

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

**FORM S-1**  
REGISTRATION STATEMENT  
UNDER THE SECURITIES ACT OF 1933

**Artelo Biosciences, Inc.**

(Exact name of registrant as specified in its charter)

**Nevada**

(State or other jurisdiction of  
incorporation or organization)

**7389**

(Primary Standard Industrial  
Classification Code Number)

**33-1220924**

(I.R.S. Employer  
Identification Number)

**505 Lomas Santa Fe, Suite 160**  
**Solana Beach, CA USA**  
**(858) 925-7049**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Gregory D. Gorgas**  
**Chief Executive Officer and President**  
**505 Lomas Santa Fe, Suite 160**  
**Solana Beach, CA USA**  
**(858) 925-7049**

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

**Copies to:**

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

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☒

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ☐ Accelerated filer ☐ Non-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 with any new or revised accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to such Section 8(a) may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities 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 we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

**Subject to completion, dated November 17, 2025**

**PRELIMINARY PROSPECTUS**



**Artelo Biosciences, Inc.**

**RESALE OF UP TO 899,972 SHARES OF COMMON STOCK**

This prospectus relates to the offer and resale, from time to time, by the selling securityholders named in this prospectus (the "Selling Securityholders") of up to an aggregate of 899,972 shares of common stock, par value \$0.001 per share ("Common Stock"), of Artelo Biosciences, Inc., consisting of (i) 215,292 shares of Common Stock issuable upon the conversion of convertible notes (the "Notes"), (ii) 246,498 shares of Common Stock issuable upon the exercise of warrants at an exercise price of \$6.24 per share (the "\$6.24 Warrants"), and (iii) 438,182 shares of Common Stock issuable upon the exercise of warrants at an exercise price of \$3.40 per share (the "\$3.40 Warrants"). The \$6.24 Warrants and the \$3.40 Warrants are collectively referred to herein as the "Warrants." The shares of Common Stock issuable upon the conversion of the Notes and the Warrants are collectively referred to herein as the "Shares."

The \$6.24 Warrants were issued to the Selling Securityholders on October 28, 2025, upon the automatic conversion of a portion of the May 2025 Notes (as defined below) issued to the Selling Securityholders in a private placement that closed on May 1, 2025 (the "May 2025 Private Placement"), pursuant to a subscription agreement that we entered into with the Selling Securityholders, effective May 1, 2025 (the "May 2025 Subscription Agreement"). The Notes and the \$3.40 Warrants were issued and sold to the Selling Securityholders in a private placement that closed on October 28, 2025 (the "October 2025 Private Placement"), pursuant to a subscription agreement among us and such selling stockholders effective October 28, 2025 (the "October 2025 Subscription Agreement," and together with the May 2025 Subscription Agreement, the "Subscription Agreements"). We are filing the registration statement of which this prospectus is a part pursuant to the Subscription Agreements on behalf of the Selling Securityholders.

We will not receive any proceeds from the sale of the Shares by the Selling Securityholders. We will, however, receive the net proceeds of any Warrants exercised for cash. Our registration of the Shares covered by this prospectus does not mean that the Selling Securityholders will offer or sell any of the Shares.

We will bear all costs, expenses and fees in connection with the registration of the Shares. The Selling Securityholders will bear all commissions and discounts, if any, attributable to their sales of the Shares. The Selling Securityholders and any of their permitted transferees may offer and sell the shares covered by this prospectus in a number of different ways and at varying prices. The Securities and Exchange Commission may take a position that each of the Selling Securityholders is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the "Securities Act"). Additional information on the Selling Securityholders, and the times and manner in which they may offer and sell shares of our Common Stock under this prospectus, is provided under "*Selling Securityholders*" and "*Plan of Distribution*" in this prospectus.

Our Common Stock is traded on the Nasdaq Capital Market under the symbol "ARTL." The last reported sales price of our shares of Common Stock on November 14, 2025 was \$1.85 per share.

On June 11, 2025, we filed a Certificate of Change (the “Certificate of Change”) to our Amended and Restated Articles of Incorporation (as amended, the “Articles of Incorporation”) with the Secretary of State of Nevada to effect a 1-for-6 reverse stock split of the shares of our Common Stock either issued and outstanding, held by us as treasury stock and authorized, effective as of 2:01 a.m. (Eastern time) on June 13, 2025 (the “Reverse Stock Split”). All Common Stock share and per share amounts in this prospectus have been adjusted to give effect to the Reverse Stock Split unless otherwise stated.

You should read this prospectus, together with additional information described under the heading “*Where You Can Find More Information*” carefully before you invest in any of our securities.

**We are a “smaller reporting company” as defined under the federal securities laws and, as such, we may continue to elect to comply with certain reduced public company reporting requirements in future reports.**

**Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page 8 of this prospectus and in the other documents that are incorporated by reference into this prospectus before purchasing any of the shares offered by 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 November 17, 2025

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## ABOUT THIS PROSPECTUS

As used in this prospectus, unless the context otherwise requires or indicates, references to “the Company,” “we,” “our,” “ourselves,” “us” and “Artelo” refer to Artelo Biosciences, Inc.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”), under which the Selling Securityholders may, from time to time, sell the securities described in this prospectus in one or more offerings or otherwise described under “*Plan of Distribution*.”

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. Such 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 headings “*Where You Can Find More Information*” and “*Incorporation by Reference*.”

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. 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 and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference or, in each case, any earlier date specified for such information, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the SEC before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

This prospectus incorporates by reference, and any post-effective amendment or any prospectus supplement may contain or incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, neither we nor the Selling Securityholders guarantee the accuracy or completeness of this information and neither we nor the Selling Securityholders have independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any post-effective amendment or any prospectus supplement may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “*Risk Factors*” contained in this prospectus, any post-effective amendment and any applicable prospectus supplement, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

We obtained certain statistical data, market data and other industry data and forecasts used in this prospectus from publicly available information. While we believe that the statistical data, industry data, forecasts and market research are reliable, we have not independently verified the data, and we do not make any representation as to the accuracy of the information.

This prospectus contains forward-looking statements that are subject to a number of risks and uncertainties, many of which are beyond our control. Please read “*Cautionary Note Regarding Forward- Looking Statements*” and “*Risk Factors*”.

## SUMMARY

*This summary is not complete and does not contain all of the information that you should consider before investing in the securities offered by this prospectus. You should read this summary together with the entire prospectus carefully, including “Risk Factors” and our financial statements and the related notes incorporated by reference into this prospectus, before making an investment decision. See “Risk Factors” for a discussion of the risks involved in investing in our securities.*

### Corporate Overview

We are a clinical stage biopharmaceutical company focused on the development and commercialization of therapeutics that target lipid-signaling modulation pathways, including the endocannabinoid system (the “ECS”), a network of receptors and neurotransmitters that form a biochemical communication system throughout the body.

Our product candidate pipeline broadly leverages leading scientific methodologies and balances risk across mechanisms of action and stages of development. Our programs represent a comprehensive approach in utilizing the power and promise of lipid signaling to develop pharmaceuticals for patients with unmet healthcare needs. We are currently developing a dual cannabinoid (CB) agonist that targets both the CB1 and CB2 receptors. This synthetic small molecule program is a G protein-coupled receptor (“GPCR”) designated ART27.13. We are developing ART27.13 as a potential treatment for cancer-related anorexia and it is currently in a Phase 1b/2a trial, titled the Cancer Appetite Recovery Study (“CAReS”).

Our second program, ART26.12 is a small molecule and the lead product candidate from our chemical library of inhibitors of fatty acid binding proteins, notably Fatty Acid Binding Protein 5 (“FABP5”). We received U.S. Food & Drug Administration (the “FDA”) clearance for our Investigational New Drug (“IND”) application for ART26.12 in July 2024 and have completed enrolment to a Phase 1 clinical trial in healthy subjects to support the development towards an agent intended to treat chemotherapy-induced peripheral neuropathy. In addition, ART26.12 may have broad applications as a cancer therapeutic, as a treatment for dermatologic conditions, such as psoriasis, as a treatment for pain and inflammation, and potential use in anxiety-related disorders, including post-traumatic stress disorder. In June 2025, we announced favorable results from our first-in-human study evaluating ART26.12. The Phase 1 Single Ascending Dose (SAD) study was designed to assess the safety, tolerability, and pharmacokinetics of ART26.12 in healthy volunteers and enrolled 49 subjects. All adverse events (AEs) were mild, transient, and self-resolving. No drug-related AEs were observed in the blinded dataset, and no tolerability issues or safety signals were detected across multiple assessments (vital signs, ECGs, clinical laboratory tests, physical examinations, and visual analogue mood scales). In addition, full dose-exposure profiles were successfully explored. Plasma analysis confirmed dose-dependent, linear absorption across the evaluated range. A wide safety margin was observed between estimated therapeutic plasma concentrations and the highest exposure levels achieved, supporting potential titration for maximum efficacy in future studies.

We are also developing our own invention ART12.11 (the “CBD cocrystal”). ART12.11 is our patented solid-state composition of cannabidiol (“CBD”) and tetramethylpyrazine (“TMP”). TMP serves as the cofomer in the CBD cocrystal. ART12.11 may be considered by the regulatory authorities as a fixed drug combination instead of a new chemical entity (“NCE”).

We obtained two of our patent protected product candidates through our in-licensing activities. Our first in-licensed program, ART27.13, is being developed for cancer-related anorexia. ART27.13 is a peripherally-selective high-potency dual CB1 and CB2 full-receptor agonist, which was originally invented at AstraZeneca plc (“AstraZeneca”). We exercised our option to exclusively license this product candidate through the NEOMED Institute (“NEOMED”), a Canadian not-for-profit corporation, renamed adMare Bioinnovations (“adMare”) in June 2019, which had obtained rights to ART27.13 from AstraZeneca. In Phase 1, single dose studies in healthy volunteers and a multiple ascending dose study in individuals with chronic low back pain conducted by AstraZeneca, ART27.13 exhibited an attractive pharmacokinetic and absorption, distribution, metabolism, and excretion profile and was well tolerated within the target exposure range. It also exhibited dose-dependent and potentially clinically meaningful increases in body weight. Importantly, the changes in body weight were not associated with fluid retention or other adverse effects and occurred at exposures without central nervous system (“CNS”) side effects. Discussions with United Kingdom (“UK”), U.S. and Canadian regulators indicate there is a potential pathway for development of ART27.13 for the treatment of cancer-related anorexia, which affects approximately 60% of advanced stage cancer patients.

We commenced enrollment and dosed the first patient in CARES, our Phase 1b/2a clinical study of cancer-related anorexia with ART27.13 in April 2021 and completed enrolling patients in the Phase 1b during the first quarter of 2023. Data from the Phase 1b stage was used to determine the most effective and safe dose selected as the starting dose for the Phase 2a portion of CARES. We received approval from the regulatory authorities in the UK, Ireland and Norway to increase the daily dose from the starting dose of 650 micrograms to 1,000 micrograms after 4 weeks and up to 1,300 micrograms initiated at 8 weeks in patients for whom intra-patient dose escalation is expected to be well tolerated. We also received approval from the regulatory authorities to enroll 40 evaluable patients into the Phase 2a stage with a 3:1 randomization of ART27.13 to placebo. We initiated the Phase 2a portion of CARES during April 2023. As of May 6, 2025, 18 clinical sites across five countries were open for enrollment.

As of June 30, 2025, 32 participants have been enrolled. On September 3, 2025, we announced interim results from the Phase 2a CARES trial. In the interim analysis, 18 evaluable patients—primarily with lung and gastrointestinal cancers not receiving cyclic chemotherapy—were included. After 12 weeks of treatment in patients who titrated to the top dose evaluated of 1300 micrograms (n=5), ART27.13 demonstrated compelling increases in mean body weight of 6.38% (Standard Deviation or SD 9.50) compared to patients on placebo (n=6) who lost -5.42% (SD 8.17). The maximum weight gain in the ART27.13 group reached 18.5%, versus only 0.4% in placebo. The maximum weight loss in the placebo arm was -17.4%, compared to just -3.0% in the ART27.13 group. Additional benefits were seen in lean body mass, with a +4.23% increase (SD 5.37) in the treatment group versus a -3.15% loss (SD 4.89) in placebo at one month, as well as qualitative improvements in total and weekly activity scores.

Safety results were consistent with prior findings. Among the 32 participants enrolled in the CARES Phase 2 trial to date, 7 patients (22%) experienced adverse events that may be related to ART27.13. All were mild or moderate, with the exception of a single case of severe malaise, and no drug-related serious adverse events were reported. These data are aligned with safety outcomes observed in Phase 1 of CARES, supporting ART27.13's overall favorable tolerability and acceptable safety profile.

Our second in-licensed patented program is being advanced from our platform of small-molecule inhibitors of fatty acid binding proteins, notably FABP5. Fatty acid binding proteins ("FABPs") are attractive therapeutic targets, however, the high degree of sequence and structural similarities among family members made the creation of drugs targeting specific FABPs challenging. FABP5 is believed to specifically target and regulate one of the body's endogenous cannabinoids, anandamide ("AEA"). While searching for a FABP5 inhibitor to regulate AEA, researchers at Stony Brook University ("SBU") discovered the chemistry for creating a large library of compounds which we believe to be highly specific and potent small molecule inhibitors of FABP5 and other isoforms. SBU received approximately \$8.0 million in funding from the National Institutes of Health to develop FABP5 inhibitor candidates including a \$4.2 million grant in 2020 to advance research of FABP5 inhibition in prostate cancer. We licensed the rights to world-wide intellectual property in all fields and certain know-how to these inhibitors from SBU.

Our lead FABP5 inhibitor program is designated ART26.12. Preclinical research with ART26.12 showed evidence of activity in multiple pain models including osteoarthritis, cancer bone pain, and neuropathic pain. Based upon positive preclinical evidence from five separate studies showing promising activity and a differentiated mechanism-of-action for the prevention and treatment of painful neuropathies, including diabetic neuropathy and Chemotherapy Induced Peripheral Neuropathy ("CIPN"), we prioritized CIPN as the initial indication for development of ART26.12. Treatment and/or prevention of CIPN is a significant unmet need, often resulting in anti-cancer treatment delays or discontinuations, and there are currently no approved treatments for CIPN by the regulatory authorities in the U.S., UK or EU. We submitted an IND application for ART26.12 to the FDA on 10th of June 2024 and received a study may proceed notice from the FDA on the 8th of July 2024. First-in-human studies for ART26.12 began in Q4 of 2024 and we successfully completed dosing all 48 healthy volunteers planned for the Phase 1 Single Ascending Dose study at the end of April 2025. In addition to its potential as a synthetic endocannabinoid modulator with development targeting pain, inflammation, dermatologic conditions such as psoriasis, FABP5 is understood to play an important role in lipid signaling and is believed to be an attractive strategy for drug development in oncology. Large amounts of human biomarker and animal model data support FABP5 as an oncology target, including triple negative breast cancer, ovarian cancer, cervical cancer, and castration-resistant prostate cancer. Through our sponsored research we have also subsequently identified a potential role for FABP5 inhibition to treat anxiety disorders, such as Post Traumatic Stress Disorder ("PTSD"). We have been awarded a research grant in Canada to expand on our earlier research at the University of Western Ontario in this new development area.

