

PROSPECTUS SUPPLEMENT



**Up to \$100,000,000**

**Common Stock**

---

We have entered into an Open Market Sale Agreement<sup>SM</sup> (the "Sale Agreement") with Jefferies LLC ("Jefferies" or the "Sales Agent") relating to shares of our common stock, \$0.18 par value per share. Under this prospectus supplement and the accompanying prospectus, and in accordance with the terms of the Sale Agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time through the Sales Agent.

Our common stock is listed on the Nasdaq Capital Market under the trading symbol "ATOS." On November 15, 2024, the last reported sale price of our common stock was \$1.28 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the "Securities Act"). The Sales Agent is not required to sell any specific number or dollar amounts of securities but will act as sales agent using commercially reasonable efforts consistent with their normal trading and sales practices, on mutually agreed terms between the Sales Agent and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The Sales Agent will be entitled to compensation at a commission of up to 3.0% of the aggregate gross sales price per share sold under the Sale Agreement, unless otherwise agreed to by the Sales Agent and the Company. In connection with the sale of our common stock on our behalf, the Sales Agent will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of the Sales Agent will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contributions to the Sales Agent against certain civil liabilities, including liabilities under the Securities Act. See "Plan of Distribution" beginning on page S-12 of this prospectus supplement for additional information regarding the Sales Agent's compensation.

---

**Investing in our common stock involves a high degree of risk. Before making an investment decision, you should review carefully and consider all of the information set forth in this prospectus supplement, the accompany prospectus and the documents incorporated by reference in this prospectus supplement. See "[Risk Factors](#)" beginning on page S-7 of this prospectus supplement and in the documents incorporated by reference herein.**

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

**Jefferies**

---

**The date of this prospectus supplement is November 19, 2024.**

---

**TABLE OF CONTENTS**  
**PROSPECTUS SUPPLEMENT**

<a href="#">ABOUT THIS PROSPECTUS SUPPLEMENT</a>	<a href="#">S-1</a>
<a href="#">SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>	<a href="#">S-3</a>
<a href="#">PROSPECTUS SUPPLEMENT SUMMARY</a>	<a href="#">S-5</a>
<a href="#">THE OFFERING</a>	<a href="#">S-6</a>
<a href="#">RISK FACTORS</a>	<a href="#">S-7</a>
<a href="#">USE OF PROCEEDS</a>	<a href="#">S-9</a>
<a href="#">DILUTION</a>	<a href="#">S-10</a>
<a href="#">PLAN OF DISTRIBUTION</a>	<a href="#">S-12</a>
<a href="#">LEGAL MATTERS</a>	<a href="#">S-14</a>
<a href="#">EXPERTS</a>	<a href="#">S-14</a>
<a href="#">WHERE YOU CAN FIND MORE INFORMATION</a>	<a href="#">S-15</a>
<a href="#">INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</a>	<a href="#">S-16</a>

**PROSPECTUS**

	<u>Page</u>
<a href="#">ABOUT THIS PROSPECTUS</a>	1
<a href="#">NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>	2
<a href="#">ABOUT THE COMPANY</a>	4
<a href="#">RISK FACTORS</a>	7
<a href="#">USE OF PROCEEDS</a>	7
<a href="#">PLAN OF DISTRIBUTION</a>	8
<a href="#">SECURITIES WE MAY OFFER</a>	9
<a href="#">DESCRIPTION OF CAPITAL STOCK</a>	10
<a href="#">DESCRIPTION OF DEBT SECURITIES</a>	15
<a href="#">DESCRIPTION OF WARRANTS</a>	20
<a href="#">DESCRIPTION OF UNITS</a>	22
<a href="#">EXPERTS</a>	23
<a href="#">LEGAL MATTERS</a>	23
<a href="#">WHERE YOU CAN FIND ADDITIONAL INFORMATION</a>	24
<a href="#">INFORMATION INCORPORATED BY REFERENCE</a>	25

## ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under the shelf registration, we may, from time to time, sell common stock, preferred stock, debt securities and warrants having an aggregate offering price of up to \$100,000,000. Under this prospectus supplement, we may offer shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time at prices and on terms to be determined by market conditions at the time of offering.

We provide information to you about this offering of shares of our common stock in two separate documents that are bound together: (1) this prospectus supplement, which describes the specific details regarding this offering; and (2) the accompanying prospectus, which provides general information, some of which may not apply to this offering. Generally, when we refer to this “prospectus,” we are referring to both documents combined. If information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement. However, if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement as our business, financial condition, results of operations and prospects may have changed since the earlier dates.

We have not, and the Sales Agent has not, authorized any other person to provide you with any information or to make any representations other than those contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the Sales Agent take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the Sales Agent are not making an offer to sell or soliciting an offer to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and in any free writing prospectus that we may authorize for use in connection with this offering is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and any free writing prospectus that we may authorize for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement titled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of our common stock and the distribution of this prospectus supplement and the accompanying prospectus supplement outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

This prospectus supplement, the accompanying prospectus and the information incorporated herein and therein by reference include trademarks, servicemarks and tradenames owned by us or other companies. All trademarks, servicemarks and tradenames included or incorporated by reference in this prospectus supplement or the accompanying prospectus are the property of their respective owners.

Unless otherwise indicated, information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus concerning our industry and the markets in which we operate, including market position and market opportunity, is based on information from our management’s estimates, as well as from industry

publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. However, assumptions and estimates of our future performance, and the future performance of our industry are subject to numerous known and unknown risks and uncertainties, including those described under the heading “Risk Factors” beginning on page S-7 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and accompanying prospectus. These and other important factors could result in our estimates and assumptions being materially different from future results. You should read the information contained in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus completely and with the understanding that future results may be materially different and worse from what we expect. See the information included under the heading “Special Note Regarding Forward-Looking Statements.”

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain “forward-looking statements” within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “design,” “estimate,” “predict,” “potential,” “plan,” “anticipate,” “target,” “forecast” or the negative of these terms, and similar expressions intended to identify forward-looking statements.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause our actual results to differ materially from the forward-looking statements expressed or implied in this prospectus supplement and the accompanying prospectus. Such risks, uncertainties and other factors include, among others, the factors disclosed in the section titled “Risk Factors” in this prospectus supplement and the accompanying prospectus and the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our most recent Annual Report on Form 10-K, and in our subsequent Quarterly Reports on Form 10-Q, which are incorporated by reference herein, and the following risks, uncertainties and factors:

- the impact of general macroeconomic conditions, including the impact of inflation, high interest rates, general economic slowdown or a recession, foreign exchange rate volatility, financial institution instability, changes in monetary policy and increasing geopolitical instability, including the conflict in Ukraine, the conflict in the Middle East and rising tensions between China and Taiwan, on our business, our ability to access capital markets, our operating costs and our supply chain;
- the effects of natural disasters, pandemics, severe weather conditions and other events beyond our control;
- whether we can obtain approval from the U.S. Food and Drug Administration, and foreign regulatory bodies, to continue our clinical trials, including our planned (Z)-endoxifen trials, and to sell, market and distribute our therapeutics under development;
- our ability to identify and partner with organizations to commercialize any of our products once they are approved for marketing;
- our ability to successfully initiate and complete clinical trials of our products under development, including our proprietary (Z)-endoxifen (an active metabolite of Tamoxifen);
- the success, costs and timing of our development activities, such as clinical trials, including whether our studies using our (Z)-endoxifen therapies will enroll a sufficient number of subjects in a timely fashion or be completed in a timely fashion or at all;
- whether we will successfully complete our clinical trial of oral (Z)-endoxifen in women with mammographic breast density and our trials of (Z)-endoxifen in women with breast cancer, and whether the studies will meet their objectives;
- our ability to contract with third-party suppliers, manufacturers and service providers, including clinical research organizations, and their ability to perform adequately;
- our ability to successfully develop and commercialize new therapeutics currently in development, or new therapeutics that we might identify in the future, and within the time frames we currently expect;
- our ability to successfully deploy artificial intelligence (“AI”) in our or our collaborators’ product candidates;
- our ability to successfully defend litigation and other similar complaints that may be brought in the future, in a timely manner and within the coverage, scope and limits of our insurance policies;
- our ability to establish and maintain intellectual property rights covering our products;
- our increased risk of theft or misappropriation of our intellectual property and other proprietary technology outside of the U.S.;
- our expectations regarding, and our ability to satisfy, federal, state and foreign regulatory requirements, including evolving legal standards and regulations, including those concerning data protection, consumer privacy, sustainability and evolving labor standards;
- our ability to comply with the continued listing requirements of the Nasdaq Capital Market;
- the accuracy of our estimates of the size and characteristics of the markets that our products and services may address;
- whether final study results will vary from preliminary study results that we may announce;
- our expectations as to future financial performance, expense levels and capital sources;

- our ability to attract and retain key personnel;
- our ability to execute our share repurchase program as planned;
- our ability to raise capital;
- other risks and uncertainties, including those incorporated by reference in the section titled “Risk Factors”; and
- our intended use of proceeds from this offering.

We caution you that the risks, uncertainties and other factors referred to above, elsewhere in this prospectus supplement and the accompanying prospectus and in the documents incorporated by reference herein may not contain all of the risks, uncertainties and other factors that may affect our future results and operations. Moreover, new risks will emerge from time to time. It is not possible for our management to predict all risks. In addition, we cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Forward-looking statements are not historical facts and reflect our current views with respect to future events. Given the significant uncertainties, you should evaluate all forward-looking statements made in this prospectus supplement and the accompanying prospectus in the context of these risks and uncertainties and not place undue reliance on these forward-looking statements as predictions of future events.

All forward-looking statements in this prospectus supplement apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this prospectus supplement. We disclaim any intent to publicly update or revise any forward-looking statements to reflect subsequent events or circumstances, except as required by law.

## PROSPECTUS SUPPLEMENT SUMMARY

*This summary highlights selected information and does not contain all of the information that you should consider before deciding to invest in our common stock. You should read the entire prospectus supplement, including the information incorporated by reference herein, the accompanying prospectus and any related free writing prospectus, carefully, including the section titled “Risk Factors” contained in this prospectus supplement, the accompanying prospectus and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus supplement, and our consolidated financial statements and notes thereto, which are incorporated by reference herein, before making an investment decision. Some of the statements in this summary constitute forward-looking statements, see “Special Note Regarding Forward-Looking Statements.” In this prospectus supplement, unless the context requires otherwise, references to “we,” “us,” “our,” “Atossa” or the “company” refer to Atossa Therapeutics, Inc., in each case together with its consolidated subsidiaries.*

### Our Company

#### Overview

We are a clinical-stage biopharmaceutical company developing proprietary innovative medicines in areas of significant unmet medical need in oncology, with a focus on women’s breast cancer and other breast conditions. Our lead drug candidate under development is oral (Z)-endoxifen, which we are developing for both the prevention and treatment of breast cancer and other therapeutics areas.

We have been granted multiple U.S. and international patents covering our proprietary (Z)-endoxifen, and we have numerous applications pending in the U.S. and in other major countries. We have patent protection covering our proprietary (Z)-endoxifen through at least November 17, 2038.

Our business strategy is to advance our programs through clinical studies, including potentially with partners, and opportunistically add programs in areas of high unmet medical need through acquisition, minority investment, collaboration or internal development.

#### Corporate Information

We commenced our operations in April 2009 as a Delaware corporation named Atossa Genetics Inc. We changed our corporate name to Atossa Therapeutics, Inc. in January 2020. Our principal executive offices are located at 10202 5th Ave NE, Suite 200, Seattle, Washington 98125 and our telephone number is (206) 588-0256. Our website is [www.atossatherapeutics.com](http://www.atossatherapeutics.com). The information contained on, or that can be accessed through, our website is not part of, and is not incorporated by reference into, this prospectus supplement or the accompanying prospectus. We have included our website address in this prospectus supplement solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our securities.

## THE OFFERING

<b>Common stock offered by us</b>	Shares of our common stock having an aggregate offering price of up to \$100,000,000.
<b>Common stock to be outstanding immediately after this offering</b>	Up to 203,926,254 shares of our common stock, assuming sales of 78,125,000 shares of our common stock in this offering at a public offering price of \$1.28 per share, which was the last reported sale price per share of our common stock on the Nasdaq Capital Market on November 15, 2024. The actual number of shares of our common stock issued will vary depending on the sales prices at which our shares of common stock are sold under this offering.
<b>Plan of Distribution</b>	“At the market offering” that may be made from time to time, on the Nasdaq Capital Market or such other national securities exchange on which our common stock is then listed, through the Sales Agent. See “Plan of Distribution” on page S-12 of this prospectus supplement.
<b>Use of Proceeds</b>	We currently intend to use the net proceeds from this offering, if any, for clinical development of our product candidates, working capital and general corporate purposes. See “Use of Proceeds” on page S-9 of this prospectus supplement.
<b>Risk Factors</b>	You should read the “Risk Factors” section of this prospectus supplement and the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement for a discussion of factors you should carefully consider before deciding to purchase shares of our common stock.
<b>Nasdaq Capital Market symbol</b>	“ATOS”

The number of our shares of common stock outstanding after this offering is based on an aggregate of 125,801,254 shares of our common stock outstanding as of September 30, 2024, and excludes the following:

- 20,198,571 shares of common stock issuable upon the exercise of options issued under the Company’s 2020 Stock Incentive Plan (the “2020 Plan”) at a weighted average exercise price of \$1.61 per share;
- 10,525,000 shares of common stock issuable upon the exercise of warrants at an exercise price of \$2.88 per share;
- 4,500,000 shares of common stock issuable upon the exercise of warrants at an exercise price of \$1.055 per share;
- 6,185,750 shares of common stock issuable upon the exercise of warrants at an exercise price of \$1.00 per share;
- 165,338 shares of common stock issuable upon the conversion of outstanding Series B convertible preferred stock; and
- 13,484,925 shares of common stock reserved for issuance pursuant to future equity awards under our 2020 Plan.

Except as otherwise indicated, all information in this prospectus assumes no exercise of outstanding options or warrants and conversion of Series B convertible preferred stock after September 30, 2024.



