

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

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

**AZITRA, INC.**

*(Exact name of registrant as specified in its charter)*

**Delaware**  
*(State or other jurisdiction of  
incorporation or organization)*

**2834**  
*(Primary Standard Industrial  
Classification Code Number)*

**46-4478536**  
*(I.R.S. Employer  
Identification Number)*

**21 Business Park Drive  
Branford, CT 06405  
(203) 646-6446**

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

**Francisco D. Salva  
21 Business Park Drive  
Branford, CT 06405  
(203) 646-6446**

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

*Copies to:*

**Faith L. Charles, Esq.  
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Thompson Hine LLP  
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New York, New York 10017-6232  
Tel: (212) 344-6101**

**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, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

If this Form is a post-effective amendment filed pursuant to 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   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided 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 Commission, acting pursuant to said Section 8(a), may determine.**

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

**PRELIMINARY PROSPECTUS**

**SUBJECT TO COMPLETION**

**DATED JULY 18, 2025**

**Up to 2,245,968 Shares of Common Stock Underlying the Warrants**



This prospectus relates to the offering and resale by the selling stockholders identified herein (the "Selling Stockholders") of up to 2,245,968 shares (the "Warrant Shares") of our common stock, par value \$0.0001 per share (the "Common Stock") issuable upon exercise of Common Stock purchase warrants (the "Warrants").

The Warrants were issued and sold to the Selling Stockholders pursuant to the letter agreement, dated February 6, 2025, that we entered into with the Selling Stockholders (the "Letter Agreement"). See "The February Transactions" section of this prospectus for a description of the Letter Agreement and the "Selling Stockholders" section of this prospectus for additional information regarding the Selling Stockholders. The prices at which the Selling Stockholders may resell the Warrant Shares offered hereby will be determined by the prevailing market price for the Common Stock or in negotiated transactions. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the Selling Stockholders. However, we may receive aggregate gross proceeds of up to approximately \$1.2 million upon exercise of the Warrants for cash.

The Selling Stockholders may sell or otherwise dispose of the Warrant Shares described in this prospectus in a number of different ways and at varying prices. See the "Plan of Distribution" section of this prospectus for more information about how the Selling Stockholders may sell or otherwise dispose of the Warrant Shares being registered pursuant to this prospectus. The Selling Stockholders may be deemed "underwriters" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the "Securities Act").

The Selling Stockholders will pay all brokerage fees and commissions and similar expenses. We will pay the expenses (except brokerage fees and commissions and similar expenses) incurred in registering the Warrant Shares, including legal and accounting fees. See "Plan of Distribution."

Our Common Stock is listed on the NYSE American under the symbol "AZTR." The last reported sale price of our Common Stock on the NYSE American on July 17, 2025, was \$0.2275 per share.

You should read this prospectus, together with additional information described under the headings "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference" carefully before you invest in any of our securities.

**Investing in our Common Stock involves a high degree of risk. See "Risk Factors" on page 8 of this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

The date of this prospectus is \_\_\_\_\_, 2025.

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## TABLE OF CONTENTS

	<u>PAGE</u>
<a href="#">INDUSTRY AND MARKET DATA</a>	1
<a href="#">PROSPECTUS SUMMARY</a>	2
<a href="#">THE OFFERING</a>	7
<a href="#">RISK FACTORS</a>	8
<a href="#">THE FEBRUARY TRANSACTIONS</a>	11
<a href="#">CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>	12
<a href="#">TRADEMARKS, SERVICE MARKS AND TRADE NAMES</a>	13
<a href="#">USE OF PROCEEDS</a>	14
<a href="#">DIVIDEND POLICY</a>	15
<a href="#">DESCRIPTION OF SECURITIES</a>	16
<a href="#">SELLING STOCKHOLDERS</a>	21
<a href="#">PLAN OF DISTRIBUTION</a>	23
<a href="#">LEGAL MATTERS</a>	24
<a href="#">EXPERTS</a>	24
<a href="#">INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</a>	25
<a href="#">WHERE YOU CAN FIND MORE INFORMATION</a>	25

You should rely only on the information contained in this prospectus or incorporated by reference herein. Neither we nor the Selling Stockholders have authorized any other person to provide you with information different from or in addition to that contained in this prospectus, and neither we nor the Selling Stockholders take responsibility for any other information others may give you. If anyone provides you with different or inconsistent information, you should not rely on it. The Selling Stockholders are not making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. Except as otherwise stated, you should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus and that the information in any report incorporated by reference is accurate only as of the date of such report. Our business, financial condition, results of operations and prospects may have changed since such dates.

No action is being taken in any jurisdiction outside the United States to permit a public offering of our securities or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

As used in this prospectus, unless the context indicates or otherwise requires, the “Company,” “we,” “us,” and “our” refer to Azitra, Inc., a Delaware corporation.

## INDUSTRY AND MARKET DATA

This prospectus contains or incorporates by reference observations, statistical data, estimates, and forecasts that are based on independent industry, government and non-government organization publications or other publicly available information, as well as other information based on our internal sources. Although we believe that the third-party sources referred to in this prospectus or incorporated by reference are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section titled “*Risk Factors*” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

Certain information in the text of this prospectus or incorporated by reference is contained in independent industry government and non-governmental organizational publications. The sources of these publications are provided below:

- Stacy and Belkaid Study, *Apollo Stacy and Yasmine Belkaid*, Microbial Guardians of Skin Health. Science, 2019 Jan 18;363(6424):227-228. Doi: 10.1126/science.aat4326. PMID: 30655428
- Oh Study, Zhou W, Spoto M, Hardy R, Guan C, Fleming E, Larson PJ, Brown JS, Oh J. Host-Specific Evolutionary and Transmission Dynamics Shape the Functional Diversification of Staphylococcus epidermidis in Human Skin. Cell. 2020 Feb 6;180(3):454-470.e18. doi: 10.1016/j.cell.2020.01.006. Epub 2020 Jan 30. PMID: 32004459; PMCID
- Satoh Study, Satoh TK, Mellett M, Meier-Schiesser B, Fenini G, Otsuka A, Beer HD, Rordorf T, Maul JT, Hafner J, Navarini AA, Contassot E, French LE. IL-36γ drives skin toxicity induced by EGFR/MEK inhibition and commensal Cutibacterium acnes. J Clin Invest. 2020 Mar 2;130(3):1417-1430. Doi: 10.1172/JCI128678. PMID: 31805013; PMCID: PMC7269569
- Barbati Study, Netherton Syndrome in Children: Management and Future Perspectives, Federica Barbati, Mattia Giovannini Teresa Oranges, Lorenzo Lodi, Simona Barni, Elio Novembre, Ermanno Baldo, Mario Cristofolini, Stefano Stagi, Silvia Ricci, Francesca Mori, Cesare Filippeschi, Chiara Azzari and Giuseppe Indol; Frontiers in Pediatrics, May 2021
- Sun Study, Netherton syndrome: A case report and review of the literature, Joannie D. Sun, MD, and Kenneth G. Linden, PhD, MD, International Journal of Dermatology 2006
- Orphanet, Netherton Syndrome, Orphanet: Netherton syndrome

## PROSPECTUS SUMMARY

*This summary highlights certain information appearing elsewhere in this prospectus. Investing in our Common Stock involves a high degree of risk. Because it is only a summary, it does not contain all of the information that you should consider before investing in our Common Stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. Before you decide to invest in our Common Stock, you should read the entire prospectus carefully, including "Risk Factors" beginning on page 8 and the financial statements and related notes included in this prospectus or incorporated by reference herein.*

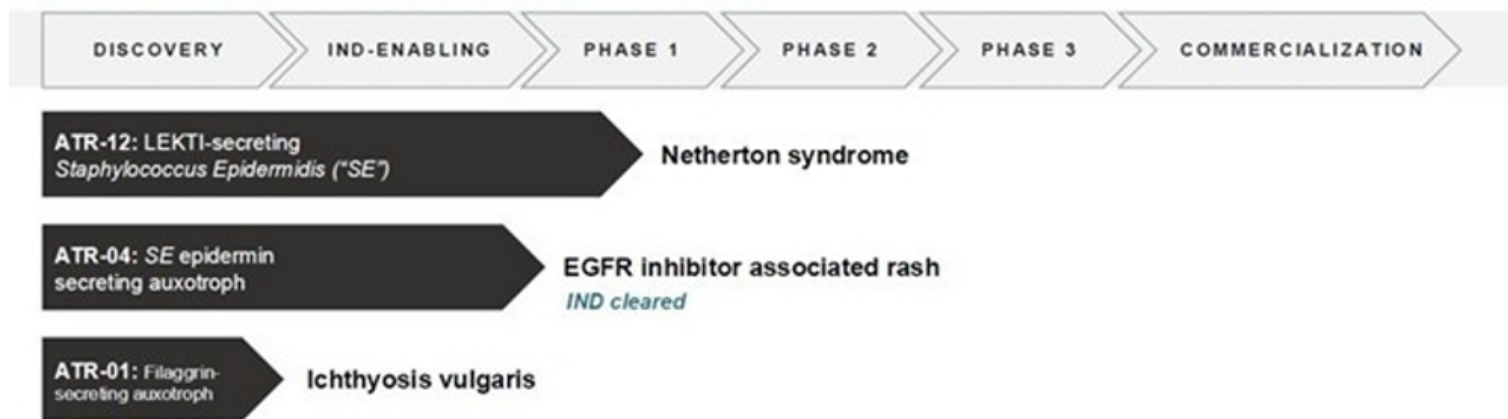
### Our Company

We are an early-stage clinical biopharmaceutical company focused on developing innovative therapies for precision dermatology using engineered proteins and topical live biotherapeutic products. We have built a proprietary platform that includes a microbial library comprised of approximately 1,500 unique bacterial strains that can be screened for unique therapeutic characteristics. The platform is augmented by an artificial intelligence and machine learning technology that analyzes, predicts and helps screen our library of strains for drug-like molecules. The platform also utilizes a licensed genetic engineering technology, which can enable the transformation of previously genetically intractable strains. Our initial focus is on the development of genetically engineered strains of *Staphylococcus epidermidis*, or *S. epidermidis*, which we consider to be an optimal therapeutic candidate species for engineering of dermatologic therapies. The particular species demonstrates a number of well-described properties in the skin. As of the date of this prospectus, we have identified among our microbial library over 60 distinct bacterial species that we believe are capable of being engineered to create living organisms or engineered proteins with significant therapeutic effect.