In addition to our in-licensed programs, we have internal discovery research initiatives which resulted in ART12.11, a proprietary cocrystal composition of CBD and TMP. The crystal structure of CBD is known to exhibit solid polymorphism, or the ability to manifest in different forms. Polymorphism can adversely affect stability, dissolution, and bioavailability of a drug product and thus may affect its quality, safety, and efficacy. Based upon our research, we believe our CBD cocrystal exists as a single crystal form and as such is anticipated to have advantages over other solid forms of CBD that exhibit polymorphism. Emerging data demonstrates potential advantages of this single crystal structure, including improved stability, solubility, and a more consistent absorption profile. We believe these features have contributed to a more consistent and improved bioavailability and pharmacokinetic profile which may ultimately lead to improved safety and efficacy in human therapeutics, as already demonstrated in animal studies.

Presently, we have two U.S. patents, one pending U.S. patent application, six foreign patents (Australia, Brazil, China, Mexico, Japan and Taiwan) and three pending foreign patent applications (Canada, Europe, and South Korea) directed to our cocrystal composition of CBD. Composition claims are generally known in the pharmaceutical industry as the most desired type of intellectual property and should provide for long lasting market exclusivity for our synthetic CBD cocrystal drug product candidate. In addition, due to the reasons outlined above, we believe that our synthetic CBD cocrystal will continue to demonstrate a superior set of pharmaceutical properties compared to non-cocrystal CBD compositions. We plan to develop ART12.11 for multiple potential indications where CBD has shown activity of such anxiety disorders, including PTSD, depression, and other possible uses such as epilepsy and insomnia.

We are developing our product candidates in accordance with traditional regulated drug development standards and expect to make them available to patients via prescription or physician orders only after obtaining marketing authorization from a country's regulatory authority, such as the FDA. Our management team has experience developing, commercializing, and partnering ethical pharmaceutical products, including several first-in-class therapeutics. Based upon our current management's capabilities and the future talent we may attract, we plan to retain rights to internally develop and commercialize products; however, we may seek collaborations with partners in the biopharmaceutical industry when a partnering strategy serves to maximize value for our stockholders.

### **Risk Factor Summary**

Investing in our securities involves a high degree of risk. You should carefully consider the risks described in the section entitled "*Risk Factors*" below, as well as other information and risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, as updated or supplemented on our quarterly reports on Form 10-Q or current reports on Form 8-K, including our financial statements and the related notes, and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," any of which may be relevant to decisions regarding an investment in or ownership of our securities. The occurrence of any of these risks could have a significant adverse effect on our reputation, business, financial condition, results of operations, growth and ability to accomplish our strategic objectives. We have organized the description of these risks into groupings in an effort to enhance readability, but many of the risks interrelate or could be grouped or ordered in other ways, so no special significance should be attributed to the groupings or order below.

#### *Risks Related to This Offering*

- Our financial condition raises substantial doubt as to our ability to continue as a going concern.
- Our Common Stock may be delisted from Nasdaq if we fail to regain and maintain compliance with continued listing standards.
- The sale or availability for sale of shares issuable pursuant to this prospectus may depress the price of our Common Stock, dilute the interest of our existing stockholders, and encourage short sales by third parties, which could further depress the price of our Common Stock.
- Any market activity involving short selling or other market making activities could result in negative impact to the market price for our Common Stock.
- We will need to raise additional capital to fund our planned future operations, and we may be unable to secure such capital without significant dilutive financing transactions, or at all. If we are not able to raise additional capital, we may not be able to complete the development, testing and commercialization of our drug candidates and will not be able to continue as a going concern.
- We have never paid dividends on our capital stock, and we do not anticipate paying dividends in the foreseeable future.
- The market price of our shares may be subject to fluctuation and volatility. You could lose all or part of your investment.



*Risks Related to our Business and Product Candidates*

- We will need to raise additional financing to support our business objectives. We cannot be sure we will be able to obtain additional financing on terms favorable to us when needed, or at all. If we are unable to obtain additional financing to meet our needs, our operations may be adversely affected or terminated.
- We are currently receiving Research and Development, or R&D, tax credits from the UK in connection with our clinical trials being conducted in the UK. With effect for accounting periods starting on or after April 1, 2024, expenditure on certain staffing costs in connection with activities which take place outside the UK as part of our clinical trials, will not qualify for R&D tax credits unless restrictive conditions are met.
- If we fail to comply with our obligations under our patent licenses with third parties, we could lose license rights that are vital to our business.
- Changes in regulatory requirements or other unforeseen circumstances may impact the timing of the initiation or completion of our clinical trials.
- We face many of the risks and difficulties frequently encountered by relatively new companies with respect to our operations.
- We have no mature product candidates and may not be successful in licensing any.
- Even if we are successful in licensing lead product candidates, resource limitations may limit our ability to successfully develop them.

*Risks Related to our Intellectual Property*

- If we are unable to obtain and maintain patent protection for our products, our competitors could develop and commercialize products and technology similar or identical to our product candidates, and our ability to successfully commercialize any product candidates we may develop, and our science may be adversely affected.
- Obtaining and maintaining our patent protection depends on compliance with various procedural measures, document submissions, fee payments and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.
- We may be subject to claims challenging the inventorship of our patents and other intellectual property.
- Intellectual property rights do not necessarily address all potential threats.
- Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

*Risks Related to our Securities*

- If we sell securities in future financings stockholders may experience immediate dilution and, as a result, our stock price may decline.
- The price of our securities may be volatile, and you could lose all or part of your investment. Further, we do not know whether an active, liquid and orderly trading market will continue for our securities or what the market price of our securities will be and as a result it may be difficult for you to sell your shares of our securities.
- Shares of our Common Stock that have not been registered under federal securities laws are subject to resale restrictions imposed by Rule 144, including those set forth in Rule 144(i) which apply to a former “shell company.”
- Sales of our currently issued and outstanding stock may become freely tradable pursuant to Rule 144 and sales of such shares may have a depressive effect on the share price of its Common Stock.

## **May 2025 Private Placement**

Effective May 1, 2025, we entered into the May 2025 Subscription Agreement with each of the Selling Securityholders named in this prospectus, pursuant to which we issued and sold to the Selling Securityholders, and the Selling Securityholders purchased convertible notes (the “May 2025 Notes”) in an aggregate principal amount of \$900,000. A portion of the May 2025 Notes was convertible into Common Stock, at the election of each Selling Securityholders, pursuant to the Voluntary Conversion (defined below) and the remaining portion of each May 2025 Note was converted into the \$6.24 Warrants. The sale and issuance of the May 2025 Notes closed on May 1, 2025.

The May 2025 Notes accrued interest at a rate of 12% per annum. All unpaid principal, together with any then unpaid and accrued interest and other amounts payable thereunder, was due and payable on October 28, 2025 (the “May 2025 Notes’ Maturity Date”).

On the May 2025 Notes’ Maturity Date, the Selling Securityholder had the right (at the Selling Securityholder’s sole option) to convert all of that certain unpaid portions of principal and accrued interest of the Selling Securityholder’s May 2025 Note into shares of Common Stock (the “Voluntary Conversion”), as provided in the May 2025 Notes. Should the Selling Securityholder not elect Voluntary Conversion, such portion of the unpaid principal balance and any accrued interest of each May 2025 Note subject to Voluntary Conversion would be immediately due and payable in cash. No Selling Securityholder elected their right to Voluntary Conversion. Further, each Selling Securityholder entered into the October 2025 Subscription Agreement (as defined below) pursuant to which they agreed to convert all or a portion of the unconverted “Voluntary Conversion” portion of unpaid principal balance and accrued interest due to the Selling Securityholders upon the maturity of the May 2025 Notes into the Notes.

On the May 2025 Notes’ Maturity Date, that portion of the unpaid principal balance and any accrued interest of each Note not subject to the Voluntary Conversion was automatically converted into the \$6.24 Warrants.

Each \$6.24 Warrant shall be immediately exercisable after issuance for five (5) years. Each \$6.24 Warrant will be exercisable by payment of the exercise price in cash or on a cashless basis if at the time of exercise there is no effective resale registration statement and will contain customary anti-dilution provisions (in the case of stock splits, dividends, recapitalizations, mergers and similar transactions).

A holder of a \$6.24 Warrant may not exercise any such \$6.24 Warrant to the extent that such conversion or exercise would result in the number of shares of Common Stock beneficially owned by such holder and its affiliates exceeding 9.9% of the total number of shares of Common Stock outstanding immediately after giving effect to the conversion or exercise, which percentage may be increased or decreased at the holder’s election not to exceed 19.9%.

Pursuant to the May 2025 Subscription Agreement, we agreed (i) to file a registration statement (the “May 2025 Registration Statement”) with the SEC under the Securities Act of 1933, as amended (the “Securities Act”) on or before the 45<sup>th</sup> calendar day following the May 2025 Notes’ Maturity Date (subject to certain exceptions) for purposes of registering the resale of the shares of Common Stock issuable upon Conversion of the May 2025 Notes, if any, and the shares of Common Stock issuable pursuant to the \$6.24 Warrants (collectively, the “May 2025 Registrable Shares”), (ii) to use our reasonable best efforts to have such registration statement declared effective within the time period set forth in the May 2025 Subscription Agreement, and (iii) to keep the May 2025 Registration Statement effective until the May 2025 Registrable Shares covered by such May 2025 Registration Statement may be sold without volume or manner-of-sale restrictions pursuant to Rule 144, subject to certain conditions.

The offer and sale of the securities pursuant to the May 2025 Subscription Agreement were not registered under the Securities Act, or any state securities laws. We relied on an exemption from the registration requirements of the Securities Act provided by Section 4(a)(2) thereof and Rule 506(b) of Regulation D promulgated thereunder. Each of the Selling Securityholders has represented to us that such Selling Securityholder is an “accredited investor,” as defined in Regulation D of the Securities Act, and that the securities purchased by such Selling Securityholder were being acquired solely for such selling stockholder’s own account and for investment purposes and not with a view to its future sale or distribution.

The description of the May 2025 Subscription Agreement, the May 2025 Notes and \$6.24 Warrants are not complete and are qualified in their entirety by reference to the subscription agreement, form of convertible note and the form of warrant, which were filed as exhibits to our Current Report on Form 8-K, filed on May 1, 2025. See “Where You Can Find More Information” and “Information Incorporated by Reference.” The representations, warranties and covenants made by us in such agreements were made solely for the benefit of the parties to such agreements, including, in some cases, for the purpose of allocating risk among the parties thereto, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were made as of an earlier date. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

#### **October 2025 Private Placement**

Effective October 28, 2025, we entered into the October 2025 Subscription Agreement with the Selling Securityholders named in this prospectus, pursuant to which we issued and sold to the Selling Securityholders, and the Selling Securityholders purchased (by converting all or a portion of the unconverted “Voluntary Conversion” portion of unpaid principal balance and accrued interest due to the Selling Securityholders upon the maturity of the May 2025 Notes): (i) The Notes in an aggregate principal amount of \$690,154.69; and (ii) the \$3.40 Warrants to purchase an aggregate of 438,182 shares of Common Stock, at an exercise price of \$3.40 per share. The sale and issuance of the Notes and \$3.40 Warrants closed effective as of October 28, 2025 (the “Closing Date”).

The Notes will accrue interest at a rate of 12% per annum, which will adjust to 20% upon an Event of Default (as defined in the Notes). All unpaid principal, together with any then unpaid and accrued interest and other amounts payable thereunder, shall be due and payable six months after the Closing Date (the “Maturity Date”).

At any time prior to the Maturity Date, all or any portion of the outstanding principal amount of the Notes, together with the accrued and unpaid interest, shall be convertible, in whole or in part, into shares of Common Stock, at a conversion price of \$3.40.

Each \$3.40 Warrant shall be immediately exercisable after issuance for five (5) years. Each \$3.40 Warrant will be exercisable by payment of the exercise price in cash or on a cashless basis if at the time of exercise there is no effective resale registration statement and will contain customary anti-dilution provisions (in the case of stock splits, dividends, recapitalizations, mergers

A holder of a Note or \$3.40 Warrant may not convert or exercise any such Note or \$3.40 Warrant to the extent that such conversion or exercise would result in the number of shares of Common Stock beneficially owned by such holder and its affiliates exceeding 4.9% of the total number of shares of Common Stock outstanding immediately after giving effect to the conversion or exercise, which percentage may be increased or decreased at the holder’s election not to exceed 19.9%.

Pursuant to the Subscription Agreement, the Company agreed (i) to file a registration statement (the “October 2025 Registration Statement”) with the SEC under the Securities Act on or before the 20<sup>th</sup> calendar day following the Closing Date (subject to certain exceptions) for purposes of registering the resale of the shares of Common Stock issuable upon Conversion of the Notes, if any, and the shares of Common Stock issuable pursuant to the \$3.40 Warrants (collectively, the “October 2025 Registrable Shares”), (ii) to use its reasonable best efforts to have such registration statement declared effective within the time period set forth in the Subscription Agreement, and (iii) to keep the October 2025 Registration Statement effective until the October 2025 Registrable Shares covered by such October 2025 Registration Statement may be sold without volume or manner-of-sale restrictions pursuant to Rule 144, subject to certain conditions.

The offer and sale of the securities pursuant to the October 2025 Subscription Agreement were not registered under the Securities Act, or any state securities laws. We relied on an exemption from the registration requirements of the Securities Act provided by Section 3(a)(9) and/or Section 4(a)(2) thereof and Rule 506(b) of Regulation D promulgated thereunder. Each of the Selling Securityholders has represented to us that such Selling Securityholder is an “accredited investor,” as defined in Regulation D of the Securities Act, and that the securities purchased by such Selling Securityholder were being acquired solely for such selling stockholder’s own account and for investment purposes and not with a view to its future sale or distribution.

The description of the October 2025 Subscription Agreement, the Notes and \$3.40 Warrants are not complete and are qualified in their entirety by reference to the subscription agreement, form of convertible note and the form of warrant, which were filed as exhibits to our Current Report on Form 8-K, filed on October 31, 2025. See “*Where You Can Find More Information*” and “*Information Incorporated by Reference*.” The representations, warranties and covenants made by us in such agreements were made solely for the benefit of the parties to such agreements, including, in some cases, for the purpose of allocating risk among the parties thereto, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were made as of an earlier date. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

#### **Recent Developments**

On October 26, 2025, our board of directors appointed Mark Spring, effective November 1, 2025, as our Chief Financial Officer and Treasurer as well as its principal financial officer and principal accounting officer. Mr. Spring replaced Gregory Gorgas in the roles of Treasurer, principal financial officer and principal accounting officer.