## RISK FACTORS

*Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described below and discussed under the heading “Risk Factors” contained in our most recent Annual Report on Form 10-K, and in our subsequent Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus supplement in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with this offering. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below titled “Special Note Regarding Forward-Looking Statements.”*

### **Additional Risks Related to This Offering**

**Management will have broad discretion as to the use of the proceeds from this offering, and may not use the proceeds effectively.**

While we currently intend to use the net proceeds from this offering, if any, for clinical development of our product candidates, working capital and general corporate purposes. Because we have not designated the amount of net proceeds from this offering to be used for any particular purpose, our management will have broad discretion as to the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of the offering. Our management may use the net proceeds for corporate purposes that may not improve our financial condition or market value.

**You may experience immediate and substantial dilution.**

The offering price per share in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Assuming that 78,125,000 shares of our common stock are sold in this offering, based on an assumed sale price of \$1.28 per share, the last sale price of a share of our common stock on the Nasdaq Capital Market on November 15, 2024, you will experience immediate dilution, representing the difference between the price you pay and our as adjusted net tangible book value per share as of September 30, 2024, after giving effect to this offering, of \$0.44 per share. In addition, you may also experience additional dilution after this offering on any future equity issuances, including the issuance of common stock in connection with the exercise of outstanding stock options. See the section titled “Dilution” below for a more detailed illustration of the dilution you would incur if you participate in this offering.

**You may experience future dilution as a result of future equity offerings.**

To raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering.

**Future sales or issuances of our common stock in the public markets, or the perception of such sales, could depress the trading price of our common stock.**

The sale of a substantial number of shares of our common stock or other securities convertible into or exchangeable for our common stock in the public markets, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We may sell large quantities of our common stock at any time pursuant to this prospectus supplement or in one or more separate offerings. We cannot predict the effect that future sales of common stock or other equity-related securities would have on the market price of our common stock.

**It is not possible to predict the aggregate proceeds resulting from sales made under the Sale Agreement.**

Subject to certain limitations in the Sale Agreement and compliance with applicable law, we have the discretion to deliver placement notices to the Sales Agent at any time throughout the term of the Sale Agreement. The number of shares that are sold through the Sales Agent after delivering a placement notice will fluctuate based on a number of factors, including the market price of our common stock during the sales period, any limits we may set with the Sales Agent in any applicable placement notice and the demand for our common stock. Because the price per share of each share sold pursuant to the Sale Agreement will fluctuate over time, it is not currently possible to predict the aggregate proceeds to be raised in connection with sales under the Sale Agreement, and we may not sell any shares of common stock.

**Sales of common stock offered hereby will be in “at the market offerings,” and 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 accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices and number of shares sold in this offering. In addition, subject to the final determination by our board of directors or any restrictions we may place in any applicable placement notice delivered to the Sales Agent, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

**Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.**

As widely reported, global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive. Furthermore, our stock price may decline due in part to the volatility of the stock market and the general economic downturn.

## USE OF PROCEEDS

We may offer and sell shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time through Jefferies. Because there is no minimum offering amount required pursuant to the Sale Agreement, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. Actual net proceeds will depend on the number of shares we sell and the prices at which such sales occur. There can be no assurance that we will sell any shares under or fully utilize the Sale Agreement with the Sales Agent as a source of financing.

We currently intend to use the net proceeds from this offering, if any, for clinical development of our product candidates, working capital and general corporate purposes. We may also use a portion of the proceeds to license, acquire or invest in complementary businesses, technology, products or assets, however, we have no current commitments to do so.

We do not expect that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to enable us to fund the completion of development of any of our product candidates.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from the sale of the securities offered by us hereunder. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to invest the proceeds in a variety of capital preservation investments, including interest-bearing, investment-grade securities, certificates of deposit or government securities.

## DILUTION

If you purchase common stock in this offering, your ownership interest will be diluted to the extent of the difference between the purchase price per share and the as adjusted net tangible book value per share after this offering. We calculate net tangible book value per share by dividing the net tangible book value, which is total tangible assets less total liabilities, by the number of outstanding shares of our common stock. Dilution represents the difference between the portion of the amount per share paid by purchasers of shares in this offering and the as adjusted net tangible book value per share of our common stock immediately after giving effect to this offering. Our net tangible book value as of September 30, 2024, was approximately \$73.7 million, or \$0.59 per share.

After giving effect to the assumed sale of 78,125,000 shares of our common stock at a sale price of \$1.28 per share, the last sale price of our common stock on the Nasdaq Capital Market on November 15, 2024, after deducting commissions and estimated aggregate offering expenses payable by us, our as-adjusted net tangible book value as of September 30, 2024, would have been \$170.3 million, or \$0.84 per share of common stock. This represents an immediate increase in the as adjusted net tangible book value of \$0.25 per share to our existing stockholders and an immediate dilution of \$0.44 per share to new investors purchasing shares in this offering. The following table illustrates this per share dilution:

Assumed offering price per share	\$1.28
Net tangible book value per share as of September 30, 2024	\$0.59
Increase in net tangible book value per share attributable to new investors in offering	\$0.25
As adjusted net tangible book value per share as of September 30, 2024, after giving effect to this offering	<u>\$0.84</u>
Dilution per share to new investors in this offering	\$0.44

Changes in the assumed public offering price of \$1.28 per share would not affect our as adjusted net tangible book value after this offering because this offering is currently limited to \$100,000,000. However, each \$1.00 increase in the assumed public offering price of \$1.28 per share would decrease the dilution per share to new investors by approximately \$0.16 per share and each \$1.00 decrease in assumed public offering price of \$1.28 per share would increase the dilution per share to new investors by approximately \$0.49 per share, in each case, assuming that the aggregate dollar amount of shares offered by us, as set forth above, remains at \$100,000,000 and after deducting the commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of shares that we offer in this offering, and other terms of this offering determined at the time of each offer and sale.

Except as noted above, the foregoing excludes:

- 20,198,571 shares of common stock issuable upon the exercise of options issued under the 2020 Plan at a weighted average exercise price of \$1.61 per share;
- 10,525,000 shares of common stock issuable upon the exercise of warrants at an exercise price of \$2.88 per share;
- 4,500,000 shares of common stock issuable upon the exercise of warrants at an exercise price of \$1.055 per share;
- 6,185,750 shares of common stock issuable upon the exercise of warrants at an exercise price of \$1.00 per share;
- 165,338 shares of common stock issuable upon the conversion of outstanding Series B convertible preferred stock; and
- 13,484,925 shares of common stock reserved for issuance pursuant to future equity awards under our 2020 Plan.

To the extent that options or warrants or Series B convertible preferred stock outstanding as of September 30, 2024 have been or are exercised or converted, or other shares are issued, investors purchasing shares in this offering could experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the

extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

## PLAN OF DISTRIBUTION

We have entered into the Sale Agreement with Jefferies, under which we may offer and sell our shares of common stock from time to time through Jefferies acting as agent. Pursuant to this prospectus supplement, we may offer and sell up to \$100,000,000 of our shares of common stock. Sales of our shares of common stock, if any, under this prospectus supplement and the accompanying prospectus will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act.