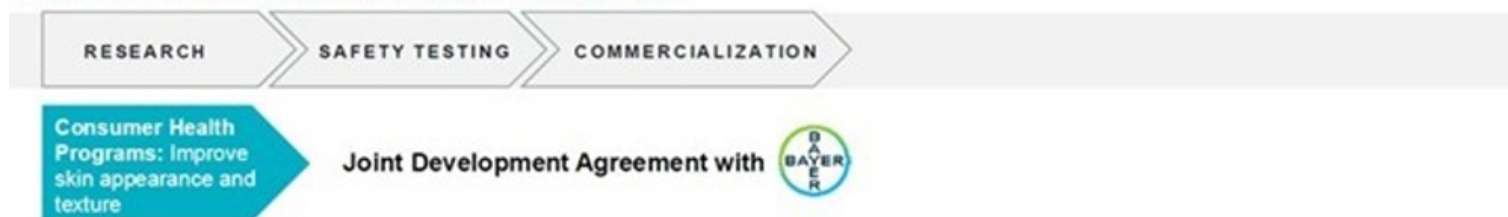
We are a pioneer in genetically engineered bacteria for therapeutic use in dermatology. Our goal is to leverage our platforms and internal microbial library bacterial strains to create new therapeutics that are either engineered living organisms or engineered proteins or peptides to treat skin diseases. Our initial focus is on the development of our current programs, including:

- **ATR-12**, which includes a genetically modified strain of *S. epidermidis* for treating the orphan disease, Netherton syndrome, a chronic and sometimes fatal disease of the skin estimated to affect approximately one in every 100,000, but its prevalence may be underestimated due to misdiagnosis caused by similarities to other skin diseases. We received Pediatric Rare Disease Designation for ATR-12 by the United States Food and Drug Administration, or FDA, in 2020. In December 2022, we submitted an investigational new drug application, or IND, for a Phase 1b clinical trial in adult Netherton syndrome patients, and on January 27, 2023 we received notification from the FDA that the "study may proceed" with respect to the proposed Phase 1b clinical trial. After submitting post-IND manufacturing reports, we have commenced operating activities for our Phase 1b clinical trial in December 2023, and we dosed our first patient in August 2024. We reported initial safety results in the first half of 2025.
- **ATR-04**, which includes a genetically modified strain of *S. epidermidis* for treating the papulopustular rash experienced by cancer patients undergoing epidermal growth factor receptor inhibitor, or EGFRi, targeted therapy. In August 2024, we obtained IND clearance from the FDA to commence a Phase 1/2 clinical trial in certain cancer patients undergoing EGFRi targeted therapy. In September 2024, we obtained Fast Track designation by the FDA in this indication. We expect to dose the first patient in the Phase 1/2 clinical trial in the third quarter of 2025.
- **ATR-01**, which includes a genetically modified strain of *S. epidermidis* that expresses an engineered recombinant human filaggrin protein for treating ichthyosis vulgaris, a chronic, xerotic (abnormally dry), scaly skin disease with an estimated incidence and prevalence of 1 in 250, which suggests a total patient population of 1.3 million in the United States. We are planning to perform lead optimization and IND-enabling studies in 2025 to support an IND filing.
- Two separate strains of bacterial microbes have been investigated and developed by us and Bayer Consumer Care AG, the consumer products division of Bayer AG, or Bayer, the international life science company. We entered into a Joint Development Agreement, or JDA, with Bayer in December 2019. Under the terms of the JDA, we are responsible for testing our library of bacterial strains and their natural products for key preclinical properties. After screening through hundreds of strains, we and Bayer have selected two particular strains to move forward into further development. Bayer holds the exclusive option to license the patent rights to these strains. As of the date of this prospectus, we have not negotiated a commercial license agreement with Bayer and we will not do so until such time, if ever, as Bayer exercises its option to acquire an exclusive royalty bearing license.

## FDA-regulated candidates for drug development



## Consumer/Cosmetic Product Development



We also have established partnerships with teams from Carnegie Mellon University and the Fred Hutchinson Cancer Center, or Fred Hutch, two of the premier academic centers in the United States. Our collaboration with the Carnegie Mellon based team also takes advantage of the power of whole genome sequencing. This partnership is mining our proprietary library of bacterial strains for novel, drug like peptides and proteins. The artificial intelligence/machine learning technology developed by this team predicts the molecules made by microbes from their genetic sequences. The system then compares the predictions to the products actually made through tandem mass spectroscopy and/or nuclear magnetic resonance imaging to refine future predictions. The predictions can be compared to publicly available 2D and 3D protein databases to select drug like structures.

We hold an exclusive, worldwide license from Fred Hutch regarding the use of its patented SyngenicDNA Minicircle Plasmid, or SyMPL, technologies for all fields of genetic engineering, including to discover, develop and commercialize engineered microbial therapies and microbial-derived peptides and proteins for skin diseases. We are utilizing our licensed patent rights to build plasmids in order to make genetic transformations that have never been previously achieved. To date, our team has successfully engineered our lead therapeutic candidates without the SyMPL technology. However, we believe that SyMPL will open up the ability to make genetic transformations of an expanded universe of microbial species, and we expect that some or all of our future product candidates will incorporate the SyMPL technology.

### Our Strategy

Beyond our three lead product candidates and collaboration with Bayer, our goal is to develop a broad portfolio of product candidates focused on expanding the application of our platforms for precision dermatology. We believe that we have established a unique position in advancing the development of biologics for precision dermatology.

We intend to create a broad portfolio of product candidates for precision dermatology through our development of genetically engineered proteins selected from our proprietary microbial library of approximately 1,500 unique bacterial strains. Our strategy is as follows:

- **Build a sustainable precision dermatology company.** Our goal is to build a leading precision dermatology company with a sustainable pipeline of product candidates. To that end, we are focused on rapidly advancing our current pipeline of live biotherapeutic candidates while actively developing additional product candidates. Each of our current product candidates are proprietary and subject to pending patent applications. We expect that most of our genetically engineered product candidates we develop will be eligible for patent protection.
- **Advance our lead programs, ATR-12 and ATR-04, through clinical trials.** In 2022, we obtained pre-IND correspondence with the FDA for purposes of discussing our proposed regulatory pathway for the ATR-12 program and obtaining guidance from the FDA on the preclinical plan leading to the filing and acceptance of an IND for ATR-12. In December 2022, we filed an IND for an ATR-12 first-in-human trial in Netherton syndrome patients. On January 27, 2023, we received notification from the FDA that the “study may proceed” with respect to the proposed Phase 1b clinical trial, and in August 2024 we initiated dosing the first patient in the ATR-12 Phase 1b clinical trial. In August 2024, we received IND clearance from the FDA for a first-in-human Phase 1b/2a clinical trial in patients with EGFRi-associated rash, and in September 2024, the FDA granted Fast Track designation for the ATR-04 program. We commenced a Phase 1b trial for our ATR-04 program in certain cancer patients undergoing EGFRi therapy in the fourth quarter of 2024. We expect to dose the first patient in the ATR-04 Phase 1/2 clinical trial in the third quarter of 2025. We reported initial safety results of the first patients dosed in our ATR-12 Phase 1b clinical trial in Netherton syndrome patients in the first half of 2025.
- **Broaden our platform by selectively exploring strategic partnerships that maximize the potential of our precision dermatology programs.** We intend to maintain significant rights to all of our core technologies and product candidates. However, we will continue to evaluate partnering opportunities in which a strategic partner could help us to accelerate development of our technologies and product candidates, provide access to synergistic combinations, or provide expertise that could allow us to expand into the treatment of different types of skin diseases. We may also broaden the reach of our platform by selectively in-licensing technologies or product candidates. In addition, we will consider potentially out-licensing certain of our proprietary technologies for indications and industries that we are not pursuing. We believe our genetic engineering techniques and technologies have applicability outside of the field of medicine, including cosmetics and in the generation of clean fuels and bioremediation.
- **Leverage our academic partnerships.** We currently have partnerships with investigators at the Fred Hutchinson Cancer Center, Yale University, Duke University, and Carnegie Mellon University. We expect to leverage these partnerships and potentially expand them or form other academic partnerships to bolster our engineering platforms and expand our research and development pipeline.
- **Expand on our other potential product candidates.** Beyond our three lead product candidates, our goal is to develop a broad portfolio of product candidates focused on expanding the application of our platforms for precision dermatology. We have a proprietary platform for discovering and developing therapeutic products for precision dermatology. Our platform is built around a microbial library comprised of approximately 1,500 unique bacterial strains to allow screening for unique therapeutic characteristics and utilizes a microbial genetic technology that analyzes, predicts and engineers the proteins, peptides and molecules made by skin microbes. Our ability to genetically engineer intractable microbial species is uniquely leveraged by our exclusive license to the SymPL technology.

#### **Our Intellectual Property**

As of the date of this prospectus, we own three issued U.S. patents, twelve pending U.S. patent applications, three pending PCT applications and 58 other foreign patents and patent applications that are important to the development of our business.