On October 15, 2025, we entered into a cooperation letter agreement (the “Cooperation Agreement”) with Daniel S. Farb and certain of his affiliates (collectively, the “Farb Parties”). Pursuant to the Cooperation Agreement, Mr. Farb agreed to irrevocably withdraw his nomination of candidates for election to our board of directors at the 2025 annual meeting of stockholders. Additionally, the Farb Parties agreed to certain standstill restrictions and voting commitments during the Restricted Period (as defined in the Agreement), including, among other things, (i) an obligation to vote shares of our common stock beneficially owned by the Farb Parties, and that the Farb Parties have the right to vote, subject to certain limited exceptions, in favor of the election of each person nominated by our board of directors for election as a director, against any proposals to remove any member of our board of directors, and in accordance with the recommendation of our board of directors on all other proposals or business, and (ii) a restriction on the ability of the Farb Parties to acquire beneficial ownership of more than 8.0% of the then-outstanding shares of the Company’s common stock.

#### **Corporate Information**

We were incorporated in the State of Nevada on May 2, 2011, as Knight Knox Development Corp. On January 19, 2017, we changed our name to Reactive Medical, Inc. and on April 14, 2017, we changed our name to Artelo Biosciences, Inc. Our principal executive office is located at 505 Loma Santa Fe, Suite 160, Solana Beach, California 92075 and our telephone number is (858) 925-7049. Our corporate website address is [www.artelobio.com](http://www.artelobio.com). Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus.

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

Additionally, we are a “smaller reporting company” as defined in Rule 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (1) the market value of our Common Stock held by non-affiliates equals or exceeds \$250 million as of the end of that year’s second fiscal quarter, or (2) our annual revenues equaled or exceeded \$100 million during such completed fiscal year and the market value of our Common Stock held by non-affiliates equals or exceeds \$700 million as of the end of that year’s second fiscal quarter.

| The Offering                                                  |                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shares of Common Stock Offered by the Selling Securityholders | 899,972 shares of Common Stock, consisting of: (i) 215,292 shares of Common Stock issuable upon the conversion of the Notes, (ii) 246,498 shares of Common Stock issuable upon the exercise of the \$6.24 Warrants, and (iv) 438,182 shares of Common Stock issuable upon the exercise of the \$3.40 Warrants. |
| Use of proceeds                                               | We will not receive any proceeds from any sale of the shares being offered for sale by the Selling Securityholders. We will, however, receive the net proceeds of any Warrants exercised for cash. See “ <i>Use of Proceeds</i> ” for additional information                                                   |
| Dividend policy                                               | We have never declared or paid any cash dividends on our shares of Common Stock. We do not anticipate paying any cash dividends in the foreseeable future.                                                                                                                                                     |
| Risk factors                                                  | You should carefully consider the risk factors described in the section of this prospectus entitled “ <i>Risk Factors</i> ,” together with all of the other information included in this prospectus, before deciding to purchase our shares of Common Stock.                                                   |
| Market and trading symbol                                     | Our shares of Common Stock are traded on the Nasdaq Capital Market under the symbol “ARTL.”                                                                                                                                                                                                                    |

## RISK FACTORS

An investment in our securities involves a high degree of risk. Our business, financial condition or results of operations could be materially and adversely affected by any of these risks. If any of these risks occur, the value of our shares of Common Stock and our other securities may decline. Before making your investment decision, you should carefully consider the risks together with all of the other information contained or incorporated by reference in this prospectus, including any risks in the section entitled “Risk Factors” contained in any supplements to this prospectus, in our Annual Report on Form 10-K filed with the SEC on March 3, 2025, as updated or supplemented on our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and in our subsequent filings with the SEC. Each of the referenced risks and uncertainties could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

### Risks Related to This Offering

***We may be required to raise additional financing by issuing new securities with terms or rights superior to those of our existing securityholders, which could adversely affect the market price of shares of common stock and our business.***

We will require additional financing to fund future operations, including for research and development, clinical trials, expansion in current and new markets, development and acquisition, capital costs and the costs of any necessary implementation of technological innovations or alternative technologies. We may not be able to obtain financing on favorable terms, if at all. If we raise additional funds by issuing equity securities, the percentage ownership of our current stockholders will be reduced, and the holders of the new equity securities may have rights superior to those of our existing securityholders, which could adversely affect the market price of our common stock and the voting power of shares of our common stock.

***Our financial condition raises substantial doubt as to our ability to continue as a going concern.***

As of September 30, 2025, we had approximately \$1.7 million in cash and cash equivalents, and working capital of negative \$3.0 million, and we have incurred and expect to continue to incur significant costs in pursuit of our drug candidates. For the nine months ended September 30, 2025, we recorded a net loss of approximately \$8.7 million and used cash in operations of approximately \$8.6 million. Our financial statements for the nine months ended September 30, 2025 have been prepared assuming that we will continue to operate as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. To date, we have not generated substantial product revenues from our activities and have incurred substantial operating losses. We expect that we will continue to generate substantial operating losses for the foreseeable future until we complete development and approval of one of our product candidates. We expect to continue to fund our operations primarily through utilization of our current financial resources and additional raises of capital.

These conditions raise substantial doubt about our ability to continue as a going concern. We have evaluated the significance of the uncertainty regarding our financial condition in relation to our ability to meet our obligations, which has raised substantial doubt about our ability to continue as a going concern. While it is very difficult to estimate our future liquidity requirements, we believe if we are unable to obtain additional financing, existing cash resources will not be sufficient to enable us to fund the anticipated level of operations through one year from the date the accompanying financial statements are issued. There can be no assurances that we will be able to secure additional financing on acceptable terms. In the event we do not secure additional financing, we will be forced to delay, reduce, or eliminate some or all of its discretionary spending, which could adversely affect our business prospects, ability to meet long-term liquidity needs and the ability to continue operations.

## Risks Related to Our Common Stock

### *Our Common Stock may be delisted from Nasdaq if we fail to comply with continued listing standards.*

Our Common Stock is currently traded on Nasdaq under the symbol “ARTL.” If we fail to comply with Nasdaq’s continued listing standards, we may be delisted and our Common Stock will trade, if at all, only on the over-the-counter market, such as the OTC Bulletin Board or OTCQX market, and then only if one or more registered broker-dealer market makers comply with quotation requirements. In addition, delisting of our Common Stock could depress our stock price, substantially limit liquidity of our Common Stock and materially adversely affect our ability to raise capital on terms acceptable to us, or at all. Further, delisting of our Common Stock would likely result in our Common Stock becoming a “penny stock” under the Exchange Act.

On May 22, 2025, we received a notice from the Staff notifying us that, because our stockholders’ equity was below \$2.5 million as reported on our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, we no longer meet the minimum stockholders’ equity requirement for continued listing on Nasdaq under Nasdaq Rule 5550(b)(1). Pursuant to the notice and the Listing Rules of Nasdaq, we submitted a plan to regain compliance with the minimum stockholders’ equity requirement within 45 calendar days of receiving the letter from the Staff. If such compliance plan is accepted, Nasdaq may grant an extension of 180 calendar days from the date of the notice. This plan was updated and resubmitted to Nasdaq on August 29, 2025. If the updated plan is not accepted, we may appeal the Staff’s determination to a Nasdaq Hearings Panel. We are currently evaluating options to regain compliance and intend to timely submit a plan to regain compliance with the minimum stockholders’ equity requirement. Although we intend to use all reasonable efforts to achieve compliance with all Nasdaq listing standards, there can be no assurance that we will be able to regain compliance with the listing standards or that we will otherwise be in compliance with other applicable Nasdaq listing criteria. Furthermore, Nasdaq may delist our common stock for public interest concerns, even if we are able to regain compliance for continued listing on Nasdaq under the listing requirements.

If our Common Stock were to be delisted by Nasdaq, it may be eligible for quotation on an over-the-counter quotation system or on the pink sheets. Upon any such delisting, our Common Stock would become subject to the regulations of the SEC relating to the market for penny stocks. A penny stock is any equity security not traded on a national securities exchange that has a market price of less than \$5.00 per share. The regulations applicable to penny stocks may severely affect the market liquidity for our Common Stock and could limit the ability of stockholders to sell securities in the secondary market. In such a case, an investor may find it more difficult to dispose of or obtain accurate quotations as to the market value of our Common Stock, and there can be no assurance that our Common Stock will be eligible for trading or quotation on any alternative exchanges or markets.

Delisting from Nasdaq could adversely affect our ability to raise additional financing through public or private sales of equity securities, would significantly affect the ability of investors to trade our securities and would negatively affect the value and liquidity of our Common Stock. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest and fewer business development opportunities.

The sale or availability for sale of shares issuable pursuant to this prospectus may depress the price of our Common Stock, dilute the interest of our existing stockholders, and encourage short sales by third parties, which could further depress the price of our Common Stock.

As of November 10, 2025, there were 2,018,746 total shares outstanding and the Selling Securityholders may sell up to 899,972 shares of Common Stock pursuant to this prospectus (assuming they choose to convert all outstanding principal, together with the accrued and unpaid interest of their Notes and exercise all of their \$6.24 Warrants and \$3.40 Warrants). To the extent that the Selling Securityholders sell shares of our Common Stock, the market price of our Common Stock may decrease due to the additional selling pressure in the market. In addition, the dilution from exercise of the Warrants may cause stockholders to sell their shares of our Common Stock, which could further contribute to any decline in the price of our Common Stock. Any downward pressure on the price of our Common Stock caused by the sale or potential sale of such shares could encourage short sales by third parties. Such sales could place downward pressure on the price of our Common Stock by increasing the number of shares of our Common Stock being sold, which could further contribute to any decline in the market price of our Common Stock.

***Any market activity involving short selling or other market making activities could result in negative impact to the market price for our Common Stock.***

Short selling is a method used to capitalize on an expected decline in the market price of a security and could depress the price of our Common Stock, which could further increase the potential for future short sales. Sales of our Common Stock could encourage short sales by market participants, which could create negative market momentum. Continued short selling may bring about a temporary, or possibly long term, decline in the market price of our Common Stock. The Company cannot predict the size of future issuances or sales of Common Stock or the effect, if any, that future issuances and sales of Common Stock will have on its market price or the activities of short sellers. Sales involving significant amounts of Common Stock, including issuances made in the ordinary course of the Company's business, or the perception that such sales could occur, may materially and adversely affect prevailing market prices of the Common Stock.

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

We have never paid dividends on any of our capital stock and currently intend to retain any future earnings to fund the growth of our business. We may also enter into credit agreements or other borrowing arrangements in the future that will restrict our ability to declare or pay cash dividends on our Common Stock. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. As a result, capital appreciation, if any, of the securities will be the sole source of gain, if any, for the foreseeable future.

***The market price of our shares may be subject to fluctuation and volatility. You could lose all or part of your investment.***

The market price of our common stock is subject to wide fluctuations in response to various factors, some of which are beyond our control. The market price of our shares on the Nasdaq Capital Market may fluctuate as a result of a number of factors, some of which are beyond our control, including, but not limited to:

- actual or anticipated variations in our and our competitors' results of operations and financial condition
- changes in earnings estimates or recommendations by securities analysts, if our shares are covered by analysts;
- market acceptance of our product candidates;
- our obligation to use commercially reasonable efforts to use \$250,000 of the net proceeds from our June 2025 private placement to purchase Solana, as required by the related purchase agreement;
- development of technological innovations or new competitive products by others;
- announcements of technological innovations or new products by us;
- publication of the results of preclinical or clinical trials for our product candidates;
- failure by us to achieve a publicly announced milestone;
- delays between our expenditures to develop and market new or enhanced products and the generation of sales from those products;
- developments concerning intellectual property rights, including our involvement in litigation brought by or against us;
- regulatory developments and the decisions of regulatory authorities as to the approval or rejection of new or modified products;
- changes in the amounts that we spend to develop, acquire or license new products, technologies or businesses;
- changes in our expenditures to promote our product candidates;
- our sale or proposed sale, or the sale by our significant stockholders, of our shares or other securities in the future;
- changes in key personnel;
- success or failure of our research and development projects or those of our competitors;
- the trading volume of our shares; and
- general economic and market conditions and other factors, including factors unrelated to our operating performance.



These factors and any corresponding price fluctuations may materially and adversely affect the market price of our shares and result in substantial losses being incurred by our investors. In the past, following periods of market volatility, public company stockholders have often instituted securities class action litigation. If we were involved in securities litigation, it could impose a substantial cost upon us and divert the resources and attention of our management from our business.

***We were obligated to use commercially reasonable efforts to invest \$250,000 of our cash to purchase Solana, a cryptocurrency, the price of which has been, and will likely continue to be, highly volatile.***

As a condition of our June 2025 private placement, we were obligated to use commercially reasonable efforts to use \$250,000 of the net proceeds from the private placement to purchase Solana, a cryptocurrency, which we purchased on August 6, 2025. Solana is a highly volatile asset. Solana does not pay interest, but if management determines to stake the Solana tokens in treasury, certain rewards can be earned on Solana. The ability to generate a return on investment from the purchase of Solana will depend on whether there is appreciation in the value of Solana. Future fluctuations in Solana's trading prices may result in our converting Solana into cash with a value substantially below the value at which such Solana was purchased.

***Any Solana we purchase may be less liquid than our existing cash and cash equivalents and may not be able to serve as a source of liquidity for us to the same extent as cash and cash equivalents.***

Historically, the crypto markets have been characterized by: significant volatility in price, limited liquidity and trading volumes compared to sovereign currencies markets; relative anonymity; a developing regulatory landscape; potential susceptibility to market abuse and manipulation; compliance and internal control failures at exchanges; and various other risks inherent in its entirely electronic, virtual form and decentralized network. During times of market instability, we may not be able to sell our Solana at favorable prices or at all. Further, Solana which we may hold with a custodian does not enjoy the same protections as are available to cash or securities deposited with or transacted by institutions subject to regulation by the Federal Deposit Insurance Corporation or the Securities Investor Protection Corporation. If we are unable to sell our Solana or otherwise generate funds using our Solana holdings, or if we are forced to sell our Solana at a significant loss, in order to meet our working capital requirements, our business and financial condition could be negatively impacted.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference contains forward-looking statements that are based on our management's beliefs and assumptions and on information currently available. This section should be read in conjunction with our financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2024. The statements contained or incorporated by reference in this prospectus that are not historical facts are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended.

