated Abuse Protection (TAAP) and Multi-Pill Abuse Resistance (MPAR™) platforms, the Company is in the process of developing a new class of powerful, tamper-proof opioids that prevent both drug abuse and overdoses. Ensysce’s products are anticipated to provide safer options to treat severe pain and assist in preventing deaths caused by opioid abuse, reducing the human and economic cost. The platforms are covered by an extensive worldwide intellectual property portfolio for a wide array of prescription drug compositions. For more information, please visit [www.ensysce.com](http://www.ensysce.com).

#### Forward-Looking Statements

Statements contained in this press release that are not purely historical may be deemed to be forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995 and other federal securities laws. Without limiting the foregoing, the use of words such as “may,” “intends,” “can,” “might,” “will,” “expect,” “plan,” and other similar expressions are intended to identify forward-looking statements. The product candidates discussed are in clinic and not approved and there can be no assurance that the clinical programs will be successful in demonstrating safety and/or efficacy, that Ensysce will not encounter problems or delays in clinical development, or that any product candidate will ever receive regulatory approval or be successfully commercialized. All forward-looking statements are based on estimates and assumptions by Ensysce’s management that, although Ensysce believes to be reasonable, are inherently uncertain. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that Ensysce expected. In addition, Ensysce’s business is subject to additional risks and uncertainties, including among others, the initiation and conduct of preclinical studies and clinical trials; the timing and availability of data from preclinical studies and clinical trials; expectations for regulatory submissions and approvals; potential safety concerns related to, or efficacy of, Ensysce’s product candidates; the availability or commercial potential of product candidates; the ability of Ensysce to fund its continued operations, including its planned clinical trials; and Ensysce’s and its partners’ ability to perform under their license, collaboration and manufacturing arrangements. These statements are also subject to a number of material risks and uncertainties that are described in Ensysce’s most recent Form 10-Q. Any forward-looking statement speaks only as of the date on which it was made. Ensysce undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required under applicable law.

#### Ensysce Biosciences Company Contact

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Chief Executive Officer  
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