## **Our Leadership Team**

We are led by Francisco D. Salva, our chief executive officer, and Travis Whitfill Ph.D. MPH, our co-founder and chief operating officer, who have more than 35 years of combined experience in the management of biotechnology companies and healthcare investing. Mr. Salva was previously a co-founder of Acerta Pharma, which was sold to AstraZeneca for approximately \$6.3 billion in a staged acquisition in 2016. He also worked on the turnaround of Pharmacyclics, which subsequently sold to Abbvie for approximately \$21 billion in 2015. Before that, Mr. Salva spent almost a decade in life sciences venture capital. Dr. Whitfill served as associate research scientist and serves as assistant professor adjunct at Yale University with appointments in the Departments of Pediatrics and Emergency Medicine. He spent nearly a decade in venture capital as a partner in a biotech-focused venture capital fund, Bios Partners. He has led numerous grant-funded projects, holds nearly a dozen patents and has co-authored over 60 publications. Our board of directors (the "Board") is comprised of renowned group of senior executives, scientists and investors in the biotechnology industry.

## **Our Competitive Strengths**

We are a pioneer in genetically engineering bacteria for therapeutic use in dermatology clinical trials. We have built a proprietary platform that includes a microbial library comprised of approximately 1,500 unique bacterial strains that are screened for therapeutic characteristics as well as lead drug candidates. Furthermore, we have exclusively licensed a novel technology, which potentially enables the genetic transformation of previously intractable bacterial microbes. The history of recombinant protein engineering in biotech has traditionally been limited to less than 20 species. Our licensed technology opens up the potential to genetically engineer thousands of microbial species to build proteins and peptides that have never been previously built. Our management team has significant experience in discovering, developing, manufacturing and commercializing therapeutics. The members of our leadership team have specialized expertise developed at companies including Pharmacyclics, Acerta Pharma, Castle Creek Biosciences, VYNE Therapeutics (fka Menlo Therapeutics), Revance Therapeutics, Biogen, Novartis and Connetics Corp.

## **Our Market Opportunity**

We believe there are significant market opportunities to capture in each of our addressable markets. The dermatology market itself has shown considerable growth over the last decade and is predicted to continue to grow. According to Vision Research Reports, the dermatology drug market surpassed \$17 billion in 2021 and is expected to grow at a compound annual growth rate of 8.8% through 2030. Our first product candidate to emerge from our platform focuses on the orphan indication of Netherton syndrome. Based on the Barbaty and Sun Studies, we believe that this product candidate represents a potential \$250 million global sales opportunity by mid-2030. Our second product candidate focuses on papulopustular rash due to EGFR inhibitors. We believe this product candidate represents a potential \$1 billion global sales opportunity by 2030. The diseases we intend to target are well characterized, often by a monogenic genetic mutation. Additionally, the era of genomic sequencing has ushered in unprecedented progress in genetic testing. The defined molecular pathophysiology of over 100 rare skin diseases has now been defined.

## **Our Corporate Information**

We were incorporated under the laws of the state of Delaware on January 2, 2014. Our principal executive offices are located at 21 Business Park Drive, Branford, Connecticut 06405, and our telephone number is (203) 646-6446. Our website address is [www.azitrainc.com](http://www.azitrainc.com). The information contained in, or accessible through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained in, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our Common Stock or Warrants.

We own U.S. and foreign registered trademarks, including our company name. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indication that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

## **Additional Information**

For additional information related to our business and operations, please refer to the reports incorporated herein by reference, as described in the section entitled “*Incorporation of Certain Documents by Reference*” in this prospectus.

### **Implications of Being an Emerging Growth Company**

The Jumpstart Our Business Startups Act, or the JOBS Act, was enacted in April 2012 with the intention of encouraging capital formation in the United States and reducing the regulatory burden on newly public companies that qualify as “emerging growth companies.” We are an emerging growth company within the meaning of the JOBS Act. As an emerging growth company, we may take advantage of certain exemptions from various public reporting requirements, including:

- the requirement that our internal control over financial reporting be attested to by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002;
- certain requirements related to the disclosure of executive compensation in this prospectus and in our periodic reports and proxy statements;
- the requirement that we hold a nonbinding advisory vote on executive compensation and any golden parachute payments; and
- the ability to delay compliance with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standard.

We may take advantage of the exemptions under the JOBS Act discussed above until we are no longer an emerging growth company. We will remain an emerging growth company until the earliest to occur of (1) the last day of the fiscal year in which we have \$1.235 billion or more in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates; (3) the date on which we have issued, in any three-year period, more than \$1.0 billion in non-convertible debt securities; or (4) the last day of the fiscal year ending after the fifth anniversary of the IPO.

We may choose to take advantage of some, but not all, of the available benefits under the JOBS Act. We have chosen to take advantage of all of the other exemptions discussed above. Accordingly, the information contained herein and in our subsequent filing with the SEC may be different than the information you receive from other public companies in which you hold stock.

### **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.

### **February Transactions**

See “The February Transactions” for a description of the February transactions and the Letter Agreement.

## THE OFFERING

Issuer	Azitra, Inc.
Common Stock offered by the Selling Stockholders	Up to 2,245,968 Warrant Shares that we may issue pursuant to any exercise of the Warrants.
Offering Price	The Selling Stockholders will sell the shares at prevailing market prices or privately negotiated prices.
Common Stock outstanding immediately before this offering	20,676,354 shares of Common Stock.
Common Stock to be outstanding after this offering	22,922,322 shares of Common Stock, assuming that all Warrants that we issue pursuant to the Letter Agreement are exercised. <sup>(1)</sup>
Use of proceeds	The Selling Stockholders will receive all of the proceeds from the sale of the Warrant Shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the Warrant Shares by the Selling Stockholders. However, we may receive aggregate gross proceeds of up to approximately \$1.2 million if the Warrants are exercised for cash. Any proceeds from the Selling Stockholders that we receive under the exercise of the Warrants are expected to be used for working capital and other general corporate purposes. See “Use of Proceeds.”
Trading market and symbol	Our Common Stock is listed on the NYSE American under the symbol “AZTR.”
Risk factors	Investing in our securities involves a high degree of risk. See the section titled “ <i>Risk Factors</i> ” and the other information in this prospectus for a discussion of the factors you should consider carefully before you decide to invest in our securities.

(1) The number of shares of our Common Stock to be outstanding after this offering is based on approximately 20,676,354 shares of our Common Stock outstanding as of July 18, 2025, and excludes:

- 41,608 shares of our Common Stock issuable upon exercise of outstanding options, with a weighted average exercise price of \$41.60 per share, granted pursuant to our 2016 Stock Incentive Plan (the “2016 Plan”) and our 2023 Stock Incentive Plan (the “2023 Plan”);
- approximately 16,698,593 shares of our Common Stock issuable upon exercise of outstanding warrants, with a weighted average exercise price of \$0.79 per share; and
- 7,457 shares of our Common Stock reserved for future grants under our 2016 Plan and 1,209,734 shares of our Common Stock reserved for future grants under our 2023 Plan

Unless we indicate otherwise or unless the context otherwise requires, all information in this prospectus assumes the following:

- no exercise of outstanding warrants or options described above; and
- no exercise of the Warrants.

## RISK FACTORS

*Any investment in our securities involves a high degree of risk. You should carefully consider the risks described below and set forth in the section “Risk Factors” in our Annual Report on Form 10-K for the year ended 2024 (the “2024 Form 10-K”), as well as any amendment or update to our risk factors reflected in subsequent filings with the SEC, which are incorporated by reference in this prospectus, and all other information contained in this prospectus and incorporated by reference in this prospectus, before you make a decision to invest in our securities. Please note that the risks highlighted here are not the only ones that we may face. For example, additional risks presently unknown to us or that we currently consider immaterial or unlikely to occur could also impair our operations. If any of the following events occur or any additional risks presently unknown to us actually occur, our business, financial condition and operating results may be materially adversely affected. In that event, the trading price of our Common Stock could decline and you could lose all or part of your investment.*

### **Risks Related to this Offering**

***As an investor, you may lose all of your investment.***

Investing in our securities involves a high degree of risk. As an investor, you may never recoup all, or even part, of your investment and you may never realize any return on your investment. You must be prepared to lose all of your investment.

***We will need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all.***

As of March 31, 2025, we had total assets of \$5,907,891 and working capital of approximately \$2.6 million. We believe that our cash on hand as of the date of this prospectus will not be sufficient to cover our proposed plan of operations over, at least, the next 12 months. We intend to seek additional funds through various financing sources, including the sale of our equity, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable us to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations, in which case you may lose your entire investment.

The report of our independent registered public accounting firm for the year ended December 31, 2024 states that due to our accumulated deficit, recurring and negative cash flow from operations there is substantial doubt about our ability to continue as a going concern.

***The market price of our Common Stock 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. Since shares of our Common Stock were sold in our initial public offering (“IPO”) in June 2023 at a price of \$150.00 per share, the reported high and low sales prices of our Common Stock have ranged from \$155.40 to \$0.2275 through July 17, 2025. The market price of our Common Stock on the NYSE American 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;
- 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.

***Our charter limits our ability to issue shares.***

Our charter authorizes us to issue up to 200,000,000 shares of Common Stock. With 20,676,354 shares of Common Stock issued and outstanding as of the date of this prospectus, 41,608 options, and 16,698,593 warrants outstanding, as well as 7,457 shares reserved for issue under our 2016 equity plan and 1,209,734 shares reserved under our 2023 equity incentive plan, 179,323,646 shares of Common Stock remain issuable as of the date of this prospectus. The number of shares issued and outstanding may increase depending upon any additional issuances of shares and shares underlying warrants pursuant to the purchase agreement with Alumni Capital LP. Additional shares may become issuable with the expiration of currently outstanding warrants or if we effect a reverse share split in the future. We may register additional shares as they become issuable.

***The issuance of Common Stock to the Selling Stockholders may cause substantial dilution to our existing stockholders, and the sale of such shares acquired by the Selling Stockholders could cause the price of our Common Stock to decline.***

We are registering for resale by the Selling Stockholders up to 2,245,968 Warrant Shares issuable upon exercise of the Warrants. The number of shares of our Common Stock ultimately offered for resale by the Selling Stockholders under this prospectus is dependent upon the number of Warrant Shares issued upon exercise of the Warrants by the Selling Stockholder. Depending on a variety of factors, including market liquidity of our Common Stock, the issuance of Warrant Shares to the Selling Stockholders may cause the trading price of our Common Stock to decline.