Forward-looking statements can be identified by words such as "believe," "anticipate," "may," "might," "can," "could," "continue," "depends," "expect," "expand," "forecast," "intend," "predict," "plan," "rely," "should," "will," "may," "seek," or the negative of these terms and other similar expressions, although not all forward-looking statements contain these words. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other "forward-looking" information. These statements relate to our future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements.

These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including, but not limited to, those described in "*Risk Factors*." These forward-looking statements reflect our beliefs and views with respect to future events and are based on estimates and assumptions as of the date of this prospectus and are subject to risks and uncertainties. We discuss many of these risks in greater detail in the section entitled "*Risk Factors*" and elsewhere in this prospectus, including the information incorporated by reference. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in any forward-looking statements, whether as a result of new information, future events or otherwise.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

This prospectus and the information incorporated by reference also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data, and similar sources.

## **USE OF PROCEEDS**

All shares of our Common Stock offered by this prospectus are being registered for resale by the Selling Securityholders identified herein. We will not receive any of the proceeds from the sale of the Shares being offered for sale by the Selling Securityholders.

The Shares covered by the registration statement of which this prospectus is a part includes 684,680 shares of Common Stock issuable upon exercise of the Warrants. If all such warrants are exercised in cash, then we will receive gross proceeds of approximately \$3.0 Million. Proceeds to us from the exercise of such warrants will be used for general corporate purposes, including working capital.

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 securities. We will bear the costs, fees and expenses incurred in effecting the registration of the Shares covered by this prospectus, including all registration and filing fees, Nasdaq listing fees and fees and expenses of our counsel and our independent registered public accounting firm.

## DIVIDEND POLICY

We have never declared or paid any cash dividends on our Common Stock and do not anticipate paying any cash dividends on our Common Stock at any time in the foreseeable future. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our Common Stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on, among other factors, our financial condition, operating results, capital requirements, general business conditions, the terms of any future credit agreements and other factors that our board of directors may deem relevant. See the section captioned “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” contained in our Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q for additional information regarding our financial condition.

**SELLING SECURITYHOLDERS**

This prospectus covers the resale or other disposition by the Selling Securityholders of the Shares. The Selling Securityholders listed in the table below may from time to time offer and sell any or all of the Shares set forth below pursuant to this prospectus. When we refer to the “Selling Securityholders” in this prospectus, we refer to the persons listed in the table below and the permitted transferees that hold any of the Selling Securityholders’ interest in the Shares after the date of this prospectus.

The following table sets forth certain information concerning the Shares that may be offered from time to time by each Selling Securityholder pursuant to this prospectus. The number of shares beneficially owned by each Selling Securityholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Percentage ownership is based on 2,018,746 shares of Common Stock outstanding as of November 10, 2025. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person or entity, shares of Common Stock subject to warrants or other rights held by such person or entity that are currently exercisable or convertible or will become exercisable or convertible or will vest within 60 days of such date are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. The percentages included in the table below take into account the beneficial ownership limitations included in the Notes, the \$6.24 Warrants and the \$3.40 Warrants, which provide that a holder of such notes and warrants may not exercise any portion of such holder’s Notes, the \$6.24 Warrants and the \$3.40 Warrants to the extent that the holder, together with its affiliates, would beneficially own more than 4.9% (or 9.9%, in the case of the \$6.24 Warrants) of the Company’s outstanding shares of Common Stock immediately after exercise, except that upon at least 61 days’ prior notice from the holder to the Company, the holder may increase the beneficial ownership limitation to up to 19.9% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise. Except as otherwise indicated, to our knowledge, each of the Selling Securityholders listed has sole voting and investment power with respect to the shares beneficially owned by the Selling Securityholder, subject to community property laws where applicable.

The Selling Securityholders identified below may have sold, transferred or otherwise disposed of all or a portion of their securities included in the table below in transactions exempt from the registration requirements of the Securities Act. Any changed or new information provided to us by the Selling Securityholders, including regarding the identity of, and the securities held by, each Selling Securityholder, will be set forth in a prospectus supplement or amendments to the registration statement of which this prospectus is a part, if and when necessary. A Selling Securityholder may sell all, some or none of such securities in this offering. See “*Plan of Distribution.*” For purposes of this table, we have assumed that the Selling Securityholders will have sold all of the securities covered by this prospectus upon the completion of the offering.

As detailed below, certain of the Selling Securityholders have a position, office or other material relationship with us:

| <b>Selling<br/>Securityholders</b> | <b>Affiliation with the Company</b> |
|------------------------------------|-------------------------------------|
| Connie Matsui                      | Director                            |
| Tamara Favorito                    | Director                            |
| Gregory Gorgas                     | Director and Officer                |
| Peter O’Brien                      | Consultant                          |
| Chris Duncan                       | Consultant                          |
| Jason Baybutt                      | Consultant                          |
| PubCo Reporting Solutions,<br>Inc. | Service Provider                    |

| Selling Securityholder <sup>(1)</sup>                                       | Number of Shares of<br>Common Stock<br>Beneficially Owned<br>Prior to Offering | Percentage of Shares<br>Beneficially Owned Prior<br>to Offering % | Maximum Number of Shares of<br>Common Stock to be Sold<br>Pursuant to this Prospectus | Number of Shares<br>of Common Stock<br>Beneficially Owned<br>After Offering | Percentage of Shares<br>Beneficially Owned after<br>Shares are Sold |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------|
| 3i, LP <sup>(2)</sup>                                                       | 98,919                                                                         | 4.9%                                                              | 255,893                                                                               | -                                                                           | -%                                                                  |
| Donal Hamill <sup>(3)</sup>                                                 | 98,919                                                                         | 4.9%                                                              | 225,180                                                                               | 547                                                                         | *%                                                                  |
| Equity Trust Company<br>Custodian FBO Donal F.<br>Hamill IRA <sup>(4)</sup> | 98,919                                                                         | 4.9%                                                              | 112,590                                                                               | -                                                                           | -<br>%                                                              |
| Connie Matsui <sup>(5)</sup>                                                | 98,919                                                                         | 4.9%                                                              | 143,300                                                                               | 3,970                                                                       | *%                                                                  |
| Eamonn O’Kane <sup>(6)</sup>                                                | 71,649                                                                         | 3.5%                                                              | 71,649                                                                                | -                                                                           | -%                                                                  |
| Peter O’Brien <sup>(7)</sup>                                                | 21,709                                                                         | 1.1%                                                              | 19,728                                                                                | 1,981                                                                       | *%                                                                  |
| David Waldman <sup>(8)</sup>                                                | 51,177                                                                         | 2.5%                                                              | 51,177                                                                                | -                                                                           | -%                                                                  |
| Gregory Gorgas <sup>(9)</sup>                                               | 88,558                                                                         | 4.4%                                                              | 35,822                                                                                | 52,736                                                                      | 2.6%                                                                |
| Tamara Favorito <sup>(10)</sup>                                             | 27,864                                                                         | 1.4%                                                              | 25,586                                                                                | 2,278                                                                       | *                                                                   |
| PubCo Reporting Solutions,<br>Inc. <sup>(11)</sup>                          | 25,586                                                                         | 1.3%                                                              | 25,586                                                                                | -                                                                           | -                                                                   |
| Troy Norris <sup>(12)</sup>                                                 | 18,082                                                                         | *                                                                 | 15,352                                                                                | 2,730                                                                       | *                                                                   |
| Jason Baybutt <sup>(13)</sup>                                               | 10,963                                                                         | *                                                                 | 10,233                                                                                | 730                                                                         | *                                                                   |
| John Brady <sup>(14)</sup>                                                  | 10,319                                                                         | *                                                                 | 10,233                                                                                | 86                                                                          | *                                                                   |
| Chris Duncan <sup>(15)</sup>                                                | 10,366                                                                         | *                                                                 | 10,233                                                                                | 133                                                                         | *                                                                   |

\* Less than 1.0%.

- (1) This table and the information in the notes below are based upon information supplied by the Selling Securityholders.
- (2) Consists of (i) 61,747 shares of Common Stock issuable upon conversion of the Notes, (ii) 68,474 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 125,672 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. As a result of the beneficial ownership limitation of the Notes, the \$6.24 Warrants and the \$3.40 Warrants, the “Shares of Common Stock Beneficially Owned Prior to Offering” excludes an aggregate of 156,974 shares of Common Stock issuable upon the conversion or exercise, as applicable, of the Notes, the \$6.24 Warrants and \$3.40 Warrants due to the beneficial ownership limitation. 3i Management LLC is the general partner of 3i, LP, and Maier Joshua Tarlow is the manager of 3i Management LLC. As such, Mr. Tarlow exercises sole voting and investment discretion over securities beneficially owned directly or indirectly by 3i, LP and 3i Management LLC. Mr. Tarlow disclaims beneficial ownership of the securities beneficially owned directly by 3i, LP and indirectly by 3i Management LLC. The business address of each of the aforementioned parties is 2 Wooster Street, 2nd Floor, New York, NY 10013. We have been advised that none of Mr. Tarlow, 3i Management LLC, or 3i, LP is a member of the Financial Industry Regulatory Authority, or FINRA, or an independent broker-dealer, or an affiliate or associated person of a FINRA member or independent broker-dealer.
- (3) Consists of (i) 27,168 shares of Common Stock issuable upon conversion of the Notes, (ii) 30,128 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 55,294 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 112,590 shares of Common Stock held by Equity Trust Company Custodian FBO Donal F. Hamill IRA. As a result of the beneficial ownership limitation of the Notes, the \$6.24 Warrants and the \$3.40 Warrants, the “Shares of Common Stock Beneficially Owned Prior to Offering” excludes an aggregate of 126,808 shares of Common Stock issuable upon the conversion or exercise, as applicable, of the Notes, the \$6.24 Warrants and \$3.40 Warrants due to the beneficial ownership limitation. The principal address of Donal Hamill is 683 SE 27th Street, #207, Mercer Island, WA 98040.
- (4) Consists of (i) 27,168 shares of Common Stock issuable upon conversion of the Notes, (ii) 30,128 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 55,294 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. As a result of the beneficial ownership limitation of the Notes, the \$6.24 Warrants and the \$3.40 Warrants, the “Shares of Common Stock Beneficially Owned Prior to Offering” excludes an aggregate of 13,671 shares of Common Stock issuable upon the exercise of the Warrants due to the beneficial ownership limitation. Donal Hamill has voting and investment power with respect to the securities beneficially owned by Equity Trust Company Custodian FBO Donal F. Hamill IRA. The principal address of Equity Trust Company Custodian FBO Donal F. Hamill IRA is 683 SE 27th Street, #207, Mercer Island, WA 98040.
- (5) Consists of (i) 34,578 shares of Common Stock issuable upon conversion of the Notes, (ii) 38,346 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 70,376 shares of Common Stock issuable upon exercise of the \$3.40 Warrants, (iv) 630 shares held directly by Connie Matsui and (v) 3,340 shares of Common Stock issuable pursuant to options held directly by Connie Matsui exercisable within 60 days of November 10, 2025. As a result of the beneficial ownership limitation of the Notes, the \$6.24 Warrants and the \$3.40 Warrants, the “Shares of Common Stock Beneficially Owned Prior to Offering” excludes an aggregate of 48,351 shares of Common Stock issuable upon the conversion or exercise, as applicable, of the Notes, the \$6.24 Warrants and \$3.40 Warrants due to the beneficial ownership limitation. The principal address of Connie Matsui is c/o Artelo Biosciences, Inc., 505 Lomas Santa Fe, Suite 160, Solana Beach, California 92075.

- (6) Consists of (i) 17,289 shares of Common Stock issuable upon conversion of the Notes, (ii) 19,172 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 35,188 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. The principal address of Eamonn O’Kane is Arabella, Claremont Road, Foxrock, Dublin D18A090.
- (7) Consists of (i) 2,890 shares of Common Stock issuable upon conversion of the Notes, (ii) 10,956 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 5,882 shares of Common Stock issuable upon exercise of the \$3.40 Warrants, (iv) 1,400 shares held directly by Peter O’Brien and (v) 581 shares of Common Stock issuable pursuant to options held directly by Peter O’Brien exercisable within 60 days of November 10, 2025. The principal address of Peter O’Brien is 1 Albert Tee, Mesrh Rd, Bray, Co Wicklow Ireland.
- (8) Consists of (i) 12,349 shares of Common Stock issuable upon conversion of the Notes, (ii) 13,694 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 25,134 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. The principal address of David Waldman is 995 Orion Court, Merrick, NY 11566.
- (9) Consists of (i) 8,644 shares of Common Stock issuable upon conversion of the Notes, (ii) 9,586 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 17,592 shares of Common Stock issuable upon exercise of the \$3.40 Warrants, (iv) 3,008 shares of Common Stock held directly by Gregory D. Gorgas, (v) 400 shares of Common Stock held indirectly by Gorgas Family Trust and (vi) 49,328 shares of Common Stock issuable pursuant to options held directly by Gregory D. Gorgas exercisable within 60 days of November 10, 2025. The principal address of Gregory D. Gorgas is c/o Artelo Biosciences, Inc., 505 Lomas Santa Fe, Suite 160, Solana Beach, California 92075.
- (10) Consists of (i) 6,174 shares of Common Stock issuable upon conversion of the Notes, (ii) 6,846 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 12,566 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 2,278 shares of Common Stock issuable pursuant to options held directly by Tamara A. Favorito exercisable within 60 days of November 10, 2025. The principal address of Tamara A. Favorito is c/o Artelo Biosciences, Inc., 505 Lomas Santa Fe, Suite 160, Solana Beach, California 92075.
- (11) Consists of (i) 6,174 shares of Common Stock issuable upon conversion of the Notes, (ii) 6,846 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 12,566 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. Nanuk Warman has voting and investment power with respect to the securities beneficially owned by PubCo Reporting Solutions, Inc. The principal address of PubCo Reporting Solutions, Inc is 610 - 475 W. Georgia Street, Vancouver, BC Canada V6B 4M9.
- (12) Consists of (i) 3,704 shares of Common Stock issuable upon conversion of the Notes, (ii) 4,108 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 7,540 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 2,730 shares of Common Stock issuable pursuant to options held directly by Troy Norris exercisable within 60 days of November 10, 2025. The principal address of Troy Norris is 6 Bethany, Laguna Niguel, CA 92677.
- (13) Consists of (i) 2,469 shares of Common Stock issuable upon conversion of the Notes, (ii) 2,738 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 5,026 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 730 shares of Common Stock issuable pursuant to options held directly by Jason Baybutt exercisable within 60 days of November 10, 2025. The principal address of Jason Baybutt is c/o PubCo Reporting Solutions, Inc., 610 - 475 W. Georgia Street, Vancouver, BC Canada V6B 4M9.
- (14) Consists of (i) 2,469 shares of Common Stock issuable upon conversion of the Notes, (ii) 2,738 shares of Common Stock issuable upon exercise of the \$6.24 Warrants and (iii) 5,026 shares of Common Stock issuable upon exercise of the \$3.40 Warrants. The principal address of John Brady is 1 Vernon, Rise, Clontarf, Dublin 3, Ireland.
- (15) Consists of (i) 2,469 shares of Common Stock issuable upon conversion of the Notes, (ii) 2,738 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 5,026 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 133 shares of Common Stock issuable pursuant to options held directly by Chris Duncan exercisable within 60 days of November 10, 2025. The principal address of Chris Duncan is c/o Artelo Biosciences, Inc., 505 Lomas Santa Fe, Suite 160, Solana Beach, California 92075.