Each time we wish to issue and sell shares of our common stock under the Sale Agreement, we will notify Jefferies of the number of shares to be issued, the dates on which such sales are anticipated to be made, any limitation on the number of shares to be sold in any one day and any minimum price below which sales may not be made. Once we have so instructed Jefferies, unless Jefferies declines to accept the terms of such notice, Jefferies has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of Jefferies under the Sale Agreement to sell shares of our common stock are subject to a number of conditions that we must meet.

The settlement of sales of shares between us and Jefferies is generally anticipated to occur on the first trading day following the date on which the sale was made. Sales of our shares of common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Jefferies may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Jefferies a commission of up to 3.0% of the aggregate gross proceeds we receive from each sale of our shares of common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse Jefferies for the fees and disbursements of its counsel, payable upon execution of the Sale Agreement, in an amount not to exceed \$75,000, in addition to certain ongoing disbursements of its legal counsel. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to Jefferies under the terms of the Sale Agreement, will be approximately \$400,000. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

Jefferies will provide written confirmation to us before the open on the Nasdaq Capital Market on the day following each day on which shares of common stock are sold under the Sale Agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the proceeds to us.

In connection with the sale of shares of our common stock on our behalf, Jefferies may be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have agreed to indemnify Jefferies against certain civil liabilities, including liabilities under the Securities Act. We have also agreed to contribute to payments Jefferies may be required to make in respect of such liabilities.

The offering of our shares of common stock pursuant to the Sale Agreement will terminate upon the earlier of (i) the sale of all shares of our common stock subject to the Sale Agreement and (ii) the termination of the Sale Agreement as permitted therein. We and Jefferies may each terminate the Sale Agreement at any time upon ten days’ prior notice.

This summary of the material provisions of the Sale Agreement does not purport to be a complete statement of its terms and conditions. A copy of the Sale Agreement is filed as an exhibit to the registration statement of which this prospectus supplement forms a part.

Jefferies and its affiliates may in the future provide various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they may in the future receive customary fees. In the course of its business, Jefferies may actively trade our securities for its own account or for the accounts of customers, and, accordingly, Jefferies may at any time hold long or short positions in such securities.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on a website maintained by Jefferies, and Jefferies may distribute the prospectus supplement and the accompanying prospectus electronically.

## LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California. Jefferies LLC is being represented in this offering by Wilmer Cutler Pickering Hale and Dorr LLP, New York, New York.

## EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023 as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of Atossa Therapeutics Inc. as of December 31, 2022 and for the year then ended incorporated by reference in this prospectus supplement and in the registration statement have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.C.), an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement (including amendments and exhibits to the registration statement) on Form S-3 under the Securities Act with respect to the shares of our common stock offered hereby. This prospectus supplement, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some items of which are contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement and its exhibits. Statements contained in this prospectus supplement concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus supplement relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The exhibits to the registration statement should be reviewed for the complete contents of these contracts and documents. A copy of the registration statement and its exhibits may be obtained from the SEC upon the payment of fees prescribed by it. The SEC maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements and other information regarding companies that file electronically with it.

We are subject to the information and periodic and current reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and in accordance therewith, file periodic and current reports, proxy statements and other information with the SEC. The registration statement, such periodic and current reports and other information can be obtained electronically by means of the SEC’s website at [www.sec.gov](http://www.sec.gov).



## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to those publicly available documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file after the date hereof with the SEC will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on April 1, 2024 (including the portions of our Definitive Proxy Statement on Schedule 14A for our 2024 Annual General Meeting of Stockholders filed on [May 23, 2024](#) that are incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023);
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024, June 30, 2024 and September 30, 2024 filed with the SEC on [May 13, 2024](#), [August 12, 2024](#) and [November 12, 2024](#), respectively;
- Our Current Reports on Form 8-K filed with the SEC on [March 12, 2024](#), [March 18, 2024](#), [July 2, 2024](#) and [November 4, 2024](#) (in each case, except for information contained therein which is furnished rather than filed); and  
The description of our Common Stock contained in the registration statement on [Form 8-A](#) filed with the Commission on July 24, 2012 pursuant to [Section 12 of the Exchange Act, including any amendment or report filed for the](#) purpose of updating that description.

Because we are incorporating by reference future filings with the SEC, this prospectus supplement is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus supplement. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement or in any document previously incorporated by reference have been modified or superseded.

This prospectus supplement incorporates by reference the documents listed above and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed, except that we are not incorporating by reference any information furnished (and not filed) with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K (unless expressly provided to the contrary).

You may request a copy of these filings (other than exhibits to such documents unless such exhibits are specifically incorporated by reference herein), at no cost, by contacting us, either orally or in writing, at the following:

Atossa Therapeutics, Inc.  
10202 5<sup>th</sup> Ave NE, Suite 200  
Seattle, WA 98125  
(206) 588-0256

Information about us, including our reports filed with the SEC, is available through our website at [www.atossatherapeutics.com](http://www.atossatherapeutics.com). Such reports are accessible at no charge through our website and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. Our website and the information contained on that website, or connected to that website, are not incorporated by reference in this prospectus supplement. We have authorized no one to provide you with any information that differs from that contained in this prospectus supplement. Accordingly, we take no responsibility for any other information that others may give you. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date of the front cover of this prospectus supplement.

PROSPECTUS



**ATOSSA THERAPEUTICS, INC.**

**\$100,000,000**  
**Common Stock**  
**Preferred Stock**  
**Debt Securities**  
**Warrants**

We may offer and sell an indeterminate number of shares of our common stock, preferred stock, debt securities and warrants from time to time under this prospectus. We may offer these securities separately or together in combination with other securities registered by this prospectus. We will describe in a prospectus supplement the securities we are offering and selling, as well as the specific terms of the securities.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. We may sell the securities directly to you, through agents we select, or through underwriters and dealers we select. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement or sales agreement prospectus.

Our common stock, par value \$0.18, is currently quoted on the Nasdaq Capital Market under the symbol "ATOS". On May 10, 2024 the last reported sale price per share of our common stock on the Nasdaq Capital Market was \$1.49. You are urged to obtain current market quotations for our common stock.

Our principal executive offices are located at 107 Spring Street, Seattle, Washington 98104.