The Selling Stockholders may sell all, some or none of such Warrant Shares. The sale of a substantial number of Warrant Shares by the Selling Stockholders in this offering, or anticipation of such sales, could cause the trading price of our Common Stock to decline or make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire.

***Investors who buy shares at different times will likely pay different prices.***

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different levels of dilution and different outcomes in their investment results. The Selling Stockholders may sell the Warrant Shares at different times and at different prices. Investors may experience a decline in the value of the shares they purchase from the Selling Stockholders in this offering as a result of sales made by us in future transactions.

***Our failure to meet the continued listing requirements of the NYSE American could result in a delisting of our Common Stock.***

If we fail to satisfy the continued listing requirements of the NYSE American, such as the corporate governance requirements or the minimum closing bid price requirement, the NYSE American may take steps to delist our Common Stock. Such a delisting would likely have a negative effect on the price of our Common Stock and would impair your ability to sell or purchase our Common Stock when you wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our Common Stock to become listed again, stabilize the market price or improve the liquidity of our Common Stock, prevent our Common Stock from dropping below the NYSE American's minimum bid price requirement or prevent future non-compliance with the NYSE American's listing requirements.

***Future capital raises may dilute your ownership and/or have other adverse effects on our operations.***

If we raise additional capital by issuing equity securities, our existing stockholders' percentage ownership will be reduced and these stockholders may experience substantial dilution. If we raise additional funds by issuing debt securities, these debt securities would have rights senior to those of our Common Stock and the terms of the debt securities issued could impose significant restrictions on our operations, including liens on our assets. If we raise additional funds through collaborations and licensing arrangements, we may be required to relinquish some rights to our intellectual property or candidate products, or to grant licenses on terms that are not favorable to us.

***We have not paid dividends on our Common Stock in the past and have no immediate plans to pay such dividends.***

We plan to reinvest all of our earnings, to the extent we have earnings, to cover operating costs and otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our Common Stock in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our Common Stock as a dividend. Therefore, you should not expect to receive cash dividends on the Common Stock we are offering.

## THE FEBRUARY TRANSACTIONS

On February 4, 2025, we entered into a placement agency agreement (the “Placement Agency Agreement”) with Maxim Group LLC (the “Placement Agent”) in connection with the offer and sale to investors (the “Investors”) of 2,495,518 shares of the Company’s Common Stock, at an offering price of \$0.2785 per share (the “February RDO”) pursuant to a securities purchase agreement dated February 4, 2025 (the “Initial Purchase Agreement”). The Initial Purchase Agreement was amended and restated on February 5, 2025 (the “A&R Purchase Agreement”). The shares of Common Stock were offered by the Company pursuant to a shelf registration statement on Form S-3 (File No. 333-280648), which was declared effective by the SEC on July 8, 2024, the base prospectus included therein, and a prospectus supplement dated February 4, 2025. The aggregate gross proceeds to the Company from the February RDO were approximately \$693,803, before deducting placement agent fees and other estimated offering expenses. The February RDO closed on February 6, 2025.

On February 6, 2025, in connection with the Investors’ agreement to amend the Initial Purchase Agreement and enter into the A&R Purchase Agreement, the Company and the Investors entered into the Letter Agreement, pursuant to which the Company (i) issued the Investors the Warrants to purchase up to 2,245,968 shares of Common Stock, in the aggregate and (ii) granted the Investors a right for two years from the closing date of the Letter Agreement, to participate in future financings of the Company in an aggregate amount equal to 50% of such financings (the “Letter Agreement Offering”). Pursuant to the terms of the Letter Agreement, the Company must file a registration statement with the SEC covering the issuance of the Warrant Shares underlying the Warrants and use its best efforts to cause the registration statement to become effective by the six-month anniversary of the closing of the Letter Agreement. The filing of the registration statement of which this prospectus forms a part was made to satisfy this obligation. The Warrants are exercisable on the six-month and one day anniversary of their issuance, and their exercise price is equal to \$0.54, subject to adjustment in accordance with the terms of the Warrants.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains or incorporates by reference forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning the following:

- our future financial and operating results;
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the timing and success of our plan of commercialization;
- our ability to successfully develop and clinically test our product candidates;
- our ability to obtain FDA approval for any of our product candidates;
- our ability to comply with all U.S. and foreign regulations concerning the development, manufacture and sale of our product candidates;
- our reliance on third parties to manufacture our product candidates;
- the adequacy of the net proceeds of this offering;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively;
- our plans to use the proceeds from this offering;
- costs associated with initiating and defending intellectual property infringement and other claims;
- the attraction and retention of qualified employees and key personnel;
- future acquisitions of or investments in complementary companies or technologies; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the “*Risk Factors*” section of our 2024 Form 10-K and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus, the documents incorporated by reference in this prospectus, the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

## TRADEMARKS, SERVICE MARKS AND TRADE NAMES

We own or have rights to use a number of registered and common law trademarks, service marks and/or trade names in connection with our business in the United States and/or in certain foreign jurisdictions.

Solely for convenience, the trademarks, service marks, logos and trade names referred to in this prospectus are without the ® and ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, service marks and trade names. This prospectus contains additional trademarks, service marks and trade names of others, which are the property of their respective owners. All trademarks, service marks and trade names appearing in this prospectus are, to our knowledge, the property of their respective owners. We do not intend our use or display of other companies' trademarks, service marks, copyrights or trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

## USE OF PROCEEDS

This prospectus relates to shares of Common Stock that may be offered and sold from time to time by the Selling Stockholders. We will not receive any proceeds from the resale of shares of Common Stock by the Selling Stockholders.

We may receive up to approximately \$1.2 million if the Warrants are exercised for cash. See the "Plan of Distribution" section of this prospectus for more information. Any proceeds from the Selling Stockholders that we receive upon exercise of the Warrants for cash are currently expected to be used primarily for working capital and general corporate purposes. Pending these uses, we expect to invest the net proceeds in short-term, interest-bearing securities. We cannot predict when, or if, the Warrants will be exercised for cash. Further, in certain circumstances, the Selling Stockholders may exercise the Warrants on a cashless basis. As a result, we cannot specify with certainty all of the particular uses for the net proceeds that we will have. Management will retain broad discretion over the allocation of any net proceeds it receives as a result of the exercise of the Warrants.

We will incur all costs associated with this prospectus and the registration statement of which it is a part.

## **DIVIDEND POLICY**

We have never declared or paid any cash dividends on our Common Stock and we do not anticipate paying any cash dividends on our Common Stock in the foreseeable future. Investors should not purchase our Common Stock with the expectation of receiving cash dividends. The payment of dividends on our Common Stock, if any, in the future is within the discretion of our Board and will depend on our earnings, capital requirements and financial condition and other relevant facts. We currently intend to retain all future earnings, if any, to finance the development and growth of our business.

## DESCRIPTION OF SECURITIES

### General

The following description summarizes the most important terms of our capital stock. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description of the matters set forth in this "Description of Securities," you should refer to our amended and restated certificate of incorporation and amended and restated bylaws and investor rights agreement, which are included as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law.

Our authorized capital stock consists of 200,000,000 shares of Common Stock, \$0.0001 par value per share, and 10,000,000 shares of undesignated preferred stock, \$0.0001 par value per share.

There are 20,676,354 shares of our Common Stock outstanding and no shares of our preferred stock outstanding as of the date of this prospectus. As of the date of this prospectus, we had 34 stockholders of record.

### Common Stock

The holders of Common Stock are entitled to one vote for each share of Common Stock. The holders of Common Stock are entitled to any dividends that may be declared by the Board out of funds legally available for payment of dividends at such times and in such amounts as the Board in its discretion. In the event of any liquidation, dissolution or winding up of the Company, holders of Common Stock are entitled to receive the assets of the Company available for distribution to its stockholders ratably in proportion to the number of shares of Common Stock held by the holders of Common Stock. The holders of shares of Common Stock have no preemptive, conversion, subscription rights or cumulative voting rights.

### Preferred Stock

As of the date of this prospectus, there are a total of 10,000,000 shares of undesignated preferred stock authorized for issuance, none of which are outstanding.

Our Board is authorized, without further action by our stockholders, to provide from time to time out of the unissued shares of preferred stock for one or more series of preferred stock, and with respect to each such series, to fix the number of shares constituting such series and the designation of such series, the powers (including voting powers), if any, of the shares of such series and the preferences and relative, participating, optional, special or other rights, if any, and the qualifications, limitations, or restrictions, if any, of the shares of such series. The issuance of our preferred stock could adversely affect the voting power of holders of our Common Stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring, or preventing a change of control or other corporate action.

### Warrants

We have outstanding the following warrants to purchase shares of our Common Stock:

- Warrants issued in connection with our April 2018 placement of unsecured convertible promissory notes to purchase up to an aggregate of 1,596 shares of our Common Stock, at a per share exercise price equal to \$14.40. The warrants expire in April 2028.
- Warrants issued in connection with our February 2019 placement of Series A-1 convertible preferred shares to purchase up to an aggregate of 7,195 shares of our Common Stock, at a per share exercise price equal to \$158.40. The warrants expire in February 2026.
- Warrants issued to the underwriter of our IPO to purchase 2,000 shares of our Common Stock. These warrants are exercisable at \$187.50 per share. The warrants expire in June 2028.
- Warrants issued to the underwriter of our February 2024 public offering to purchase 22,223 shares of our Common Stock. These warrants are exercisable at \$11.25 per share. The warrants expire in February 2029.
- Warrants issued in connection with our July 2024 follow-on public offering to purchase 13,329,000 shares of our Common Stock. These warrants are exercisable at \$0.7043 per share. The warrants expire in July 2029.