## PLAN OF DISTRIBUTION

Each Selling Securityholder of the shares of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on Nasdaq or any other stock exchange, market or trading facility on which the 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;
- 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;
- to or through one or more underwriters or dealers in a public offering and sale by them, whether individually or through an underwriting syndicate led by one or more managing underwriters;
- through agents;
- 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 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

If underwriters are used in the sale of any securities, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. Securities may be either offered to the public through underwriting syndicates represented by managing underwriters or directly by underwriters.

If a dealer is used in an offering of securities, the dealer may purchase the securities, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of sale.

Securities may be sold directly or through agents designated from time to time. We will name any agent involved in the offering and sale of such securities and we will describe any commissions paid to the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, the agent will act on a best-efforts basis for the period of its appointment.



Underwriters, dealers and agents may be entitled to indemnification by the Selling Securityholders and/or us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the agents, broker-dealers or underwriters may be required to make in respect thereof.

Underwriters, dealers or agents may receive compensation in the form of discounts, concessions or commissions from the Selling Securityholders or the purchasers, as their agents in connection with the sale of securities. If the shares are sold through underwriters, broker-dealers or agents, the Selling Securityholders will be responsible for underwriting discounts or commissions or agent's commissions. These underwriters, dealers or agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions or profits on resale received by the underwriters, dealers or agents may be treated as underwriting discounts and commissions. Each accompanying prospectus supplement will identify any such underwriter, dealer or agent and describe any compensation received by them from the Selling Securityholders. Any initial public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

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. If the Selling Securityholders are deemed to be underwriters, the Selling Securityholders may be subject to certain liabilities under statutes including, but not limited to, Section 11, 12 and 17 of the Securities Act and Section 10(b) and Rule 10b-5 under the Exchange Act.

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.

We have agreed to keep this prospectus effective until 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.

In order to comply with the securities laws of some states, if applicable, the shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements 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 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).

## PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our Common Stock as of November 10, 2025 by:

- each person, or group of affiliated persons, who we know to beneficially own more than 5% of our Common Stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The percentage beneficial ownership information shown in the table is based on an aggregate of 2,018,746 shares of our Common Stock outstanding as November 10, 2025.

Beneficial ownership is determined according to the rules of the SEC, which generally provide that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security. Under those rules, beneficial ownership includes securities that the individual or entity has the right to acquire, such as through the exercise of stock options, within 60 days of November 10, 2025. Shares subject to options that are currently exercisable or exercisable within 60 days of November 10, 2025 are considered outstanding and beneficially owned by the person holding such options for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Except as noted by footnote, and subject to community property laws where applicable, based on the information provided to us, we believe that the persons and entities named in the table below have sole voting and investment power with respect to all shares shown as beneficially owned by them.

Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws. Except as otherwise noted below, the address of each of the individuals and entities named in the table below is c/o Artelo Biosciences, Inc., 505 Lomas Santa Fe, Suite 160, Solana Beach, California 92075.

| <b>Name and Address of Beneficial Owner</b>                                | <b>Shares</b> | <b>Percentage</b> |
|----------------------------------------------------------------------------|---------------|-------------------|
| <b>5% Stockholders:</b>                                                    |               |                   |
| None                                                                       |               |                   |
| <b>Other Directors and Named Executive Officers:</b>                       |               |                   |
| Gregory D. Gorgas <sup>(1)</sup>                                           | 88,558        | 4.4%              |
| Connie Matsui <sup>(2)</sup>                                               | 98,919        | 4.9%              |
| Steven Kelly <sup>(3)</sup>                                                | 3,346         | *                 |
| Douglas Blayney, M.D. <sup>(4)</sup>                                       | 3,282         | *                 |
| R. Martin Emanuele, Ph.D. <sup>(5)</sup>                                   | 3,238         | *                 |
| Gregory R. Reyes M.D., Ph.D. <sup>(6)</sup>                                | 2,886         | *                 |
| Tamara A. Favorito <sup>(7)</sup>                                          | 27,864        | 1.4%              |
| Mark Spring <sup>(8)</sup>                                                 | 1,562         | *                 |
| All directors and executive officers as a group (8 persons) <sup>(9)</sup> | 229,655       | 11.4%             |

\* Less than 1%

(1) Consists of (i) 8,644 shares of Common Stock issuable upon conversion of the Notes, (ii) 9,586 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 17,592 shares of Common Stock issuable upon exercise of the \$3.40 Warrants, (iv) 3,008 shares of Common Stock held directly by Gregory D. Gorgas, (v) 400 shares of Common Stock held indirectly by Gorgas Family Trust and (vi) 49,328 shares of Common Stock issuable pursuant to options held directly by Gregory D. Gorgas exercisable within 60 days of November 10, 2025.

(2) Consists of (i) 34,578 shares of Common Stock issuable upon conversion of the Notes, (ii) 38,346 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 70,376 shares of Common Stock issuable upon exercise of the \$3.40 Warrants, (iv) 6.30 shares held directly by Connie Matsui and (v) 3,340 shares of Common Stock issuable pursuant to options held directly by Connie Matsui exercisable within 60 days of November 10, 2025.

- (3) Consists of (i) 139 shares held by Steven Kelly, and (ii) 3,207 shares of Common Stock issuable pursuant to options held directly by Steven Kelly exercisable within 60 days of November 10, 2025.
- (4) Consists of (i) 139 shares held by Douglas Blayney, M.D., and (ii) 3,143 shares of Common Stock issuable pursuant to options held directly by Douglas Blayney, M.D. exercisable within 60 days of November 10, 2025.
- (5) Consists of (i) 139 shares held by R. Marty Emanuele, Ph.D., and (ii) 3,099 shares of Common Stock issuable pursuant to options held directly by R. Marty Emanuele, Ph.D. exercisable within 60 days of November 10, 2025.
- (6) Consists of 2,886 shares of Common Stock issuable pursuant to options held directly by Gregory R. Reyes M.D., Ph.D. exercisable within 60 days of November 10, 2025.
- (7) Consists of (i) 6,174 shares of Common Stock issuable upon conversion of the Notes, (ii) 6,846 shares of Common Stock issuable upon exercise of the \$6.24 Warrants, (iii) 12,566 shares of Common Stock issuable upon exercise of the \$3.40 Warrants and (iv) 2,278 shares of Common Stock issuable pursuant to options held directly by Tamara A. Favorito exercisable within 60 days of November 10, 2025.
- (8) Consists of 1,562 shares of Common Stock issuable pursuant to options held directly by Mark Spring exercisable within 60 days of November 10, 2025
- (9) Includes 68,843 shares of Common Stock subject to options exercisable within 60 days of November 10, 2025.

## DESCRIPTION OF CAPITAL STOCK

The following description summarizes certain terms of our capital stock and certain provisions of our Articles of Incorporation and Bylaws. This summary does not purport to be complete and is qualified in its entirety by the provisions of our Articles of Incorporation and Bylaws, copies of which are filed with the SEC as exhibits to the registration statement on Form S-1 of which this prospectus forms a part, and to the applicable provisions of Nevada law.

### Authorized Capital Stock

Our authorized capital stock consists of 500,069,445 shares of capital stock, of which 500,000,000 shares are designated as common stock, \$0.001 par value per share, and 69,445 shares are designated as preferred stock, \$0.001 par value per share. As of November 10, 2025, there were 2,018,746 shares of Common Stock issued and outstanding held by approximately 166 holders of record of our Common Stock, and no outstanding shares of preferred stock.

### Common Stock

The holders of our Common Stock (i) have equal ratable rights to dividends from funds legally available therefor, when, as and if declared by our board of directors; (ii) are entitled to share in all of our assets available for distribution to holders of Common Stock upon liquidation, dissolution or winding up of our affairs; (iii) do not have preemptive, subscription or conversion rights and there are no redemption or sinking fund provisions or rights; and (iv) are entitled to one non-cumulative vote per share on all matters submitted to a vote of stockholders. The rights, preferences and privileges of the holders of our Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

### Preferred Stock

The Company has authorized 69,445 shares of preferred stock. There is no preferred stock outstanding.

### Anti-Takeover Effects of Nevada Law and our Articles of Incorporation and Bylaws.

Certain provisions of Nevada law and certain provisions that are included in our Articles of Incorporation and our Bylaws may have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

*Classified Board.* Our amended and restated certificate of incorporation provides that our board of directors is divided into three classes, designated Class I, Class II, and Class III. Each class will be an equal number of directors, as nearly as possible, consisting of one third of the total number of directors constituting the entire board of directors. The term of Class I directors shall terminate on the date of the 2027 annual meeting, the term of the Class II directors shall terminate on the date of the 2025 annual meeting, and the term of the Class III directors shall terminate on the date of the 2026 annual meeting. At each annual meeting of stockholders, successors to the class of directors whose term expires at that annual meeting will be elected for a three-year term.

*Stockholder Meetings.* Our Bylaws provide that a special meeting of stockholders may be called only by our president, by all of the directors when there are no more than three directors, or if there are more than three directors, by any three directors, or by the holder of a majority share of our capital stock.

*Stockholders Not Entitled to Cumulative Voting.* Our Bylaws do not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our Common Stock entitled to vote in any election of directors could elect all of the directors standing for election, if they chose, other than any directors that holders of our preferred stock may be entitled to elect.

*Nevada Business Combination Statutes.* The “business combination” provisions of Sections 78.411 to 78.444, inclusive, of the Nevada Revised Statutes, (the “NRS”), generally prohibit a Nevada corporation with at least 200 stockholders of record from engaging in various “combinations” with any interested stockholder for a period of two years after the date of the transaction in which the person became an interested stockholder, unless (a) such transaction or combination is approved by the Board prior to the date the interested stockholder obtained such status, or (b) the combination is approved by the Board and thereafter is approved at a meeting of the stockholders by the affirmative vote of stockholders representing at least 60% of the outstanding voting power held by disinterested stockholders. The prohibition on “combinations” with an interested stockholder extends beyond the expiration of the two-year period, unless:

- the combination was approved by the Board prior to the person becoming an interested stockholder or the transaction by which the person first became an interested stockholder was approved by the Board before the person became an interested stockholder or the combination is later approved by a majority of the voting power held by disinterested stockholders; or
- if the consideration to be paid by the interested stockholder is at least equal to the highest of: (a) the highest price per share paid by the interested stockholder within the two years immediately preceding the date of the announcement of the combination or in the transaction in which it became an interested stockholder, whichever is higher, (b) the market value per share of Common Stock on the date of announcement of the combination and the date the interested stockholder acquired the shares, whichever is higher, or (c) for holders of preferred stock, the highest liquidation value of the preferred stock, if it is higher.

A “combination” is generally defined to include mergers or consolidations or any sale, lease exchange, mortgage, pledge, transfer, or other disposition, in one transaction or a series of transactions, with an “interested stockholder” having: (a) an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation, (b) an aggregate market value equal to 5% or more of the aggregate market value of all outstanding voting shares of the corporation, (c) more than 10% of the earning power or net income of the corporation, and (d) certain other transactions with an interested stockholder or an affiliate or associate of an interested stockholder.

In general, an “interested stockholder” is a person who, together with affiliates and associates, beneficially owns (or within two years, did own) 10% or more of the voting power of the outstanding voting shares of a corporation. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

*Nevada Control Share Acquisition Statutes.* The “control share” provisions of Sections 78.378 to 78.3793, inclusive, of the NRS apply to “issuing corporations” that are Nevada corporations with at least 200 stockholders of record, including at least 100 stockholders of record who are Nevada residents, and that conduct business in Nevada directly or through an affiliated corporation. The control share statute prohibits an acquirer, under certain circumstances, from voting its shares of a target corporation’s stock after crossing certain ownership threshold percentages, unless the acquirer obtains approval of the target corporation’s disinterested stockholders. The statute specifies three thresholds: one-fifth or more but less than one-third, one-third or more but less than a majority, and a majority or more, of the outstanding voting power. Generally, once an acquirer crosses one of the above thresholds, those shares acquired within 90 days prior to the shareholder crossing the relevant threshold become “control shares” and such control shares are deprived of the right to vote until disinterested stockholders restore the right. These provisions also provide that if control shares are accorded full voting rights and the acquiring person has acquired a majority or more of all voting power, all other stockholders who do not vote in favor of authorizing voting rights to the control shares are entitled to demand payment for the fair value of their shares in accordance with statutory procedures established for dissenters’ rights.

Our Bylaws provide that we shall be considered an “issuing corporation” as defined in such statutes, irrespective of whether we, as of any date, (i) have 200 or more stockholders of record, at least 100 of whom have had addresses in Nevada appearing on our stock ledger at all times during the 90 days immediately preceding such date, and/or (ii) does business in Nevada directly or through an affiliated corporation.

The effect of the Nevada control share statutes is that the acquiring person, and those acting in association with the acquiring person, will obtain only such voting rights in the control shares as are conferred by a resolution of the stockholders at an annual or special meeting. The Nevada control share law could have the effect of discouraging takeovers of us.

*Amendment of Articles of Incorporation and Bylaw Provisions.* The amendment of any provision of our Articles of Incorporation (other than the name of the Company) must be approved by the board of directors and shareholders holding a majority of the voting power of the issued and outstanding shares of the Company's capital stock. The amendment of any provision of our Bylaws may be made by majority vote of the shareholders at any annual meeting or special meeting called for that purpose or by the board of directors, but the board of directors may not alter or repeal any Bylaws adopted by the shareholders.

The provisions of Nevada law, our Articles 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 the composition of our board and 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.

#### **Transfer Agent and Registrar**

The transfer agent and registrar for our Common Stock is Equiniti Trust Company, LLC. The transfer agent's address is 48 Wall Street, 23rd floor, New York, NY 10043.

#### **Market Listing**

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "ARTL."