*Investing in our securities involves risks. You should carefully consider the Risk Factors beginning on page 5 of this prospectus before you make an investment in our securities.*

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

**The date of this prospectus is May 23, 2024**

---

## TABLE OF CONTENTS

	<u>Page</u>
<a href="#"><u>ABOUT THIS PROSPECTUS</u></a>	1
<a href="#"><u>NOTE REGARDING FORWARD-LOOKING STATEMENTS</u></a>	2
<a href="#"><u>ABOUT THE COMPANY</u></a>	4
<a href="#"><u>RISK FACTORS</u></a>	7
<a href="#"><u>USE OF PROCEEDS</u></a>	7
<a href="#"><u>PLAN OF DISTRIBUTION</u></a>	8
<a href="#"><u>SECURITIES WE MAY OFFER</u></a>	9
<a href="#"><u>DESCRIPTION OF CAPITAL STOCK</u></a>	10
<a href="#"><u>DESCRIPTION OF DEBT SECURITIES</u></a>	15
<a href="#"><u>DESCRIPTION OF WARRANTS</u></a>	20
<a href="#"><u>DESCRIPTION OF UNITS</u></a>	22
<a href="#"><u>EXPERTS</u></a>	23
<a href="#"><u>LEGAL MATTERS</u></a>	23
<a href="#"><u>WHERE YOU CAN FIND ADDITIONAL INFORMATION</u></a>	24
<a href="#"><u>INFORMATION INCORPORATED BY REFERENCE</u></a>	25

## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a shelf registration process. Under the shelf registration process, we may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities with a total value of up to \$100,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement (which term includes, as applicable, the sales agreement prospectus filed with the registration statement of which this prospectus forms a part) that will describe the specific amounts, prices and other important terms of the securities.

We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. A prospectus supplement or free writing prospectus may include a discussion of risks or other special considerations applicable to us or the offered securities. A prospectus supplement or free writing prospectus may also add, update or change information in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you must rely on the information in the prospectus supplement. Please carefully read both this prospectus and the applicable prospectus supplement in their entirety together with additional information described under the heading “Where You Can Find Additional Information” in this prospectus. This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

We have not authorized any broker-dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement. This prospectus and any accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy securities, nor do this prospectus and any accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation. The information contained in this prospectus and any accompanying prospectus supplement speaks only as of the date set forth on the cover page and you should assume that such information may not reflect subsequent changes in our business, financial condition, results of operations and prospects even though this prospectus and any accompanying prospectus supplement is delivered, or securities are sold, on a later date.

## NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into it contain, in addition to historical information, certain information, assumptions and discussions that may constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). We have made these statements in reliance on the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are subject to certain risks and uncertainties, which could cause actual results to differ materially from those projected or anticipated. Although we believe our assumptions underlying our forward-looking statements are reasonable as of the date of this prospectus, we cannot assure you that the forward-looking statements set out in this prospectus will prove to be accurate. We typically identify these forward-looking statements by the use of forward-looking words such as “expect,” “potential,” “continue,” “may,” “will,” “should,” “could,” “would,” “seek,” “intend,” “plan,” “estimate,” “anticipate” or the negative version of those words or other comparable words. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- general macroeconomic conditions, including the impact of inflation, high interest rates, general economic slowdown or a recession, the prospect of a shutdown of the U.S. federal government, foreign exchange rate volatility, financial institution instability, changes in monetary policy and increasing geopolitical instability, including the conflict in Ukraine, the conflict in the Middle East and rising tensions between China and Taiwan, on our business, our ability to access capital markets, our operating costs and our supply chain;
- the effects of natural disasters, pandemics, severe weather conditions and other events beyond our control;
- whether we can obtain approval from the U.S. Food and Drug Administration (FDA), and foreign regulatory bodies, to continue our clinical trials, including our planned (Z)-endoxifen trials, and to sell, market and distribute our therapeutics under development;
- our ability to identify and partner with organizations to commercialize any of our products once they are approved for marketing;
- our ability to successfully initiate and complete clinical trials of our products under development, including our proprietary (Z)-endoxifen (an active metabolite of Tamoxifen);
- the success, costs and timing of our development activities, such as clinical trials, including whether our studies using our (Z)-endoxifen therapies will enroll a sufficient number of subjects in a timely fashion or be completed in a timely fashion or at all;
- whether we will successfully complete our clinical trial of oral (Z)-endoxifen in women with mammographic breast density and our trials of (Z)-endoxifen in women with breast cancer, and whether the studies will meet their objectives;
- our ability to contract with third-party suppliers, manufacturers and service providers, including clinical research organizations, and their ability to perform adequately;
- our ability to successfully develop and commercialize new therapeutics currently in development, or new therapeutics that we might identify in the future, and within the time frames we currently expect;
- our ability to successfully defend litigation and other similar complaints that may be brought in the future, in a timely manner and within the coverage, scope and limits of our insurance policies;
- our ability to establish and maintain intellectual property rights covering our products;
- our increased risk of theft or misappropriation of our intellectual property and other proprietary technology outside of the U.S.;
- our expectations regarding, and our ability to satisfy, federal, state and foreign regulatory requirements, including evolving legal standards and regulations, including those concerning data protection, consumer privacy, sustainability and evolving labor standards;
- our ability to comply with the continued listing requirements of the Nasdaq Capital Market (the Nasdaq);
- the accuracy of our estimates of the size and characteristics of the markets that our products and services may address;
- whether final study results will vary from preliminary study results that we may announce;
- our expectations as to future financial performance, expense levels and capital sources;
- our ability to attract and retain key personnel;
- our ability to execute our share repurchase program as planned; and

- our ability to raise capital.

This prospectus also contains estimates and other statistical data provided by independent parties and by us relating to market size and growth and other industry data. These and other forward-looking statements made in this prospectus are presented as of the date on which the statements are made. We have included important factors in the cautionary statements included in this prospectus, particularly in the section entitled “Risk Factors,” that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any new information, future events or circumstances that may affect our business after the date of this prospectus. Except as required by law, we do not intend to update any forward-looking statements after the date on which the statement is made, whether as a result of new information, future events or circumstances or otherwise.

## ABOUT THE COMPANY

We are a clinical-stage biopharmaceutical company developing proprietary innovative medicines in areas of significant unmet medical need in oncology with a focus on women's breast cancer and other breast conditions. Our lead drug candidate under development is oral (Z)-endoxifen, which we are developing for both the prevention and treatment of breast cancer.

Our business strategy is to advance our programs through clinical studies, including potentially with partners, and opportunistically add programs in areas of high unmet medical need through acquisition, minority investment, collaboration or internal development.

(Z)-endoxifen is an active metabolite of tamoxifen, which is an FDA-approved drug to treat and prevent breast cancer. Tamoxifen is a "pro-drug," in that it must be metabolized into active components ("metabolites") to be effective. Despite the success of tamoxifen in treating ER+ breast cancer, its systemic side effects have led to generally low acceptance as a therapy to reduce the risk of breast cancer. These systemic side effects relate to estrogen agonist activity on the endometrium and the activation of coagulation pathways, leading to an increased risk of uterine events and thromboembolism. Hot flashes and vaginal symptoms are additional barriers to tamoxifen being accepted in the prevention setting.

Other limiting aspects of tamoxifen are that some people lack liver enzymes to adequately metabolize it and it can take a long time for many patients to reach therapeutic levels. Up to 50% of breast cancer survivors who take tamoxifen do not achieve therapeutic (Z)-endoxifen levels (meaning they are "refractory") for a number of reasons, including that they, due to their genotype, do not have the requisite liver enzymes. We believe our proprietary oral (Z)-endoxifen, in part because it is not a pro-drug and does not need to be metabolized by the liver, may overcome some of the shortcomings of tamoxifen.