- Warrants issued to the underwriter of our July 2024 follow-on offering to purchase 266,600 shares of our Common Stock. These warrants are exercisable at \$1.88 per share. The warrants expire in July 2029.
- Warrants issued to the underwriter of our January 2025 public offering to purchase 194,311 shares of our Common Stock. These warrants are exercisable at \$0.38 per share. The warrants expire in January 2030.
- Warrants issued in connection with our February 2025 follow-on offering to purchase 2,245,968 shares of our Common Stock. These warrants are exercisable at \$0.54 per share. The warrants expire in August 2030. The shares underlying these Warrants are being registered hereunder.
- Warrants issued in connection with our equity line of credit to purchase in aggregate 479,700 shares of our Common Stock. These warrants are exercisable at ranges from \$0.27 to \$0.35 per share depending on their respective date of issuance. The warrants have expiration dates ranging from May 2025 to July 2025.

#### **Stock Incentive Plans**

We have adopted the Azitra, Inc. 2016 Stock Incentive Plan (the “2016 Plan”) providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our Common Stock and for the grant of restricted and unrestricted share grants and restricted stock units. We currently have reserved 7,457 shares of our Common Stock under the 2016 Plan. The purpose of the 2016 Plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. All officers, directors, employees and consultants to our company are eligible to participate under the 2016 Plan. The 2016 Plan provides that options may not be granted at an exercise price less than the fair market value of our shares of Common Stock on the date of grant. As of the date of this prospectus, we have outstanding options granted under the 2016 Plan to purchase an aggregate of 40,276 shares of our Common Stock at an average exercise price of \$40.92 per share.

In March 2023, our Board and stockholders approved and adopted the Azitra, Inc. 2023 Stock Incentive Plan (the “2023 Plan”) providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our Common Stock and for the grant of restricted and unrestricted share grants and restricted stock units. In November 2024, our stockholders approved amendments to the 2023 Plan that (i) increased the number of shares of Common Stock that may be issued under the 2023 Plan by 1,144,401 shares and (ii) adopted an evergreen provision to the 2023 Plan providing for an automatic 5% annual increase in the shares of Common Stock available for issuance under the 2023 Plan over the next 10 years, commencing on January 1, 2026. We currently have reserved 1,211,068 shares of our Common Stock under the 2023 Plan. The purpose of the 2023 Plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. All officers, directors, employees and consultants to our company are eligible to participate under the 2023 Plan. The 2023 Plan provides that options may not be granted at an exercise price less than the fair market value of our shares of Common Stock on the date of grant. As of the date of this report, we have outstanding options granted under the 2023 Plan to purchase an aggregate of 1,333 shares of our Common Stock at an average exercise price of \$62.10 per share.

#### **Dividends**

We do not anticipate the payment of cash dividends on our Common Stock in the foreseeable future.

#### **Registration Rights**

Certain holders of our Common Stock, or their permitted transferees, are entitled to the registration rights described below. The registration of shares of our Common Stock pursuant to the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than the underwriting discounts and commissions, of the shares registered pursuant to the registrations described below. The registration rights described below will expire upon the earlier of June 20, 2026 or when all investors, considered with their affiliates, can sell all of their shares in a three-month period under Rule 144.

*Convertible Preferred Stock Registration Rights.* In connection with our convertible preferred stock financings, we entered into an investor rights agreement, as amended, pursuant to which we have granted the purchasers of our convertible preferred stock certain demand and piggyback registration rights. Those parties beneficially hold approximately 217,082 shares of our Common Stock, including 5,612 shares of our Common Stock issuable upon exercise of warrants issued to the parties in connection with our 2018 placement of our unsecured convertible promissory notes and our 2019 placement of Series A-1 convertible preferred shares.

Pursuant to the investor rights agreement, we are required, upon the written request by the holders of at least 50% of the shares that are entitled to registration rights under the investor rights agreement, to register, as soon as practicable, all or a portion of these shares for public resale. We are required to effect two demand registrations pursuant to a registration statement on Form S-1. Subject to our eligibility to use a registration statement on Form S-3, we are required to effect an unlimited number of demand registrations pursuant to Form S-3, provided such requests for registration be for an aggregate offering price, net of the underwriting discounts and commissions, equal or greater than \$1 million. Pursuant to the investor rights agreement, we have also granted to the piggyback registration rights and demand registration rights. These demand and piggyback registration rights terminate as to each investor when their shares subject to the registration rights agreement may be sold by the investor pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

On July 1, 2024, we filed with the SEC a registration statement on Form S-3 to register the resale of the 217,082 shares of Common Stock held by the stockholders holding demand registration rights.

*Underwriter Registration Rights.* In connection with our IPO and February 2024 public offering, we issued to the representative of the underwriters or its designees warrants, referred to as the Representative's Warrants, to purchase up to a total of 2,000 shares and 22,222 shares of our Common Stock, respectively. The Representative's Warrants provide for registration rights (including a one-time demand registration right and unlimited piggyback rights) consistent with FINRA Rule 5110.05. The demand for registration may be made at any time beginning on the initial exercise date of the Representative's Warrants and expiring on the fifth anniversary of the date of the public offering prospectus to which the warrants relate in accordance with FINRA Rule 5110(g)(8)(C). In addition to the one-time demand registration right, the Representative's Warrants have unlimited piggyback rights, for a period of no more than two years from the initial exercise date of the Representative's Warrants in accordance with FINRA Rule 5110(g)(8)(D).

*January 2025 Offering.* In connection with the offering of securities pursuant to our shelf registration statement on Form S-3 that we completed in January 2025, we issued to the placement agent or its designees warrants, referred to as the January Placement Agent Warrants, to purchase up to a total of 194,311 shares of our Common Stock. The January Placement Agent Warrants provide for registration rights (including a one-time demand registration right and unlimited piggyback rights) consistent with FINRA Rule 5110.05. The demand for registration may be made at any time beginning on the initial exercise date of the January Placement Agent Warrants and expiring on the fifth anniversary of the date of the public offering prospectus to which the warrants relate in accordance with FINRA Rule 5110(g)(8)(C).

*Alumni Capital LP Equity Line of Credit.* The Company entered into a purchase agreement (the "ELOC Purchase Agreement") with Alumni Capital LP ("Alumni") in April 2025 through which the Company has the right, but not the obligation, to sell to Alumni, and Alumni is obligated to purchase, up to an aggregate of \$20 million (the "Investment Amount") of shares (the "ELOC Shares") of the Company's Common Stock in a series of purchases. Upon each purchase, Alumni receives warrants to purchase such number of shares of the Company's Common Stock equal to 10% of the number of ELOC Shares purchased in the related purchase (the "ELOC Warrants").

On April 28, 2025, we filed with the SEC a registration statement on Form S-1 (File No. 333-286809) to register the resale of 73,578,595 shares of Common Stock, which represents (i) 66,889,632 ELOC Shares that we may issue and sell to Alumni under the ELOC Purchase Agreement and (ii) 6,688,963 shares of Common Stock underlying the ELOC Warrants that are issuable upon exercise of the ELOC Warrants that we may issue to Alumni in connection with any single fixed purchase under the ELOC Purchase Agreement. The Form S-1 was declared effective on May 1, 2025.

Depending on the market prices of the Company's Common Stock at the time it elects to issue and sell ELOC Shares and ELOC Warrants to Alumni under the ELOC Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our Common Stock in order to receive aggregate gross proceeds equal to the full Investment Amount.

## Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Charter Documents

The following is a summary of certain provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws. This summary does not purport to be complete and is qualified in its entirety by reference to the corporate law of Delaware and our amended and restated certificate of incorporation and amended and restated bylaws.

### Delaware Law

We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination (as defined below) with any interested stockholder (as defined below) for a period of three years following the date that the stockholder became an interested stockholder, unless:

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

Section 203 defines “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to limited exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation, or who beneficially owns 15% or more of the outstanding voting stock of the corporation at any time within a three-year period immediately prior to the date of determining whether such person is an interested stockholder, and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

### Our Charter Documents

Our charter documents include provisions that could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our Board and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of us. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions may have the effect of discouraging, delaying or preventing a change in control or an unsolicited acquisition proposal that a stockholder might consider favorable, including a proposal that might result in the payment of a premium over the market price for the shares held by our stockholders. Certain of these provisions are summarized in the following paragraphs.

*Effects of authorized but unissued Common Stock and preferred stock.* One of the effects of the existence of authorized but unissued Common Stock and preferred stock may be to enable our Board to make more difficult or to discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the Board were to determine that a takeover proposal was not in our best interest, such shares could be issued by the Board without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights of the proposed acquirer or insurgent stockholder group, by putting a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent Board, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

*Cumulative Voting.* Our amended and restated certificate of incorporation does not provide for cumulative voting in the election of directors, which would allow holders of less than a majority of the stock to elect some directors.

*Vacancies.* Our amended and restated bylaws provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

*Special Meeting of Stockholders and Stockholder Action by Written Consent.* A special meeting of stockholders may only be called by our Board or the chairperson of our Board. All stockholder actions must be effected at a duly called meeting of stockholders and not by written consent.

*Advance Notice Provisions.* Our amended and restated bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

*Choice of Forum.* Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine.

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

The transfer agent and registrar for our shares of Common Stock is VStock Transfer, LLC. The transfer agent and registrar's address is 18 Lafayette Place, Woodmere, New York 11598.

#### **National Securities Exchange Listing**

Our Common Stock is listed on the NYSE American under the symbol "AZTR."