## **MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS**

The following is a general discussion of the material U.S. holders (as defined below) with respect to their purchase, ownership and disposition of our convertible notes and warrants purchased in this offering. This discussion is for general information only, is not tax advice and does not purport to be a complete analysis of all the potential tax considerations. This discussion is based upon the provisions of the United States Internal Revenue Code of 1986, as amended, or the Code, existing and proposed Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all in effect as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought any ruling from the Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction or under U.S. federal gift and estate tax laws. In addition, this discussion does not address any tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, regulated investment companies, real estate investment trusts or other financial institutions;
- persons subject to the alternative minimum tax or the Medicare contribution tax on net investment income;
- tax-exempt organizations or governmental organizations;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- certain former citizens or long-term residents of the United States;
- partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities (and investors therein);
- persons whose functional currency is not the U.S. dollar;
- persons who hold our convertible notes or warrants as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction or integrated investment;
- persons who hold or receive our convertible notes or warrants pursuant to the exercise of any warrant or option or otherwise as compensation;
- persons who hold or receive our convertible notes or warrants pursuant to conversion rights under convertible instruments;
- persons who do not hold our convertible notes or warrants as a capital asset within the meaning of Section 1221 of the Code; or
- persons deemed to sell our convertible notes or warrants under the constructive sale provisions of the Code.

In addition, if a partnership, entity or arrangement classified as a partnership for U.S. federal income tax purposes holds our convertible notes or warrants, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership. Accordingly, entities classified as partnerships for U.S. federal income tax purposes and other pass-through entities that hold our convertible notes or warrants, as well as partners or members in such entities, should consult their tax advisors.

**You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our convertible notes or warrants arising under the U.S. federal estate or gift tax laws or under the laws of any state, local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty. In addition, significant changes in U.S. federal income tax laws were recently enacted. You should consult with your tax advisor with respect to such changes in U.S. tax law as well as potentially conforming changes in state tax laws.**

#### ***Non-U.S. Holder Defined***

For purposes of this discussion, you are a non-U.S. holder if you are any holder of our Common Stock, warrants other than a partnership (or other entity or arrangement classified as a partnership for U.S. federal income tax purposes) or:

- an individual who is a citizen or resident of the United States (for U.S. federal income tax purposes);
- a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if it (i) is subject to the primary supervision of a U.S. court and one or more U.S. persons have the authority to control all substantial decisions of the trust or (ii) has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

#### ***Distributions***

As described in the section captioned “*Dividend policy*,” we have never declared or paid cash dividends on our capital stock and do not anticipate paying any dividends on our capital stock in the foreseeable future. However, if we do make distributions on our Common Stock, those payments will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, they will constitute a return of capital and will first reduce your basis in our Common Stock, but not below zero, and then will be treated as gain from the sale of stock as described below under “—*Gain on Disposition of Convertible Notes or Warrants*.”

Subject to the discussion below on effectively connected income, backup withholding and foreign accounts, any dividend paid to you generally will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty. In order to receive a reduced treaty rate, you must provide us with an IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate.



Dividends received by you that are effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a permanent establishment maintained by you in the United States) are generally exempt from the withholding tax described in the previous paragraph, subject to the discussion below on backup withholding. In order to obtain this exemption, you must provide us with an IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty. You should consult your tax advisor regarding any applicable tax treaties that may provide for different rules.

If you hold our Common Stock through a financial institution or other agent acting on your behalf, you will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries. You may be eligible to obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

#### ***Gain on Disposition of Convertible Notes or Warrants***

Subject to the discussion below on backup withholding on convertible notes or warrants held by or through foreign entities, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our convertible notes or warrants unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, the gain is attributable to a permanent establishment maintained by you in the United States);
- you are a non-resident alien individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- we are treated as a “United States real property holding corporation,” or USRPHC, for U.S. federal income tax purposes within the meaning of Section 897(c)(2) of the Code at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our convertible notes or warrants.

We believe that we are not currently and will not become a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our Common Stock is regularly traded on an established securities market, your Common Stock will be treated as U.S. real property interests only if you actually or constructively hold more than five percent of such regularly traded Common Stock at any time during the shorter of the five-year period preceding your disposition of, or your holding period for, our Common Stock. Special rules may apply to the determination of the five percent threshold in the case of a holder of a warrant. Non-U.S. holders are urged to consult their own tax advisors regarding the effect of holding our warrants on the calculation of such five percent threshold.

If you are a non-U.S. holder described in the first bullet above, you will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S. source capital losses for the year (provided you have timely filed U.S. federal income tax returns with respect to such losses). You should consult any applicable income tax or other treaties that may provide for different rules.

## **Warrants**

*Exercise of Warrants.* In general, a non-U.S. holder will not recognize gain or loss for U.S. federal income tax purposes upon exercise of a warrant, except to the extent the non-U.S. holder receives a cash payment for any such fractional share that would otherwise have been issuable upon exercise of the warrant, which will be treated as a sale subject to the rules described above for “—*Gain on Disposition of Convertible Notes or Warrants.*” A non-U.S. holder’s initial tax basis in the share of Common Stock received upon exercise of a warrant should be equal to the sum of (i) the non-U.S. holder’s tax basis in the warrant (that is, an amount equal to the purchase price of the warrant) plus (ii) the exercise price paid by the non-U.S. holder on the exercise of the warrant. A non-U.S. holder’s holding period for shares of Common Stock received on exercise of a warrant will commence on the date following the date of exercise of the warrant and will not include the period during which the non-U.S. holder held the warrant.

In certain limited circumstances, a non-U.S. holder may be permitted to undertake a cashless exercise of warrants into our Common Stock. The U.S. federal income tax treatment of a cashless exercise of warrants into our Common Stock is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a warrant described in the preceding paragraph. Non-U.S. holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of warrants.

*Expiration of Warrants.* Expiration of warrants will be treated as if the non-U.S. holder sold or exchanged the warrant, as applicable, and recognized a capital loss equal to the non-U.S. holder’s tax basis in such warrant. However, a non-U.S. holder will not be able to utilize a loss recognized upon expiration of a warrant against the non-U.S. holder’s U.S. federal income tax liability unless the loss is effectively connected with the non-U.S. holder’s conduct of a trade or business within the United States (and, if an income tax treaty applies, is attributable to a permanent establishment in the United States) or is treated as a U.S.-source loss and the non-U.S. holder is present 183 days or more in the taxable year of disposition and certain other conditions are met.

*Certain Adjustments to the Warrants.* Under Section 305 of the Code, an adjustment to the number of shares of Common Stock issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to a non-U.S. holder of the warrants, as applicable, if, and to the extent that, such adjustment has the effect of increasing such non-U.S. holder’s proportionate interest in our “earnings and profits” or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our shareholders). In addition, if we were to make a distribution in cash or other property with respect to our Common Stock after the issuance of the warrants, then we may, in certain circumstances, make a corresponding distribution to a warrant holder. The taxation of a distribution received with respect to a warrant is unclear. It is possible such a distribution would be treated as a distribution (or constructive distribution), although other treatments are possible. For more information regarding the tax considerations related to distributions, see the discussion above regarding “—*Distributions.*” Non-U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to and adjustments on the warrants.

## **Backup Withholding and Information Reporting**

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address, and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends or of proceeds on the disposition of stock made to you may be subject to information reporting and backup withholding at a current rate of 24% unless you establish an exemption, for example, by properly certifying your non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our convertible notes or warrants effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed and appropriate IRS Form W-8 or otherwise meets documentary evidence requirements for establishing non-U.S. holder status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the U.S. through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, you may be able to obtain a refund or credit from the IRS, provided that the required information is furnished to the IRS in a timely manner.

#### ***Foreign Account Tax Compliance***

The Foreign Account Tax Compliance Act and the rules and regulations promulgated thereunder, collectively FATCA, generally impose withholding tax at a rate of 30% on dividends on, and gross proceeds from the sale or other disposition of, our convertible notes or warrants paid to a “foreign financial institution” (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on and gross proceeds from the sale or other disposition of our convertible notes or warrants paid to a “non-financial foreign entity” (as specially defined under these rules) unless such entity provides the withholding agent with a certification identifying certain substantial direct and indirect U.S. owners of the entity, certifies that there are none or otherwise establishes an exemption. The withholding provisions under FATCA generally apply to dividends on our convertible notes or warrants, and, subject to the proposed regulations described in the next sentence, will apply to gross proceeds of a sale or other disposition of our convertible notes and warrants. The Treasury Department has released proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization) which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our convertible notes or warrants. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. You should consult your tax advisors regarding the possible implications of FATCA on your investment in our convertible notes or warrants.

**The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our convertible notes or warrants, including the consequences of any proposed change in applicable laws.**

## LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon for us by Fennemore Craig, P.C., Reno, Nevada.

## EXPERTS

The consolidated financial statements of Artelo Biosciences, Inc. incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2024, and as updated on Form 8-K filed with the SEC on July 11, 2025, have been so incorporated in reliance on the report (which contains an explanatory paragraph regarding our ability to continue as a going concern) of MaloneBailey, LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our Common Stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our Common Stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov).

You may request a copy of this prospectus by contacting us at: Artelo Biosciences, Inc. at 505 Lomas Santa Fe, Suite 160, Solana Beach, CA or 858-925-7049. Our website address is [www.artelobio.com](http://www.artelobio.com) and such reports and documents may be accessed from <https://ir.artelobio.com/>. Information contained on or accessible through Artelo's website is not a part of the registration statement of which this prospectus forms a part, and the inclusion of Artelo's website address in this prospectus is an inactive textual reference only.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus. We incorporate by reference the documents listed below that we have previously filed with the SEC (excluding those portions of any Form 8-K that are not deemed “filed” pursuant to the General Instructions of Form 8-K):

- our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on [March 3, 2025](#);
- our Quarterly Report on Form 10-Q for the quarters ended March 31, 2025, filed with the SEC on [May 13, 2025](#), June 30, 2025, filed with the SEC on [August 13, 2025](#), and September 30, 2025, filed with the SEC on [November 12, 2025](#);
- our Current Reports on Form 8-K filed on [April 29, 2025](#), [May 1, 2025](#), [May 23, 2025](#), [June 13, 2025](#), [June 26, 2025](#), [July 11, 2025](#), [July 18, 2025](#), [August 4, 2025](#), [August 7, 2025](#), [August 20, 2025](#), [August 29, 2025](#), [September 3, 2025](#), [September 5, 2025](#), [September 10, 2025](#), [September 15, 2025](#), [October 1, 2025](#), [October 17, 2025](#), [October 27, 2025](#), [October 31, 2025](#), and [November 14, 2025](#); and
- the description of our Common Stock contained in [Exhibit 4.1](#) to our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 3, 2025, including any amendment or report filed for the purpose of updating such description.

This prospectus forms part of a registration statement on Form S-1 that we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement or the documents incorporated by reference herein and therein. For further information with respect to us and the securities that we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement and the documents incorporated by reference herein and therein. You should rely only on the information incorporated by reference or provided in this prospectus and registration statement. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus and the documents incorporated by reference herein and therein is accurate as of any date other than the respective dates thereof.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the SEC, as well as any or all of the documents incorporated by reference in this prospectus or the registration statement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to Artelo Biosciences, Inc., Attn: Chief Executive Officer, 505 Lomas Santa Fe, Suite 160, Solana Beach, California, 92075. You may also direct any requests for documents to us by telephone at (858) 925-7049.



**Artelo Biosciences, Inc.**

**Up to 899,972 Shares of Common Stock**

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**PRELIMINARY PROSPECTUS**

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**November 17, 2025**

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**PART II****INFORMATION NOT REQUIRED IN THE PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth all expenses paid or payable by the registrant in connection with this offering. All amounts shown are estimates except for the SEC registration fee.

|                              | <b>Amount Paid<br/>or to Be Paid</b> |
|------------------------------|--------------------------------------|
| SEC registration fee         | \$ 225                               |
| Printing expenses            | 5,000                                |
| Legal fees and expenses      | \$ 75,000                            |
| Accounting fees and expenses | 25,000                               |
| Other fees and expenses      | -                                    |
| Total                        | <u>\$ 105,225</u>                    |

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

The Company's Articles of Incorporation and Bylaws provide that, to the fullest extent permitted by the laws of the State of Nevada, the Company shall indemnify any officer or director of the Company, who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he/she is or was or has agreed to serve at the request of the Company as a director, officer, employee or agent of the Company, or while serving as a director or officer of the Company, is or was serving or has agreed to serve at the request of the Company as a director, officer, employee or agent (which, for purposes hereof, shall include a trustee, partner or manager or similar capacity) of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity. For the avoidance of doubt, the foregoing indemnification obligation includes, without limitation, claims for monetary damages against the indemnitee to the fullest extent permitted under Section 78.7502 of the Nevada Revised Statutes.

The indemnification provided shall be from and against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the indemnitee or on the indemnitee's behalf in connection with such action, suit or proceeding and any appeal therefrom, but shall only be provided if the indemnitee acted in good faith and in a manner that the indemnitee reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action, suit or proceeding, had no reasonable cause to believe the indemnitee's conduct was unlawful.

In the case of any threatened, pending or completed action or suit by or in the right of the Company to procure a judgment in its favor by reason of the fact that he/she is or was a director, officer, employee or agent of the Company, or while serving as a director or officer of the Company, is or was serving or has agreed to serve at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, no indemnification shall be made in respect of any claim, issue or matter as to which the indemnitee shall have been adjudged to be liable to the Company unless, and only to the extent that, the Nevada courts or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, the indemnitee is fairly and reasonably entitled to indemnity for such expenses which the Nevada courts or such other court shall deem proper.

The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that he/she did not act in good faith and in a manner which the indemnitee reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the indemnitee's conduct was unlawful.

To the extent that indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. If a claim for indemnification against such liabilities (other than the payment by us of expenses incurred or paid by a director, officer or controlling person of our company in the successful defense of any action, suit or proceeding) is asserted by any of our directors, officers or controlling persons in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of that issue.

The rights conferred in the Company's Articles of Incorporation and Bylaws are not exclusive, and the Company is authorized to enter into indemnification agreements with its directors, officers, employees, and agents and to obtain insurance to indemnify such persons. The Company may not retroactively amend the Bylaws to reduce its indemnification obligations to directors, officers, employees, and agents.

The Company has entered into indemnification agreements with its directors and executive officers that provide the maximum indemnity allowed to directors and executive officers by Section 78.7502 of the Nevada Revised Statutes and also to provide for certain additional procedural protections, in addition to the indemnification provided for in the Company's Articles of Incorporation and Bylaws, and intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Company has purchased and currently intends to maintain insurance on behalf of each and any person who is or was a director or officer of the Company against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

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

We have sold the securities described below within the past three years which were not registered under the Securities Act. All of the sales listed below were made pursuant to an exemption from registration afforded by Section 4(a)(2) of the Securities Act (and Regulation D thereunder), unless otherwise indicated.