(Z)-endoxifen is a proprietary, novel Selective Estrogen Receptor Modulator (SERM); which is a class of drugs that blocks estrogen from connecting with breast cancer cells, with the intent of keeping the cells from multiplying. We are developing oral (Z)-endoxifen for the potential prevention and treatment of breast cancer. We have completed four Phase 1 clinical studies (including a study in men) and two Phase 2 clinical studies with our proprietary (Z)-endoxifen (including oral and topical formulations). We have also developed clinical manufacturing capabilities through qualified third parties.

### Summary of Leading Programs

*(Z)-endoxifen is currently being investigated in five ongoing Phase 2 trials:*

*EVANGELINE.* A Phase 2 randomized study of (Z)-endoxifen as a neoadjuvant treatment for pre-menopausal women with Estrogen Receptor Positive (ER+) / Human Epidermal Growth Factor Receptor 2 negative (HER2-) breast cancer. The EVANGELINE study is expected to enroll 180 patients at sites across the U.S.

The EVANGELINE study began enrolling patients in February 2023 as part of a 40mg pharmacokinetic (PK) run-in cohort to assess whether 40mg/day achieved plasma concentrations required to optimally target protein kinase C beta (PKC- $\beta$ ) inhibition. The treatment was well tolerated and showed encouraging efficacy but did not reach the desired steady state plasma concentrations. Per the study protocol, an 80mg PK cohort run-in was initiated.

Targeting PKC- $\beta$  could potentially further enhance (Z)-endoxifen's antitumor mechanism of action. The opportunity with inhibiting PKC- $\beta$  is to induce apoptosis, which is programmed cell death where the malignant cells die. Apoptosis is the cellular equivalent of a self-destruct button and would be expected to lead to increased response rates evidenced by reduction or elimination of tumor lesions.

*Karisma-Endoxifen.* A Phase 2 study investigating (Z)-endoxifen in premenopausal women with measurable breast density (MBD). Participants in the study are randomized into one of three cohorts to receive a placebo, or 1mg or 2mg of (Z)-endoxifen daily for six months. Mammograms are conducted to measure reduction in breast density over the treatment period and a final mammogram will be conducted at 24 months to assess the durability of density changes. The study fully enrolled in November 2023, and we expect primary data in the second half of 2024.

Approximately half of the women in the world over the age of 40 have dense breasts and there are currently no approved treatments to reduce breast density. Elevated breast density can make a mammogram more difficult to interpret because dense breast tissue and some abnormal breast changes, such as calcifications and tumors, both appear as white areas in the mammogram. In women with the highest density, approximately 50% of breast cancers are missed on a mammogram and diagnosed in the interval between two screening rounds. These are known as "interval cancers," which are often larger, more advanced, and more difficult to treat. Additionally, women with the highest density are four to six times more likely to develop breast cancer in their lifetime compared to women with the least dense breasts.

As of September 2024, the U.S. Food and Drug Administration (FDA) will require mammogram providers to notify patients about the density of their breasts. The notification for patients with dense breasts will include a warning that dense tissue makes it harder to find breast cancer on a mammogram and raises their risk of developing breast cancer. It will also encourage women with dense breast tissue to discuss the findings with their healthcare provider.

Based on input received in March 2020 from the FDA and Swedish Medical Products Agency, reduction in MBD may not be an approvable indication unless we can demonstrate that (Z)-endoxifen also reduces the incidence of breast cancer. We may therefore conduct additional studies of (Z)-endoxifen to assess its correlation with the risk of breast cancer and/or reduction in the incidence of new breast cancers.

*I-SPY 2.* A Phase 2 trial investigating (Z)-endoxifen in the neoadjuvant treatment setting, which is the window of time between a diagnosis and the primary treatment. The intent of neoadjuvant therapy is to slow the growth of the cancer or even shrink the cancer prior to surgery. Doing this helps surgery to be more effective and could alter the surgical approach; meaning some breast cancer patients could have a lumpectomy instead of a mastectomy. Neoadjuvant therapy has also been shown to reduce the likelihood that the cancer returns.

The I-Spy 2 trial is being conducted through a partnership with Quantum Leap Healthcare Collaborative, which was established in 2005 by medical researchers at University of California, San Francisco and Silicon Valley entrepreneurs to speed the development of innovative breast cancer therapies like (Z)-endoxifen. The platform trial is enrolling patients with newly diagnosed (ER+) invasive breast cancer. Participants in the (Z)-endoxifen arm are treated with 10mg daily for up to 24 weeks prior to surgery. Efficacy measures include reduction in Ki-67, a marker for tumor cell proliferation, and objective response rate as measured by MRI. The (Z)-endoxifen treatment cohort of 20 participants completed full enrollment in the first quarter of 2024 with data expected in the second half of 2024.

*I-Spy 2 Combo.* A Phase 2 trial to evaluate our proprietary (Z)-endoxifen in combination with abemaciclib (VERZENIO®), a cyclin-dependent kinase (CDK) 4/6 inhibitor marketed by Eli Lilly and Company, in women with ER+/HER2- breast cancer. The new study arm is expected to enroll approximately 20 women with newly diagnosed Estrogen Receptor positive (ER+) / Human Epidermal Growth Factor Receptor 2 negative (HER2-) invasive breast cancer. Participants are expected to receive (Z)-endoxifen once daily in combination with abemaciclib twice daily for a total of 24 weeks prior to surgery.

*RECAST DCIS.* A Phase 2 platform study investigating (Z)-endoxifen in women diagnosed with Ductal Carcinoma In Situ (DCIS). The goal of the study, which was initiated in October 2023, is to prevent the progression of DCIS to breast cancer. Participants receive six months of treatment with 10mg of (Z)-endoxifen daily with the intent of determining their suitability for long-term active surveillance without surgery. On February 22, 2024, the first patient was dosed with our proprietary SERM (Z)-endoxifen.

DCIS is the presence of abnormal cells inside a milk duct in the breast. It is considered to be the earliest form of breast cancer and is noninvasive, meaning it has not spread beyond the milk duct. DCIS is usually found during a mammogram done as part of breast cancer screening or to investigate a breast lump. There are approximately 60,000 DCIS diagnoses made each year in the United States alone.

Currently, there is no way to predict which patients diagnosed with DCIS will progress to invasive breast cancer. As a result, aggressive local therapy, identical to the way invasive breast cancer is treated, is the current standard of care. For most patients, this involves mastectomy or lumpectomy, radiation, and hormone therapy for five years. If treatment with (Z)-endoxifen can effectively halt the progression of DCIS, it would potentially spare a significant percentage of patients diagnosed with this disease from aggressive, invasive, or potentially unnecessary treatment.

### ***Other Programs; Immunotherapy/CAR-T Programs***

*Other Program.* On July 6, 2023, we announced a strategic, sponsored research agreement with Weill Cornell Medicine to study the potential of inducing estrogen receptor expression in triple-negative breast cancer (TNBC). The goal of the research is to determine if treating TNBC with extracellular vesicles carrying the estrogen receptor can change the cancer phenotype and turn on the estrogen receptor. Converting the tumor to ER+ would make it sensitive to hormone therapy, including treatment with (Z)-endoxifen. This could potentially fundamentally transform the treatment approach and outlook for patients diagnosed with TNBC.