## SELLING STOCKHOLDERS

We are registering the Warrant Shares in order to permit the Selling Stockholders to offer these shares for resale from time to time. Except for the investment in the Warrant Shares being registered hereunder, and, in the case of certain investors, their investment in (i) the February RDO, (ii) the Letter Agreement Offering, (iii) the public offering that closed on January 16, 2025 (the “January 2025 Offering”) and (iv) the public offering that closed on July 25, 2024 (the “July 2024 Offering”), the Selling Stockholders have not had any material relationship with us within the past three years. The shares of Common Stock issued in the February RDO, the January 2025 Offering and the July 2024 Offering were registered separately. We are registering the Warrant Shares pursuant to the provisions of the Letter Agreement we entered into with the Selling Stockholders on February 6, 2025, in order to permit the Selling Stockholders to offer the Warrant Shares for resale from time to time. Pursuant to the terms of the Letter Agreement, the Company has agreed to use its best efforts to cause the registration statement to become effective by the six-month anniversary of the closing of the Letter Agreement.

The table below lists the Selling Stockholders and other information regarding the beneficial ownership of the shares of Common Stock by the Selling Stockholders and reflects holdings as of July 18, 2025. The second column lists the number of Warrant Shares owned. Unless otherwise noted, all shares owned by the Selling Stockholders were acquired in the February RDO, the Letter Agreement Offering, the January 2025 Offering and the July 2024 Offering. The third column lists the shares of Common Stock being offered by this prospectus by the Selling Stockholders. The fourth column assumes the sale of all of the shares offered by the Selling Stockholders pursuant to this prospectus.

The Selling Stockholders may sell some, all or none of their Warrant Shares in this offering. We do not know how long the Selling Stockholders will hold the Warrant Shares before selling them, and we currently have no agreements, arrangements or understandings with the Selling Stockholders regarding the sale of any of the Warrant Shares.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act, and includes shares of Common Stock with respect to which the Selling Stockholders have voting and investment powers. The percentage of shares of Common Stock beneficially owned by the Selling Stockholders prior to the offering shown in the table below is based on an aggregate of 20,676,354 shares of our Common Stock outstanding on July 18, 2025.

<u>Name of Selling Stockholder</u>	<u>Number of Shares of Common Stock Owned Prior to Offering</u>		<u>Maximum Number of Shares of Common Stock to be Sold</u>	<u>Number of Shares of Common Stock Owned After Offering</u>	
	<u>Number</u>	<u>Percent</u>		<u>Number<sup>(1)</sup></u>	<u>Percent</u>
	L1 Capital Global Opportunities Master Fund	1,521,492(2)		7.36%	561,492
Alto Opportunity Master Fund, SPC – Segregated Master Portfolio B.	1,821,492(3)	8.81%	561,492	1,260,000(3)	6.09%
Anson Investments Master Fund LP	2,324,292(4)	11.24%	561,492	1,762,800(4)	8.53%
Hudson Bay Master Fund Ltd.	1,821,492(5)	8.81%	561,492	1,260,000(5)	6.09%

- (1) Assumes the sale of all Warrant Shares being offered pursuant to this prospectus.
- (2) The 1,521,492 shares represent the 561,492 shares of Common Stock underlying the Warrants issued on February 6, 2025 and 960,000 shares of Common Stock underlying warrants issued in the July 2024 Offering. The issuable shares of Common Stock related to the exercise of the Warrants are subject to a 4.99% beneficial ownership blocker; pursuant to the terms of the Warrants the beneficial ownership limitation can be increased to (but not exceed) 9.99%. David Feldman and Joel Arber are the control persons of L1 Capital Global Opportunities Master Fund, Ltd. As such, L1 Capital Global Opportunities Master Fund, Ltd., Mr. Feldman, and Mr. Arber may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Securities Exchange Act of 1934) the Company's securities. To the extent Mr. Feldman and Mr. Arber are deemed to beneficially own such securities, Mr. Feldman and Mr. Arber disclaim beneficial ownership of these securities except to the extent of its pecuniary interest therein. The address of L1 Capital Global Opportunities Master Fund, Ltd. is 161A Shedden Road, 1 Artillery Court, PO Box 10085, Grand Cayman, Cayman Islands KY1-1001.
- (3) The 1,821,492 shares represent 561,492 shares of Common Stock underlying the Warrants issued on February 6, 2025 and 1,260,000 shares of Common Stock underlying certain warrants issued in the July 2024 Offering held by Alto Opportunity Master Fund, SPC- Segregated Master Portfolio B, a Cayman Islands exempted company (the "Fund"). The issuable shares of Common Stock related to the exercise of the Warrants are subject to a 9.99% beneficial ownership blocker. Ayrton Capital LLC is the investment manager of the Fund and has discretionary authority to vote and dispose of the shares held by the Fund and may be deemed to be the beneficial owner of these shares. Waqas Khatri, in his capacity as Managing Member of Ayrton Capital LLC, may also be deemed to have investment discretion and voting power over the shares held by the Fund. Ayrton Capital LLC and Mr. Khatri each disclaim any beneficial ownership of these shares. The address of Ayrton Capital LLC is 55 Post Rd West, 2nd Floor Westport, CT 06880. The address of Alto Opportunity Master Fund, SPC - Segregated Master Portfolio B is Suite #7 Grand Pavilion Commercial Centre, 802 West Bay Road, Grand Cayman, P.O. Box 10250, Cayman Islands. The address of Waqas Khatri is 55 Post Rd West, 2nd Floor Westport, CT 06880.
- (4) The 2,324,292 shares represent 561,492 shares of Common Stock underlying the Warrants issued on February 6, 2025 and 1,762,800 shares of Common Stock underlying warrants issued in the July 2024 Offering. The issuable shares of Common Stock related to the exercise of the Warrants are subject to a 4.99% beneficial ownership blocker; pursuant to the terms of the Warrants the beneficial ownership limitation can be increased to (but not exceed) 9.99%. Anson Advisors Inc. and Anson Funds Management LP, the Co-Investment Advisers of Anson Investment Master Fund LP ("Anson"), hold voting and dispositive power over the Common Stock held by Anson. Tony Moore is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Moore, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of the shares of Common Stock except to the extent of their pecuniary interest therein. The principal business address of Anson is Maples Corporate Services Limited, PO Box 309, Uglund House, Grand Cayman, KY1-1104, Cayman Islands.
- (5) The 1,821,492 shares represent 561,492 shares of Common Stock underlying the Warrants issued on February 6, 2025 and 1,260,000 shares of Common Stock underlying certain warrants issued in the July 2024 Offering. The issuable shares of Common Stock related to the exercise of the Warrants are subject to a 4.99% beneficial ownership blocker; pursuant to the terms of the Warrants the beneficial ownership limitation can be increased to (but not exceed) 9.99%. Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Master Fund Ltd. and Sander Gerber disclaims beneficial ownership over these securities. The principal business address of Hudson Bay Master Fund Ltd. is c/o Hudson Bay Capital Management LP, 28 Havemeyer Place, 2<sup>nd</sup> Floor, Greenwich, CT 06830.

## PLAN OF DISTRIBUTION

The Selling Stockholders of the Warrant Shares and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their Warrant Shares covered hereby on the principal trading market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. The securities may be sold or distributed from time to time by the Selling Stockholders directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the securities offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for our Common Stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the resale securities may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the resale securities may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

The Selling Stockholders may be considered "underwriters" within the meaning of Section 2(a)(11) of the Securities Act.

The Selling Stockholders may use one or more registered broker-dealers to effectuate all sales, if any, of our Common Stock. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such registered broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in resales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

We know of no existing arrangements between the Selling Stockholders or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our Common Stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement of which this prospectus forms a part to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares offered by this prospectus by the Selling Stockholders, including the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares by the Selling Stockholders, any compensation paid by the Selling Stockholders to any such brokers, dealers, underwriters or agents, and any other required information.

We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our Common Stock covered by this prospectus by the Selling Stockholders.

We estimate that the total expenses for the offering will be approximately \$50,000.

Our Common Stock is currently listed on the NYSE American under the symbol "AZTR."

#### **LEGAL MATTERS**

Thompson Hine LLP, New York, New York, will pass upon the validity of the Warrant Shares offered hereby.

#### **EXPERTS**

The financial statements as of and for the fiscal years ended December 31, 2024 and 2023 incorporated by reference in this prospectus have been so incorporated by reference reliance on the report of Grassi & Co., CPAs, P.C., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC permits us to “incorporate by reference” the information and reports we file with it. This means that we can disclose important information to you by referring to another document. The information that we incorporate by reference is considered to be part of this prospectus, and later information that we file with the SEC automatically updates and supersedes this information. We incorporate by reference the documents listed below, except to the extent information in those documents is different from the information contained in this prospectus, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) until the termination of the offering of these securities:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024 filed with the SEC on February 24, 2025;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2025, filed on May 13, 2025;
- Our Current Reports on Form 8-K filed with the SEC on [January 16, 2025](#), [February 6, 2025](#), [February 6, 2025](#) (both filed on that date), [February 20, 2025](#), [April 24, 2025](#), [May 2, 2025](#), [June 18, 2025](#), [June 23, 2025](#), and [July 3, 2025](#) (other than any information under Item 2.02 or Item 7.01 of each incorporated Form 8-K);
- Our definitive proxy statement filed on [January 14, 2025](#);
- Our definitive proxy statement filed on [May 29, 2025](#), as amended on [June 18, 2025](#); and
- The description of our Common Stock set forth in our registration statement on Form [8-A12B](#) filed with the SEC on May 16, 2023.

To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus shall supersede such incorporated statement and the incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus or the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to our various filings made with the SEC.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Azitra, Inc.  
21 Business Park Drive,  
Branford, Connecticut 06405  
Attention: Corporate Secretary  
Telephone: (203) 646-6446

## 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 Common Stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all 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 shares of 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 is 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).

In addition, we file annual, quarterly and current reports and proxy statements and other information with the SEC. Our SEC filings are available on the SEC’s website at [www.sec.gov](http://www.sec.gov). These filings are also available free of charge to the public on, or accessible through, our corporate website at [www.azitrainc.com](http://www.azitrainc.com). Our website and the information contained on, or that can be accessed through, our website is not deemed to be incorporated by reference in, and is not considered part of, this prospectus. You should not rely on any such information in making your decision whether to purchase our Common Stock.