On May 13, 2022, we executed a private placement to Lincoln Park Capital Fund, LLC pursuant to which we have the right to sell to Lincoln Park up to \$20,000,000 in shares of our Common Stock, subject to certain limitations, from time to time over the 36-month period commencing on the date that the conditions set forth in the purchase agreement have been satisfied, which includes that a registration statement covering the resale of the shares is declared effective by the SEC. We issued 3,255 shares of our Common Stock to Lincoln Park as consideration for its commitment to purchase our shares under the Purchase Agreement. In the Purchase Agreement, Lincoln Park represented to the Company, among other things, that it was an "accredited investor" (as such term is defined in Rule 501(a) of Regulation D under the Securities Act of 1933, or the Securities Act). The securities were sold by the Company under the Purchase Agreement in reliance upon an exemption from the registration requirements under the Securities Act afforded by Section 4(a)(2) of the Securities Act. As of December 31, 2024, in accordance with the Equity Line, the Company issued 70,897 shares of the Company's Common Stock.

Between April 27, 2025 and May 1, 2025, we entered into the May 2025 Subscription Agreement with each of the Selling Securityholders named in this prospectus, pursuant to which we issued and sold to the Selling Securityholders, and the Selling Securityholders purchased the May 2025 Notes in an aggregate principal amount of \$900,000. A portion of the May 2025 Notes are convertible into shares of our Common Stock, at the election of each Selling Securityholders, pursuant to the Voluntary Conversion, and the remaining portion of each note will be converted into the \$6.24 Warrants. The sale and issuance of the May 2025 Notes closed on May 1, 2025. The May 2025 Notes accrue interest at a rate of 12.0% per annum. All unpaid principal, together with any then unpaid and accrued interest and other amounts payable thereunder, shall be due and payable on October 28, 2025.

On June 24, 2025, we entered into a securities purchase agreement with certain accredited investors for the issuance and sale in a private placement of (i) 136,843 shares of Common Stock, (ii) up to 93,180 shares of Common Stock issuable upon the exercise of pre-funded warrants (the "Pre-Funded Warrants"), (iii) up to 460,046 shares of Common Stock issuable upon the exercise of common warrants at an exercise price of \$5.82 per share (the "\$5.82 Warrants"), and (iv) 230,023 shares of Common Stock issuable upon the exercise of warrants at an exercise price of \$10.00 per share (the "\$10.00 Warrants"). The private placement was priced at the market on June 24, 2025 and closed on June 26, 2025. Each share or, in lieu of shares, each Pre-Funded Warrant, was issued and sold in the private placement along with two (2) \$5.82 Warrants and one (1) \$10.00 Warrant. The combined purchase price for the securities was (i) \$6.195 per share of Common Stock and three accompanying warrants and (ii) \$6.194 per Pre-Funded Warrant and three accompanying warrants.



On August 1, 2025, we entered into a securities purchase agreement (the “Purchase Agreement”) for an at-the market PIPE (private investment in public equity) for the purchase and sale of securities at a price of \$10.45 per security, consisting of: (a) 906,687 shares of Common Stock (or pre-funded warrants in lieu thereof); (b) three-year warrants to purchase 906,687 shares of Common Stock at an exercise price of \$10.20 per share; and (c) three-year warrants to purchase 906,687 shares of Common Stock at an exercise price of \$50.00 per share, for expected aggregate gross proceeds of approximately \$9.475 million. We agreed that the net proceeds of the sale would be used to purchase Solana. However, on August 19, 2025, we entered into a Termination and Mutual Release Agreement (the “Purchase Termination Agreement”), which terminates in its entirety, effective as of the August 19, 2025, the Purchase Agreement, the three-year warrants, and any other certificates, agreements, or instruments executed in connection therewith. Concurrently with execution of the Purchase Termination Agreement, the Company paid \$50,000 to TingleMerrett LLP, counsel to the investors, for legal fees incurred by the investors in connection with the transaction.

Effective October 28, 2025, we entered into the October 2025 Subscription Agreement with the Selling Securityholders named in this prospectus, pursuant to which we issued and sold to the Selling Securityholders, and the Selling Securityholders purchased (by converting all or a portion of the unconverted “Voluntary Conversion” portion of unpaid principal balance and accrued interest due to the Selling Securityholders upon the maturity of the May 2025 Notes): (i) The Notes in an aggregate principal amount of \$690,154.69; and (ii) the \$3.40 Warrants to purchase an aggregate of 438,182 shares of Common Stock, at an exercise price of \$3.40 per share. The sale and issuance of the Notes and \$3.40 Warrants closed effective as of the Closing Date

Each of the foregoing issuances was made in a transaction not involving a public offering pursuant to an exemption from the registration requirements of the Securities Act in reliance upon Section 4(a)(2) of the Securities Act, or Regulation D or Regulation S promulgated under the Securities Act. Any shares of Common Stock that may be issued upon conversion of the Notes will be issued in reliance upon Section 3(a)(9) of the Securities Act as involving an exchange exclusively with our security holders.

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

- (a) Reference is made to the attached Exhibit Index.
- (b) No financial statement schedules are provided because the information called for is not required or is shown in the financial statements or the notes thereto.

**Item 17. Undertakings.**

- (a) 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 of 1933;
    - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; 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) 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 Commission 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.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, 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 the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; *provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 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.

- (7) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.
- (8) The undersigned registrant hereby undertakes that:
  - (i) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
  - (ii) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

# EXHIBIT INDEX

| Exhibit Number         | Description                                                                                                                                                              | Form  | File No.   | Filing Date | Filed Herewith |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------|-------------|----------------|
| <a href="#">3.1</a>    | <a href="#">Articles of Incorporation, as amended</a>                                                                                                                    | 10-Q  | 001-38951  | 5/11/2023   |                |
| <a href="#">3.2</a>    | <a href="#">Certificate of Change</a>                                                                                                                                    | 8-K   | 001-38951  | 06/13/2025  |                |
| <a href="#">3.3</a>    | <a href="#">Certificate of Amendment to Articles of Incorporation</a>                                                                                                    |       |            |             | X              |
| <a href="#">3.4</a>    | <a href="#">Amended and Restated Bylaws</a>                                                                                                                              | 8-K   | 001-38951  | 04/21/2023  |                |
| <a href="#">3.5</a>    | <a href="#">Certificate of Amendment to Bylaws</a>                                                                                                                       | 8-K   | 001-38951  | 9/10/2025   |                |
| <a href="#">3.6</a>    | <a href="#">Certificate of Amendment to Bylaws</a>                                                                                                                       | 8-K   | 001-38951  | 11/14/2025  |                |
| <a href="#">4.1</a>    | <a href="#">Specimen Common Stock Certificate</a>                                                                                                                        | S-8   | 333-251387 | 12/16/2020  |                |
| <a href="#">4.2</a>    | <a href="#">Form of Convertible Note</a>                                                                                                                                 | 8-K   | 001-38951  | 10/31/2025  |                |
| <a href="#">4.3</a>    | <a href="#">Form of \$3.40 Warrant</a>                                                                                                                                   | 8-K   | 001-38951  | 10/31/2025  |                |
| <a href="#">4.4</a>    | <a href="#">Form of \$6.24 Warrant</a>                                                                                                                                   | 8-K   | 001-38951  | 05/01/2025  |                |
| <a href="#">5.1</a>    | <a href="#">Legal Opinion of Fennemore Craig, P.C.</a>                                                                                                                   |       |            |             | X              |
| <a href="#">10.1</a>   | <a href="#">Purchase Agreement between the Company and Lincoln Park Capital Fund, LLC, dated May 13, 2022.</a>                                                           | 8-K   | 001-38951  | 05/16/2022  |                |
| <a href="#">10.2</a>   | <a href="#">Registration Rights Agreement between the Company and Lincoln Park Capital Fund, LLC, dated May 13, 2022.</a>                                                | 8-K   | 001-38951  | 05/16/2022  |                |
| <a href="#">10.3#</a>  | <a href="#">Amended and Restated Employment Agreement by and between the Company and Gregory D. Gorgas dated August 30, 2019.</a>                                        | 10-K  | 001-38951  | 11/25/2019  |                |
| <a href="#">10.4</a>   | <a href="#">Securities Purchase Agreement by and between the Company and Gregory D. Gorgas dated April 3, 2017.</a>                                                      | 8-K   | 001-38951  | 4/7/2017    |                |
| <a href="#">10.5#</a>  | <a href="#">Form of Indemnification Agreement</a>                                                                                                                        | 8-K   | 001-38951  | 5/8/2017    |                |
| <a href="#">10.6</a>   | <a href="#">Stock Purchase Agreement dated May 4, 2017</a>                                                                                                               | 8-K   | 001-38951  | 5/8/2017    |                |
| <a href="#">10.7</a>   | <a href="#">Form of Private Placement Subscription Agreement</a>                                                                                                         | 8-K   | 001-38951  | 8/4/2017    |                |
| <a href="#">10.8</a>   | <a href="#">Form of Registration Rights Agreement</a>                                                                                                                    | 8-K   | 001-38951  | 8/4/2017    |                |
| <a href="#">10.9</a>   | <a href="#">Stock Purchase Agreement dated as of August 1, 2017</a>                                                                                                      | 8-K   | 001-38951  | 8/4/2017    |                |
| <a href="#">10.10+</a> | <a href="#">Material and Data Transfer, Option and License Agreement dated as of December 20, 2017 by and between the Company and NEOMED Institute</a>                   | 10-Q  | 333-199213 | 1/16/2018   |                |
| <a href="#">10.11+</a> | <a href="#">First Amendment to Material and Data Transfer, Option and License Agreement by and between the Company and NEOMED Institute, dated as of January 4, 2019</a> | 10-Q  | 333-199213 | 4/15/2019   |                |
| <a href="#">10.12#</a> | <a href="#">2018 Equity Incentive Plan and Forms of Award Agreement Thereunder</a>                                                                                       | 8-K   | 001-38951  | 12/3/2020   |                |
| <a href="#">10.13+</a> | <a href="#">License Agreement with Stony Brook University, by and between the Company and Stony Brook University, dated January 18, 2018</a>                             | S-1/A | 333-222756 | 4/17/2018   |                |
| <a href="#">10.14</a>  | <a href="#">Form of Note and Warrant Subscription Agreement</a>                                                                                                          | 8-K   | 001-38951  | 5/1/2025    |                |
| <a href="#">10.15</a>  | <a href="#">Form of Securities Purchase Agreement by and between Artelo Biosciences Inc. and the purchasers named therein</a>                                            | 8-K   | 001-38951  | 6/26/2025   |                |
| <a href="#">10.16</a>  | <a href="#">At-The-Market Offering Agreement by and among the Artelo Biosciences, Inc. and R.F. Lafferty &amp; Co., Inc., dated as of July 18, 2025</a>                  | 8-K   | 001-38951  | 7/18/2025   |                |
| <a href="#">10.17</a>  | <a href="#">Form of Securities Purchase Agreement by and between Artelo Biosciences, Inc. and the investors named therein</a>                                            | 8-K   | 001-38951  | 8/4/2025    |                |
| <a href="#">10.18</a>  | <a href="#">Consulting Agreement by and between Artelo Biosciences, Inc. and ABK Labs, Inc., dated August 1, 2025</a>                                                    | 8-K   | 001-38951  | 8/7/2025    |                |
| <a href="#">10.19</a>  | <a href="#">Form of Termination and Mutual Release Agreement by and between Artelo Biosciences, Inc. and the investors named therein</a>                                 | 8-K   | 001-38951  | 8/20/2025   |                |
| <a href="#">10.20</a>  | <a href="#">Termination Agreement by and between Artelo Biosciences, Inc. and ABK Labs, Inc., dated August 19, 2025</a>                                                  | 8-K   | 001-38951  | 8/20/2025   |                |
| <a href="#">10.21</a>  | <a href="#">Cooperation Letter Agreement dated October 15, 2025, among the Company and the Farb Parties</a>                                                              | 8-K   | 001-38951  | 10/17/2025  |                |
| <a href="#">10.22#</a> | <a href="#">Employment Agreement by and between the Company and Mark Spring dated October 26, 2025.</a>                                                                  | 8-K   | 001-38951  | 10/27/2025  |                |
| <a href="#">10.23#</a> | <a href="#">Amendment to Amended and Restated Employment Agreement by and between the Company and Gregory D. Gorgas dated August 30, 2019.</a>                           | 8-K   | 001-38951  | 10/27/2025  |                |
| <a href="#">10.24</a>  | <a href="#">Subscription Agreement by and between Artelo Biosciences Inc. and the purchasers named therein</a>                                                           | 8-K   | 001-38951  | 10/31/2025  |                |
| <a href="#">23.1</a>   | <a href="#">Consent of Fennemore Craig, P.C. relating to opinion as to validity of the securities being registered (included in Exhibit 5.1 hereto).</a>                 |       |            |             | X              |
| <a href="#">23.2</a>   | <a href="#">Consent Of Independent Registered Public Accounting Firm</a>                                                                                                 |       |            |             | X              |
| <a href="#">24.1</a>   | <a href="#">Power of Attorney (included on the signature page to this registration statement).</a>                                                                       |       |            |             | X              |
| <a href="#">107</a>    | <a href="#">Calculation of Filing Fee Table</a>                                                                                                                          |       |            |             | X              |

# Management contracts or compensatory plans, contracts or arrangements.

+ Certain portions of this exhibit have been omitted.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Solana Beach, State of California, on November 17, 2025.