*Investment in CAR-T Company.* On December 23, 2022, we closed our investment in DCT, a privately-held, venture-capital backed, developer of CAR-T therapies. DCT is in the pre-clinical phase of developing controllable CAR-T cells to address difficult-to-treat cancers. Its platform technology of dynamic control of engineered T-cells is designed to improve the safety, efficacy, and durability of CAR-T cell therapies. While its initial focus is hematologic malignancies, it's possible that its innovative approach could also have broad applicability in solid tumors and autoimmune diseases.



Much of the recent successes in the field of chimeric antigen receptor therapy, or CAR-T, has relied on the systemic delivery (for example, a needle injection into the blood stream) of the CAR-T which is intended to treat various non-solid tumor cancers, such as blood cancers. One concern with this systemic approach is that it does not target the location of the cancer and it can have adverse effects, including deadly “cytokine storms.” Moreover, CAR-T treatments delivered systemically can be as high as \$500,000 per patient.

We have filed patent applications on a novel method to deliver CAR-T cells or other types of immunotherapy into the milk ducts of the breast, the location where most breast cancers originate for the potential targeted treatment of breast cancer. This approach uses targeted intraductal delivery of either T-cells that have been genetically modified to attack breast cancer cells or various other immune-therapies. We believe this intraductal method has several potential advantages, including the reduction of toxicity by limiting systemic exposure of the T-cells or immunotherapy; improved efficacy by placing the T-cells or immunotherapy in direct contact with the target ductal epithelial cells that are undergoing or have undergone malignant transformation; and, lymphatic migration of the CAR-T cells or immunotherapy potentially extending their cytotoxic actions into the regional lymph system, which could limit tumor cell dissemination or metastasis. Moreover, our approach may be more cost effective if lower doses of therapy can be delivered compared to systemic CAR-T. We have not begun, and may not be successful in completing, pre-clinical and clinical studies of our CAR-T technology.

## **RISK FACTORS**

Investors should carefully consider the risks and uncertainties and all other information contained or incorporated by reference in this prospectus, including the risks and uncertainties discussed under “Risk Factors” in our most recent Annual Report on Form 10-K, as may be amended from time to time, and in subsequent filings, including our most recent Quarterly Report on Form 10-Q, that are incorporated herein by reference. All of these “Risk Factors” are incorporated by reference herein in their entirety. These risks and uncertainties are not the only ones facing us. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned in this prospectus.

## **USE OF PROCEEDS**

We will retain broad discretion over the use of the net proceeds from the sale of our securities offered hereby. Except as described in any prospectus supplement, we currently anticipate using the net proceeds from the sale of our securities offered hereby primarily for general corporate purposes, which include, but are not limited to, funding our ongoing and future development of our drugs and devices under development, and for general and administrative expenses. We may also use a portion of the net proceeds to pay off outstanding indebtedness, if any, and/or acquire or invest in complementary businesses, products and technologies. Further, from time to time we may evaluate acquisition opportunities and engage in related discussions with other companies. Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

## PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus from time to time in one or more offerings. Registration of the securities covered by this prospectus does not mean, however, that those securities will necessarily be offered or sold.

We may sell the securities separately or together:

- through one or more underwriters or dealers in a public offering and sale by them;
- directly to investors; or
- through agents.

We may sell the securities from time to time:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- at market prices prevailing at the times of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We will describe the method of distribution of the securities and the terms of the offering in the prospectus supplement. Any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

If underwriters are used in the sale of any securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters. Generally, the underwriters' obligations to purchase the securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the securities if they purchase any of the securities. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment.

Underwriters, dealers and agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments made by the underwriters, dealers or agents, under agreements between us and the underwriters, dealers and agents.

We may grant underwriters who participate in the distribution of securities an option to purchase additional securities to cover over-allotments, if any, in connection with the distribution.

Underwriters, dealers or agents may receive compensation in the form of discounts, concessions or commissions from us or our purchasers, as their agents in connection with the sale of securities. These underwriters, dealers or agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions or profits on resale received by the underwriters, dealers or agents may be treated as underwriting discounts and commissions. The prospectus supplement will identify any such underwriter, dealer or agent and describe any compensation received by them from us. Any initial public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

Unless otherwise specified in the related prospectus supplement, all securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to

do so and may discontinue any market making at any time without notice. Any common stock sold pursuant to a prospectus supplement will be listed for trading on the Nasdaq Capital Market or other principal market for our common stock. We may apply to list any series of debt securities, preferred stock or warrants on an exchange, but we are not obligated to do so. Therefore, there may not be liquidity or a trading market for any series of securities.

Any underwriter may engage in over-allotment transactions, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. We make no representation or prediction as to the direction or magnitude of any effect that such transactions may have on the price of the securities. For a description of these activities, see the information under the heading "Underwriting" or "Plan of Distribution" in the applicable prospectus supplement.

Underwriters, broker-dealers or agents who may become involved in the sale of the common stock may engage in transactions with and perform other services for us in the ordinary course of their business for which they receive compensation.

### **SECURITIES WE MAY OFFER**

We may offer shares of our common stock, preferred stock, various series of debt securities and warrants to purchase any such securities with a total value of up to \$100,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities.

## DESCRIPTION OF CAPITAL STOCK

The following is a summary of the material terms of our capital stock, as well as other material terms of certain provisions of the Delaware General Corporation Law (the “DGCL”), and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Amended and Restated Certificate of Incorporation, as amended (the “certificate of incorporation”) and our Amended and Restated Bylaws (the “bylaws”), each of which are incorporated herein by reference. For more information on how you can obtain our certificate of incorporation and bylaws, see the heading “Where You Can Find Additional Information.”

### **Common Stock**

*Authorized Shares.* We are authorized to issue up to 175,000,000 shares of common stock.

*Voting Rights.* The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. When a quorum is present at any meeting of our stockholders, the affirmative vote of a majority of the votes properly cast on the matter (excluding any abstentions or broker non-votes) will be the act of the stockholders with respect to all matters other than the contested election of directors (which will be elected by a plurality of all votes properly cast), or as otherwise provided in the bylaws, the certificate of incorporation or a preferred stock designation, or as otherwise required by law.

*Dividends.* Subject to preferences that may be applicable to any outstanding preferred stock, the holders of our common stock are entitled to receive ratably all dividends, if any, as may be declared from time to time by our Board of Directors out of the funds legally available.

*Other Rights.* In the event of the liquidation, dissolution or winding up of the Company, the holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. The common stock has no preemptive or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable.

*Transfer Agent and Registrar.* The transfer agent and registrar for our common stock is VStock Transfer.

*Listing.* Our common stock is currently listed on The Nasdaq Capital Market under the symbol “ATOS”.

### **Preferred Stock**

We may issue shares of our preferred stock from time to time, in one or more series. Under our certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be greater than the rights of the common stock.

If we issue preferred stock, we will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designations relating to that series. If we issue preferred stock, we will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designations that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplement related to any series of preferred stock we may offer, as well as the complete certificate of designations that contains the terms of the applicable series of preferred stock.