We have not authorized anyone to give you any information or to make any representations about us or the transactions we discuss in this prospectus other than those contained in this prospectus. If you are given any information or representations about these matters that is not discussed in this prospectus, you must not rely on that information. This prospectus is not an offer to sell or a solicitation of an offer to buy securities anywhere or to anyone where or to whom we are not permitted to offer or sell securities under applicable law.

Up to 2,245,968 Shares of Common Stock Underlying the Warrants



PRELIMINARY PROSPECTUS

, 2025

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PART II - INFORMATION NOT REQUIRED IN PROSPECTUS

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

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of our Common Stock being registered hereby, all of which will be borne by us (except any placement agent fees and expenses incurred for brokerage, accounting, tax or legal services or any other expenses incurred in disposing of the shares). All amounts are estimated except the SEC registration fee.

Description	Amount
SEC Registration Fee	\$ 78
Accounting Fees and Expenses	30,000
Legal Fees and Expenses	50,000
Total	\$ 80,078

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

The following summary is qualified in its entirety by reference to the complete text of any statutes referred to below and the Second Amended and Restated Certificate of Incorporation, or Certificate of Incorporation, of Azitra, Inc., a Delaware corporation.

Section 145 of the General Corporation Law of the State of Delaware (the "DGCL") permits a Delaware corporation to indemnify any person 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 (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful.

In the case of an action by or in the right of the corporation, Section 145 of the DGCL permits a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery 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, such person is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or such other court shall deem proper.

Section 145 of the DGCL also permits a Delaware corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145 of the DGCL.

Our Certificate of Incorporation states that to the fullest extent permitted by the DGCL our directors shall not be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended after the date hereof to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Our Certificate of Incorporation requires us, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) our directors and officers, and authorizes us, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) to other employees and agents (and any other persons to which the DGCL permits us to provide indemnification) through bylaw provisions, agreements with such directors, officers, employees, agents or other persons, vote of stockholders or disinterested directors or otherwise, subject only to limits created by the DGCL with respect to actions for breach of duty to our corporation, our stockholders and others.

Our Certificate of Incorporation provides that we shall, to the maximum extent and in the manner permitted by the DGCL, indemnify each of our directors, officers and all other persons we have the power to indemnify under Section 145 of the DGCL against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director of the Company. We may maintain insurance, at our expense, to protect the Company and any of our directors, officers, employees or agents against any such expense, liability or loss, whether or not we have the power to indemnify such person.

We have entered into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit, or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

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

The following list sets forth information regarding all unregistered securities sold by us over the three-year period preceding the date of the prospectus that forms a part of this registration statement.

In January 2022, we sold to one investor an unsecured convertible promissory note in the principal amount of \$1,000,000. In January 2023, the principal amount of the note, along with all accrued interest, was converted into 23,432 shares of our Series B convertible preferred stock. Subsequently, these shares were converted into Common Stock upon the consummation of the IPO.

In September 2022, we conducted the placement of our unsecured convertible promissory notes in the aggregate principal amount of \$4.35 million to five investors. The principal amount of the notes, along with all accrued and unpaid interest thereunder, converted into 61,534 shares of our Common Stock upon the consummation of the IPO.

No underwriters were involved in the foregoing issuances of securities. We believe the offers, sales and issuances of the above securities by us were exempt from registration under the Securities Act by virtue of Section 4(a)(2) of the Securities Act and Rule 506 thereunder as transactions not involving a public offering. All of the investors were accredited investors as such term is defined in Rule 501 under the Securities Act. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates, notes and warrants issued in these transactions. All recipients had adequate access, through their relationships with us, to information about our Company. The sales of these securities were made without any general solicitation or advertising.

On January 14, 2025, the Company entered into a placement agency agreement (the “January Placement Agency Agreement”) with Maxim Group LLC (the “January Placement Agent”) in connection with the offer and sale to investors of up to 4,857,780 registered shares (the “January Shares”) of the Company’s Common Stock, at an offering price of \$0.30 per January Share (the “January Offering”). The January Placement Agent acted as the Company’s exclusive placement agent in the January Offering. Pursuant to the terms of the January Placement Agency Agreement, the Company has agreed to pay the January Placement Agent a cash fee equal to 7.0% of the aggregate gross proceeds raised in the January Offering. The Company agreed to reimburse the January Placement Agent for certain expenses. As additional compensation, the Company agreed to issue to the January Placement Agent (or its designees) an unregistered warrant (the “January Placement Agent Warrant”) to purchase an aggregate of 194,311 shares of Common Stock (the “January Placement Agent Warrant Shares”), which represents 4.0% of the aggregate number of January Shares sold in the January Offering, at an exercise price per share equal to 125% of the offering price of each January Share, or \$0.375. The January Placement Agent Warrants are exercisable six (6) months from the date of issuance and expire five years from the commencement of sales in the January Offering. The January Placement Agent Warrant may be exercisable via “cashless exercise” in certain circumstances.

The January Placement Agent Warrants and the shares of Common Stock issuable upon exercise of the January Placement Agent Warrants were not registered under the Securities Act of 1933, as amended (the “Securities Act”), or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act afforded by Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder as transactions by an issuer not involving any public offering.

On February 6, 2025, the Company closed the February RDO of 2,495,518 shares of the Company’s Common Stock to the Investors pursuant to the Initial Purchase Agreement, as amended by the A&R Purchase Agreement. On February 6, 2025, in connection with the Investors’ agreement to amend the Initial Purchase Agreement and enter into the A&R Purchase Agreement, the Company and the Investors entered into the Letter Agreement, pursuant to which the Company (i) issued the Investors the Warrants and (ii) granted the investors a right for two years from the closing date of the Letter Agreement, to participate in future financings of the Company in an aggregate amount equal to 50% of such financings. Pursuant to the terms of the Letter Agreement, the Company is obligated to file a registration statement covering the issuance of the shares Common Stock underlying the Warrants and to use its best efforts to cause the registration statement to become effective by the six-month anniversary of the closing of the Letter Agreement. The filing of the registration statement of which this prospectus forms a part was made to satisfy this obligation. The Warrants are exercisable on the six-month and one day anniversary of their issuance, and their exercise price is equal to \$0.54, subject to adjustment pursuant to the terms of the Warrants. As of the date of this prospectus, the Warrants and Warrant Shares have not been registered under the Securities Act, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act afforded by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder as transactions by an issuer not involving any public offering.

On April 24, 2025, the Company entered into the ELOC Purchase Agreement with Alumni, whereby the Company has the right, but not the obligation, to sell to Alumni, and Alumni is obligated to purchase up to the Investment Amount of ELOC Shares of the Company’s Common Stock in a series of purchases. The purchase price of the ELOC Shares that the Company elects to sell to Alumni pursuant to the ELOC Purchase Agreement will be equal to the lowest daily volume weighted average price of the Common Stock during the period commencing on the date that the Company delivers a notice requiring the purchase of ELOC Shares by Alumni and ending on the earlier to occur of (i) five (5) business days immediately following such date and (ii) the date on which Alumni notifies the Company that it is prepared to proceed with the relevant closing, multiplied by 90%. Upon each purchase, Alumni receives ELOC Warrants to purchase such number of shares of the Company’s Common Stock equal to 10% of the number of ELOC Shares purchased in the related purchase. The exercise price of the ELOC Warrants equals 130% of the price per share paid upon closing. The exercise of the ELOC Warrants were subject to stockholder approval, which the Company received at its annual meeting of shareholders held on June 23, 2025, and expire five years after issuance. The ELOC Warrants may be exercised via cashless exercise if there is no effective registration statement, or current prospectus available for, the resale of the shares underlying the ELOC Warrants. The issuance of the ELOC Shares and the ELOC Warrants to Alumni were or will be made pursuant to exemptions from the registration requirement of the Securities Act provided by Section 4(a)(2) thereunder. In accordance with the ELOC Purchase Agreement, the Company registered the offering and resale by Alumni of up to 66,889,632 shares of the Company’s Common Stock and up to 6,688,632 shares underlying the ELOC Warrants issuable upon exercise of the ELOC Warrants on Form S-1 (File No. 333-286809), which was declared effective by the SEC on May 1, 2025.

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

(a) Exhibits.

<b>Exhibit No.</b>	<b>Description of Document</b>	<b>Method of Filing</b>
1.1	<a href="#">Placement Agency Agreement dated July 23, 2024 between the Company and Maxim Group LLC</a>	Incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on July 25, 2024 (File No. 001-41705).
3.1	<a href="#">Second Amended and Restated Certificate of Incorporation of the Registrant.</a>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on June 21, 2023 (File No. 001-41705).
3.2	<a href="#">Second Amended and Restated Bylaws of the Registrant.</a>	Incorporated herein by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed on June 21, 2023 (File No. 001-41705).
3.3	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation of the Registrant.</a>	Incorporated herein by reference to Exhibit 3.3 to the Company's Registration Statement on Form S-3 filed on July 1, 2024 (File No. 280648).
3.4	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation of the Registrant.</a>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 3, 2025 (File No. 001-41705)
4.1	<a href="#">Specimen Certificate representing shares of Common Stock.</a>	Incorporated herein by reference to Exhibit 4.1 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
4.2	<a href="#">Form of Warrant issued to private placement investors.</a>	Incorporated herein by reference to Exhibit 4.2 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
4.3	<a href="#">Form of Representative's Warrant dated June 20, 2023 issued to ThinkEquity LLC.</a>	Incorporated herein by reference to Exhibit 4.3 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
4.5	<a href="#">Form of Representative's Warrant dated February 13, 2024 issued to ThinkEquity LLC.</a>	Incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on February 14, 2024.
4.5	<a href="#">Form of Class A Warrant</a>	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on July 21, 2024 (File No. 001-41705).
4.6	<a href="#">Form of Placement Agent Warrant</a>	Incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on July 21, 2024 (File No. 001-41705).
4.7	<a href="#">Warrant Agent Agreement dated July 25, 2025 between the Company and VStock Transfer LLC</a>	Incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on July 21, 2024 (File No. 001-41705).
4.8	<a href="#">Form of Placement Agent Warrant</a>	Incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on January 16, 2025 (File No. 001-41705).
4.9	<a href="#">Form of Warrant</a>	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 6, 2025 (File No. 001-41705).
4.10	<a href="#">Form Warrant issued to Alumni Capital.</a>	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on April 24, 2025 (File No. 001-41705).
5.1*	<a href="#">Opinion of Thompson Hine, LLP.</a>	Filed herewith.
10.1+	<a href="#">Azitra, Inc. 2016 Stock Incentive Plan.</a>	Incorporated herein by reference to Exhibit 10.2 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
10.2+	<a href="#">Azitra, Inc. 2023 Stock Incentive Plan.</a>	Incorporated herein by reference to Exhibit 10.5 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
10.3+	<a href="#">Executive Employment Agreement dated April 22, 2021 between the Registrant and Francisco D. Salva.</a>	Incorporated herein by reference to Exhibit 10.4 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).