### ARTELO BIOSCIENCES, INC.

By: /s/ Gregory D. Gorgas  
Name: Gregory D. Gorgas  
Title: President & Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints, jointly and severally, Gregory D. Gorgas and Mark Spring, or either of them, as his or her attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments), and any and all registration statements filed pursuant to Rule 462 under the Securities Act of 1933, as amended, in connection with or related to the offering contemplated by this registration statement and its amendments, if any, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorney to any and all amendments to said registration statement.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

| <u>Name</u>                                                | <u>Title</u>                                                                              | <u>Date</u>       |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------|
| <u>/s/ Gregory D. Gorgas</u><br>Gregory D. Gorgas          | President, Chief Executive Officer and Director<br>(Principal Executive Officer)          | November 17, 2025 |
| <u>/s/ Mark Spring</u><br>Mark Spring                      | Chief Financial Officer<br>(Principal Financial Officer and Principal Accounting Officer) | November 17, 2025 |
| <u>/s/ Connie Matsui</u><br>Connie Matsui                  | Director, Chair of the Board                                                              | November 17, 2025 |
| <u>/s/ Steven Kelly</u><br>Steven Kelly                    | Director                                                                                  | November 17, 2025 |
| <u>/s/ Douglas Blayney</u><br>Douglas Blayney, M.D.        | Director                                                                                  | November 17, 2025 |
| <u>/s/ R. Martin Emanuele</u><br>R. Martin Emanuele, Ph.D. | Director                                                                                  | November 17, 2025 |
| <u>/s/ Gregory Reyes</u><br>Gregory Reyes, M.D., Ph.D.     | Director                                                                                  | November 17, 2025 |
| <u>/s/ Tamara A. Favorito</u><br>Tamara A. Favorito        | Director                                                                                  | November 17, 2025 |



**FRANCISCO V. AGUILAR**  
 Secretary of State  
 401 North Carson Street  
 Carson City, Nevada 89701-4201  
 (775) 684-5708  
 Website: [www.nvsos.gov](http://www.nvsos.gov)

|                                               |                                           |
|-----------------------------------------------|-------------------------------------------|
| Filed in the<br>Office of<br><i>FVAguilar</i> | Business Number<br><b>E0258042011-1</b>   |
| Secretary of<br>State<br>State Of Nevada      | Filing Number<br><b>20255143883</b>       |
|                                               | Filed On<br><b>08/29/2025 15:52:53 PM</b> |
|                                               | Number of Pages<br><b>6</b>               |

**Profit Corporation:**  
**Certificate of Amendment** (PURSUANT TO NRS 78.380 & 78.385/78.390)  
**Certificate to Accompany Restated Articles or Amended and Restated Articles**  
 (PURSUANT TO NRS 78.403)  
**Officer's Statement** (PURSUANT TO NRS 80.030)

TYPE OR PRINT - USE DARK INK ONLY - DO NOT HIGHLIGHT

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|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Entity information:</b>                                                                                                                        | Name of entity as on file with the Nevada Secretary of State:<br>ARTELO BIOSCIENCES, INC.<br>Entity or Nevada Business Identification Number (NVID): NV20111304638                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>2. Restated or Amended and Restated Articles:</b> (Select one)<br><br>(If <u>amending and restating only</u> , complete section 1, 2, 3, 5 and 6) | <input type="checkbox"/> Certificate to Accompany Restated Articles or Amended and Restated Articles<br><input type="checkbox"/> Restated Articles - No amendments; articles are restated only and are signed by an officer of the corporation who has been authorized to execute the certificate by resolution of the board of directors adopted on:<br>The certificate correctly sets forth the text of the articles or certificate as amended to the date of the certificate.<br><input type="checkbox"/> Amended and Restated Articles<br>* Restated or Amended and Restated Articles must be included with this filing type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>3. Type of Amendment Filing Being Completed:</b><br>(Select only one box)<br><br>(If amending, complete section 1, 3, 5 and 6.)                   | <input type="checkbox"/> Certificate of Amendment to Articles of Incorporation (Pursuant to NRS 78.380 - Before Issuance of Stock)<br>The undersigned declare that they constitute at least two-thirds of the following: (Check only one box) <input type="checkbox"/> incorporators <input type="checkbox"/> board of directors<br>The undersigned affirmatively declare that to the date of this certificate, no stock of the corporation has been issued<br><br><input checked="" type="checkbox"/> Certificate of Amendment to Articles of Incorporation (Pursuant to NRS 78.385 and 78.390 - After Issuance of Stock)<br>The vote by which the stockholders holding shares in the corporation entitling them to exercise at least a majority of the voting power, or such greater proportion of the voting power as may be required in the case of a vote by classes or series, or as may be required by the provisions of the articles of incorporation* have voted in favor of the amendment is: A MAJORITY Or <input type="checkbox"/> No action by stockholders is required, name change only.<br><br><input type="checkbox"/> Officer's Statement (foreign qualified entities only) -<br>Name in home state, if using a modified name in Nevada:<br><br>Jurisdiction of formation:<br><br>Changes to takes the following effect:<br><input type="checkbox"/> The entity name has been amended.<br><input type="checkbox"/> Dissolution<br><input type="checkbox"/> The purpose of the entity has been amended.<br><input type="checkbox"/> Merger<br><input type="checkbox"/> The authorized shares have been amended.<br><input type="checkbox"/> Conversion<br><input type="checkbox"/> Other: (specify changes)<br><br>* Officer's Statement must be submitted with either a certified copy of or a certificate evidencing the filing of any document, amendatory or otherwise, relating to the original articles in the place of the corporations creation. |

This form must be accompanied by appropriate fees.

Page 1 of 2  
 Revised: 9/1/2023



FRANCISCO V. AGUILAR  
Secretary of State  
401 North Carson Street  
Carson City, Nevada 89701-4201  
(775) 684-5708  
Website: [www.nvsos.gov](http://www.nvsos.gov)

**Profit Corporation:**  
**Certificate of Amendment** (PURSUANT TO NRS 78.380 & 78.385/78.390)  
**Certificate to Accompany Restated Articles or Amended and Restated Articles**  
(PURSUANT TO NRS 78.403)  
**Officer's Statement** (PURSUANT TO NRS 80.030)

|                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                         |                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>4. Effective Date and Time:</b><br>(Optional)                                                                                        | Date: _____ Time: _____<br><br>(must not be later than 90 days after the certificate is filed)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                         |                                                   |
| <b>5. Information Being Changed:</b><br>(Domestic corporations only)                                                                    | <p>Changes to takes the following effect:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> The entity name has been amended.</li><li><input type="checkbox"/> The registered agent has been changed. (attach Certificate of Acceptance from new registered agent)</li><li><input type="checkbox"/> The purpose of the entity has been amended.</li><li><input checked="" type="checkbox"/> The authorized shares have been amended.</li><li><input type="checkbox"/> The directors, managers or general partners have been amended.</li><li><input type="checkbox"/> IRS tax language has been added.</li><li><input type="checkbox"/> Articles have been added.</li><li><input type="checkbox"/> Articles have been deleted.</li><li><input type="checkbox"/> Other.</li></ul> <p>The articles have been amended as follows: (provide article numbers, if available)</p> <p>Article 3 has been amended and restated in its entirety as shown on Exh. A<br/>(attach additional page(s) if necessary)</p> |                                                                                                                                         |                                                   |
| <b>6. Signature:</b><br>(Required)                                                                                                      | <table style="width: 100%; border: none;"><tr><td style="width: 50%; vertical-align: top;"><p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p><p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p></td><td style="width: 50%; vertical-align: top;"><p>_____ CEO<br/>Title</p><p>_____<br/>Title</p></td></tr></table> <p><small>*If any proposed amendment would alter or change any preference or any relative or other right given to any class or series of outstanding shares, then the amendment must be approved by the vote, in addition to the affirmative vote otherwise required, of the holders of shares representing a majority of the voting power of each class or series affected by the amendment regardless to limitations or restrictions on the voting power thereof.</small></p>                                                                                                                                                                                      | <p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p> <p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p> | <p>_____ CEO<br/>Title</p> <p>_____<br/>Title</p> |
| <p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p> <p><b>X</b> _____<br/>Signature of Officer or Authorized Signer</p> | <p>_____ CEO<br/>Title</p> <p>_____<br/>Title</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                         |                                                   |
| <p><b>Please include any required or optional information in space below:</b><br/>(attach additional page(s) if necessary)</p>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                         |                                                   |

This form must be accompanied by appropriate fees.

Page 2 of 2  
Revised: 9/1/2023

## **EXHIBIT A**

### **Article 3.**

Authorized Stock. Increased to 500,000,000 shares of common stock with a par value of \$0.001 per share and 69,444 shares of preferred stock, with a par value of \$0.001 per share.

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7800 Rancharra Pkwy.  
Reno, NV 89511  
PH (775) 788-2200  
[Fennemorelaw.com](http://Fennemorelaw.com)

November 17, 2025

Artelo Biosciences, Inc.  
505 Lomas Santa Fe, Suite 160  
Solana Beach, CA 92075

Re: Registration on Form S-1 for Artelo Biosciences, Inc.

Ladies and Gentlemen:

We are acting as special Nevada counsel for Artelo Biosciences, Inc., a Nevada corporation (the "**Company**"), in connection with its filing with the Securities and Exchange Commission (the "**Commission**") of a Registration Statement on Form S-1 (the "**Registration Statement**"), pursuant to which the Company is registering under the Securities Act of 1933, as amended, 899,972 shares of the Company's common stock, consisting of (i) 215,292 shares of Common Stock (the "Note Shares") issuable upon the conversion of convertible notes (the "Notes"), (ii) 246,498 shares of Common Stock issuable upon the exercise of warrants at an exercise price of \$6.24 per share (the "\$6.24 Warrants"), and (iii) 438,182 shares of Common Stock issuable upon the exercise of warrants at an exercise price of \$3.40 per share (the "\$3.40 Warrants"). The \$6.24 Warrants and the \$3.40 Warrants are collectively referred to herein as the "Warrants." The shares of Common Stock issuable upon the conversion of the Notes and the Warrants are collectively referred to herein as the "Shares."

We have examined originals or copies of each of the documents listed below:

1. The Articles of Incorporation of the Company, as amended, as certified by an officer of the Company as of the date hereof;
  2. The Bylaws of the Company, as amended, as certified by an officer of the Company as of the date hereof;
  3. The meeting minutes of the meeting of the Company's Board of Directors held on April 15, 2025;
  4. A Unanimous Written Consent of the Company's board of directors adopted on October 26, 2025;
  5. The form of the \$6.24 Warrants;
-

6. The form of the \$3.40 Warrants;
7. The form of the Notes;
8. The Note and Warrant Subscription Agreement, dated as of October 28, 2025, by and among the Company and the investor's party thereto;
9. The form of the Note and Warrant Subscription Agreement by and among the Company and the investors party thereto relating to the purchase and sale of convertible promissory notes in the aggregate principal amount of up to \$1,000,000; and
10. The Registration Statement.

We have examined originals or copies of such other corporate records, certificates of corporate officers and public officials and other agreements and documents as we have deemed necessary or advisable for purposes of this opinion letter. We have relied upon the certificates of all public officials and corporate officers with respect to the accuracy of all factual matters contained therein.

Without limiting the generality of the foregoing, in our examination, we have, with your permission, assumed without independent verification, that (i) all documents submitted to us as originals are authentic, the signatures on all documents that we examined are genuine, and all documents submitted to us as certified, conformed, photostatic, electronic or facsimile copies conform to the original document; and (ii) all corporate records made available to us by the Company and all public records we have reviewed are accurate and complete. We note that the Company has reserved, and assume it will continue to maintain reserved, a sufficient number of shares of its duly authorized, but unissued, common stock as is necessary to provide for the issuance of the Warrant Shares and the Note Shares.

1. Issuance of the Warrants has been duly authorized by the Company and, when issued and paid for in accordance with the terms of the relevant Warrant, the Shares issuable thereunder will be validly issued, fully paid, and nonassessable.
2. Issuance of the Notes has been duly authorized by the Company and upon conversion thereof in accordance with the terms of the Notes, the Shares into which the Notes are converted will be validly issued, fully paid and nonassessable.

We express no opinion as to the laws of any jurisdiction other than the laws of the State of Nevada; provided, however, that we express no opinion with respect to any securities law or rule. The opinions expressed above concern only the effect of the laws (excluding the principles of conflict of laws) of the State of Nevada currently in effect. We assume no obligation to supplement this opinion if any applicable laws change after the date of this opinion, or if we become aware of any facts that might change the opinions expressed above after the date of this opinion.

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Artelo Biosciences, Inc.  
November 17, 2025  
Page 3

This opinion is issued in the State of Nevada. By issuing this opinion, Fennemore Craig, P.C. (i) shall not be deemed to be transacting business in any other state or jurisdiction other than the State of Nevada and (ii) does not consent to the jurisdiction of any state other than the State of Nevada. Any claim or cause of action arising out of the opinions expressed herein must be brought in the State of Nevada. Your acceptance of this opinion shall constitute your agreement to the foregoing.

We consent to your filing of this opinion as an exhibit to the Registration Statement and further consent to the use of our name wherever appearing in the Registration Statement. We further consent to the incorporation by reference of this opinion and consent in any registration statement filed pursuant to Rule 462(b) under the Act with respect to the Common Stock. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder, or Item 509 of Regulation S-K. The opinions expressed in this letter are rendered as of the date hereof, and we express no opinion as to circumstances or events that may occur subsequent to such date. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company or the common stock of the Company.

Very truly yours,

/s/ Fennemore Craig, P.C.

FENNEMORE CRAIG, P.C.

CETE/cdol

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated March 3, 2025, except for Notes 1, 2, 5 and 10 which are dated July 11, 2025 with respect to the audited consolidated financial statements of Artelo Biosciences, Inc. for the years ended December 31, 2024 and 2023.

We also consent to the references to us under the heading “Experts” in such Registration Statement.

*/s/ MaloneBailey, LLP*  
www.malonebailey.com  
Houston, Texas  
November 17, 2025

## Calculation of Filing Fee Tables

**Form S-1**  
(Form Type)

**Artelo Biosciences, Inc.**  
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

|                                    | Security Type                     | Security Class Title                      | Fee Calculation Rule | Amount Registered <sup>(1)(2)</sup> | Proposed Maximum Offering Price Per Unit <sup>(3)</sup> | Maximum Aggregate Offering Price | Fee Rate   | Amount of Registration Fee |
|------------------------------------|-----------------------------------|-------------------------------------------|----------------------|-------------------------------------|---------------------------------------------------------|----------------------------------|------------|----------------------------|
| <b>Newly Registered Securities</b> |                                   |                                           |                      |                                     |                                                         |                                  |            |                            |
| Fees to Be Paid                    | Equity                            | Common Stock, par value \$0.001 per share | 457(c)               | 899,972                             | \$1.81                                                  | \$1,628,950                      | 0.00013810 | \$225.00                   |
|                                    | <b>Total Offering Amounts</b>     |                                           |                      |                                     |                                                         | \$1,628,950                      |            | \$225.00                   |
|                                    | <b>Total Fees Previously Paid</b> |                                           |                      |                                     |                                                         |                                  |            | —                          |
|                                    | <b>Total Fee Offsets</b>          |                                           |                      |                                     |                                                         |                                  |            | —                          |
|                                    | <b>Net Fee Due</b>                |                                           |                      |                                     |                                                         |                                  |            | \$225.00                   |

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement shall also cover any additional shares of the registrant's common stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the registrant's outstanding shares of common stock.
- (2) This registration statement registers for resale an aggregate 899,972 shares of the registrant's common stock, consisting of (i) 215,292 shares of the registrant's common stock issuable upon the conversion of convertible notes, (ii) 246,498 shares of the registrant's common stock issuable upon the exercise of warrants at an exercise price of \$6.24 per share, and (iii) 438,182 shares of the registrant's common stock issuable upon the exercise of warrants at an exercise price of \$3.40 per share.
- (3) Represents shares that may be sold by the selling stockholders identified in the registration statement. Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act based on the average of the high and low prices of the registrant's common stock on the Nasdaq Capital Market on November 14, 2025.