10.4+	<a href="#"><u>Executive Employment Agreement dated July 5, 2023 between the Registrant and Travis Whitfill.</u></a>	Incorporated herein by reference to Exhibit 10.4 to the Company's Form S-1 filed on January 19, 2024 (File No. 333-276598).
10.5+	<a href="#"><u>Form of Indemnity Agreement between the Registrant and each of its directors and executive officers.</u></a>	Incorporated herein by reference to Exhibit 10.1 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
10.6	<a href="#"><u>Second Amended and Restated Investors' Rights Agreement dated September 10, 2020 between the Registrant and each of the investors named therein.</u></a>	Incorporated herein by reference to Exhibit 10.3 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
10.7	<a href="#"><u>Form of Securities Purchase Agreement between the Company and Maxim Group LLC</u></a>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 21, 2024 (File No. 001-41705).
10.8	<a href="#"><u>Placement Agency Agreement</u></a>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 16, 2025 (File No. 001-41705).
10.9	<a href="#"><u>Form of Securities Purchase Agreement</u></a>	Incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 16, 2025 (File No. 001-41705).
10.10	<a href="#"><u>Placement Agency Agreement</u></a>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 6, 2025 (File No. 001-41705).
10.11	<a href="#"><u>Form of Amended and Restated Securities Purchase Agreement</u></a>	Incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 6, 2025 (File No. 001-41705).
10.12	<a href="#"><u>Form of Letter Agreement</u></a>	Incorporated herein by reference to Exhibit 10.1 to The Company's Current Report on Form 8-K filed on February 6, 2025 (File No. 001-41705).
10.13	<a href="#"><u>Form of Securities Purchase Agreement</u></a>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 24, 2025 (File No. 001-41705).
21.1	<a href="#"><u>List of Subsidiaries of the Registrant.</u></a>	Incorporated herein by reference to Exhibit 21.1 to the Company's Form S-1 filed on June 13, 2023 (File No. 333-269876).
23.1*	<a href="#"><u>Consent of Thompson Hine LLP. (included in Exhibit 5.1)</u></a>	Filed herewith.
23.2*	<a href="#"><u>Consent of Grassi &amp; Co., CPAs, P.C., Independent Registered Public Accounting Firm.</u></a>	Filed herewith.
24.1*	<a href="#"><u>Power of Attorney.</u></a>	Filed herewith.
107*	<a href="#"><u>Filing Fee Table.</u></a>	Filed herewith.

+ Indicates management compensatory plan, contract or arrangement.

\* Filed herewith.

(b) Financial Statement Schedules.

All schedules have been omitted because they are not required or are not applicable.

## Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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, as amended, or the Securities Act;

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

iii. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is a part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, 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.
- (5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser: (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424; (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant; (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Branford, State of Connecticut, on July 18, 2025.

### AZITRA, INC.

/s/ Francisco D. Salva

Francisco D. Salva  
Chief Executive Officer and Director

### POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Francisco D. Salva, his or her true and lawful attorney-in-fact and agent, 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) to this registration statement, any subsequent registration statements pursuant to Rule 462 of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney may be executed in counterparts.

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>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Francisco D. Salva</u> Francisco D. Salva	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	July 18, 2025
<u>/s/ Norman Staskey</u> Norman Staskey	Chief Financial Officer and Treasurer <i>(Principal Financial and Accounting Officer)</i>	July 18, 2025
<u>/s/ Travis Whitfill</u> Travis Whitfill	Chief Operating Officer, Secretary and Director	July 18, 2025
<u>/s/ Barbara Ryan</u> Barbara Ryan	Director	July 18, 2025
<u>/s/ John Schroer</u> John Schroer	Director	July 18, 2025



ATLANTA CINCINNATI COLUMBUS LOS ANGELES NEW YORK  
CHICAGO CLEVELAND DAYTON MINNEAPOLIS WASHINGTON, D.C.

July 18, 2025

Azitra, Inc.  
21 Business Park Drive  
Branford, CT 06405

Ladies and Gentlemen:

We have acted as counsel for Azitra, Inc., a Delaware corporation (the “*Company*”), in connection with the preparation and filing of a Registration Statement on Form S-1 (the “*Registration Statement*”), with the U.S. Securities and Exchange Commission (the “*Commission*”) pursuant to the Securities Act of 1933, as amended (the “*Securities Act*”), with respect to the resale, on a delayed or continuous basis, by the selling stockholders named in the Registration Statement under the caption “Selling Stockholders” (the “*Selling Stockholders*”) of up to 2,245,968 shares (the “*Warrant Shares*”) of common stock, par value \$0.0001 per share (the “*Common Stock*”), issuable upon exercise of certain Common Stock purchase warrants (the “*Warrants*”) issued to the Selling Stockholders pursuant to that certain Letter Agreement dated February 6, 2025 (the “*Letter Agreement*”).

In connection with this opinion letter, we have examined and relied upon the Registration Statement, the Letter Agreement, the form of Warrant, the Company’s certificate of incorporation (as amended and/or restated to date) and the Company’s bylaws (as amended and/or restated to date), each as currently in effect, a certificate of good standing issued by the Delaware Secretary of State as of a recent date, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda, and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below.

In such examination and in rendering the opinion expressed below, we have assumed, without independent investigation or verification: (i) the genuineness of all signatures on all agreements, instruments, corporate records, certificates, and other documents submitted to us; (ii) the legal capacity, competency, and authority of all individuals executing documents submitted to us; (iii) the authenticity and completeness of all agreements, instruments, corporate records, certificates, and other documents submitted to us as originals; (iv) that all agreements, instruments, corporate records, certificates, and other documents submitted to us as certified, electronic, facsimile, conformed, photostatic, or other copies conform to the originals thereof, and that such originals are authentic and complete; (v) the due authorization, execution, and delivery of all agreements, instruments, corporate records, certificates and other documents by all parties thereto (other than the Company); (vi) that no documents submitted to us have been amended or terminated orally or in writing, except as has been disclosed to us in writing; and (vii) that the statements contained in the certificates and comparable documents of public officials, officers, and representatives of the Company and other persons on which we have relied for the purposes of this opinion letter are true and correct on and as of the date hereof.

Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion herein is expressed solely with respect to the federal laws of the United States and the General Corporation Law of the State of Delaware as in effect on the date hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule, or regulation relating to securities, or to the sale or issuance thereof. Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events, or developments which hereafter may be brought to our attention and which may alter, affect, or modify the opinion expressed herein. We express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter hereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Warrant Shares, when issued and paid for upon the exercise of the Warrants in accordance with the terms of the Warrants and the terms of the Letter Agreement, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement, and to being named under the caption “Legal Matters” contained therein. In giving this consent, we do not hereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Thompson Hine LLP  
Thompson Hine LLP

THOMPSON HINE LLP  
ATTORNEYS AT LAW

300 Madison Avenue, 27th Floor  
New York, New York 10017-6232

www.ThompsonHine.com  
O: 212.344.5680  
F: 212.344.6101



### 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 February 24, 2025 with respect to our audits of the financial statements of Azitra, Inc. as of December 31, 2024 and 2023 and for the years ended December 31, 2024 and 2023, which report is included in this Annual Report on Form 10-K of Azitra, Inc. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern. We also consent to the reference to our firm under the heading "Experts" appearing therein.

*Grassi & Co., CPAs, P.C.*

Grassi & Co., CPAs, P.C.

Jericho, New York  
July 18, 2025

50 JERICHO QUADRANGLE, STE. 200, JERICHO, NY 11753  
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NEW YORK | NEW JERSEY | MASSACHUSETTS | FLORIDA



## Calculation of Filing Fee Table

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

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

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount to be Registered	Proposed Maximum Offering Price Per Share <sup>(3)</sup>	Proposed Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock	Rule 457(c)	2,245,968 <sup>(1)</sup>	\$ 0.22495	505,230.51	0.00015310	\$ 78.00
<b>Total Offering Amounts</b>					505,230.51		\$ 78.00
<b>Total Fees Previously Paid</b>							-
<b>Total Fee Offsets</b>							-
<b>Net Fee Due</b>							\$ 78.00

(1) Represents an aggregate of 2,245,968 shares of Common Stock issuable to the Selling Stockholders upon exercise of the Warrants.

(2) Pursuant to Rule 416 under the Securities Act, the shares of Common Stock being registered hereunder include such indeterminate number of shares of Common Stock as may be issuable with respect to the shares of Common Stock being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(3) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(c) under the Securities Act, based on the average of the high and low price per share of the registrant's Common Stock as reported on the NYSE American on July 15, 2025, which date is within five business days prior to filing this registration statement.