***Series A Junior Participating Preferred Stock.*** On May 22, 2014, the Company filed a Certificate of Designation, Preferences, and Rights of Series A Junior Participating Preferred Stock with the Delaware Secretary of State creating 750,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the “Series A Junior Participating Preferred Stock”. Our Stockholder Rights Agreement, dated May 19, 2014, provides that all stockholders of record on May 26, 2014 received a non-taxable dividend distribution of one right (“Right”) for each share of our common stock held by such stockholder, and each share of common stock issued after May 26, 2014 and prior to the Distribution Date (as defined below), and in certain circumstances, after the Distribution Date, will be issued together with one Right. Each Right is attached to and trades with the associated share of common stock. The Rights will become exercisable only upon the earlier of (the “Distribution Date”): (1) ten days following a public announcement that a person has become an “Acquiring Person” by acquiring beneficial ownership of 15% or more of our common stock (or, in the case of a person who beneficially owned 15% or more of our common stock on the date the Stockholder Rights Agreement was executed, by acquiring beneficial ownership of additional shares representing 2.0% of our common stock then outstanding (excluding compensatory arrangements)); or (2) ten business days after a person commences a tender offer that, if consummated, would result in such person becoming an Acquiring Person. As of and after the Distribution Date, the Rights will

separate from the shares of common stock and each Right will become exercisable to purchase one one-hundredth of a share of Series A Junior Participating Preferred Stock at a purchase price of \$15.00 (the "Purchase Price"), subject to adjustment. This portion of Series A Junior Participating Preferred Stock would give the holder thereof approximately the same dividend, voting, and liquidation rights as would one share of common stock. In the event that a person becomes an Acquiring Person, each holder of a Right will thereafter have the right to receive, upon exercise, shares of common stock (or, in certain circumstances, other securities, cash, or other assets of the Company) having a value equal to two times the Purchase Price. Notwithstanding any of the foregoing, following the occurrence of a person becoming an Acquiring Person, all Rights that are, or (under certain circumstances specified in the Stockholder Rights Agreement) were, beneficially owned by any Acquiring Person (or by certain related parties) will be null and void. However, Rights are not exercisable following the occurrence of a person becoming an Acquiring Person until such time as the Rights are no longer redeemable by the Company. In the event that, at any time after a person has become an Acquiring Person, (i) the Company engages in a merger or other business combination transaction in which the Company is not the continuing or surviving corporation or other entity, (ii) the Company engages in a merger or other business combination transaction in which the Company is the continuing or surviving corporation and the shares of common stock of the Company are changed or exchanged, or (iii) 50% or more of the Company's assets or earning power is sold or transferred, each holder of a Right (except Rights that have previously been voided as set forth above) shall thereafter have the right to receive, upon exercise, common shares of the acquiring company having a value equal to two times the Purchase Price. As of the date of this prospectus, no shares of Series-A Junior Participating Preferred Stock are outstanding. The Rights will expire on the earliest of (a) 5:00 p.m., Eastern time, on May 26, 2024, (b) the time at which the Rights are redeemed, and (c) the time at which the Rights are exchanged in full.

**Series A Convertible Preferred Stock.** On March 31, 2017, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock with the Delaware Secretary of State creating 4,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the "Series A Convertible Preferred Stock". As of the date of this prospectus, no shares of Series A Convertible Preferred Stock are outstanding. The terms and provisions of our Series A Convertible Preferred Stock are:

**Conversion.** Each share of Series A Convertible Preferred Stock is convertible at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series A Convertible Preferred Stock by an initial conversion price of \$1,333.33 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series A Convertible Preferred Stock will not have the right to convert any portion of the Series A Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

**Fundamental Transactions.** In the event the Company effects certain mergers, consolidations, sales of substantially all of its assets, tender or exchange offers, reclassifications, or share exchanges in which its common stock is effectively converted into or exchanged for other securities, cash or property, the Company consummates a business combination in which another person acquires 50% of the outstanding shares of its common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by its issued and outstanding common stock, then, upon any subsequent conversion of the Series A Convertible Preferred Stock, the holders of the Series A Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series A Convertible Preferred Stock.

**Dividends.** Holders of Series A Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock. The Series A Convertible Preferred Stock contractually entitles the holders of such securities to participate in dividends but do not contractually require the holders of such securities to participate in losses of the Company.

**Voting Rights.** Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series A Convertible Preferred Stock has no voting rights.

**Liquidation Preference.** Upon the Company's liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series A Convertible Preferred Stock will be entitled to receive out of the Company's assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series A Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid pari passu with all holders of common stock.

*Redemption Rights.* The Company is not obligated to redeem or repurchase any shares of Series A Convertible Preferred Stock. Shares of Series A Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

**Series B Convertible Preferred Stock.** On May 29, 2018, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock with the Delaware Secretary of State creating 25,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the “Series B Convertible Preferred Stock”. As of the date of this prospectus, 582 shares of Series B Convertible Preferred Stock are outstanding. The terms and provisions of our Series B Convertible Preferred Stock are:

*Conversion.* Each share of Series B Convertible Preferred Stock is convertible at our option at any time on or after the first anniversary of the closing of the rights offering or at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series B Convertible Preferred Stock by an initial conversion price of \$3.52 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series B Convertible Preferred Stock will not have the right to convert any portion of the Series B Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

*Fundamental Transactions.* In the event the Company effects certain mergers, consolidations, sales of substantially all of its assets, tender or exchange offers, reclassifications, or share exchanges in which its common stock is effectively converted into or exchanged for other securities, cash or property, the Company consummates a business combination in which another person acquires 50% of the outstanding shares of its common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by its issued and outstanding common stock, then, upon any subsequent conversion of the Series B Convertible Preferred Stock, the holders of the Series B Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series B Convertible Preferred Stock.

*Dividends.* Holders of Series B Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock. The Series B Convertible Preferred Stock contractually entitles the holders of such securities to participate in dividends but do not contractually require the holders of such securities to participate in losses of the Company.

*Voting Rights.* Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series B Convertible Preferred Stock has no voting rights.

*Liquidation Preference.* Upon the Company's liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series B Convertible Preferred Stock will be entitled to receive out of the Company's assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series B Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid *pari passu* with all holders of common stock.

*Redemption Rights.* The Company is not obligated to redeem or repurchase any shares of Series B Convertible Preferred Stock. Shares of Series B Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

**Series C Convertible Preferred Stock.** On December 9, 2020, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock with the Delaware Secretary of State creating 20,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the “Series C Convertible Preferred Stock”. As of the date of this prospectus, no shares of Series C Convertible Preferred Stock are outstanding. The terms and provisions of our Series C Convertible Preferred Stock are:

*Conversion.* Each share of Series C Convertible Preferred Stock is convertible at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series C Convertible Preferred Stock by an initial conversion price of \$1.00 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series C Convertible Preferred Stock will not have the right to convert any portion of the Series C Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially

own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

*Fundamental Transactions.* In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series C Convertible Preferred Stock, the holders of the Series C Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series C Convertible Preferred Stock.

*Dividends.* Holders of Series C Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

*Voting Rights.* Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series C Convertible Preferred Stock has no voting rights.

*Liquidation Preference.* Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series C Convertible Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series C Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid pari passu with all holders of common stock.

*Redemption Rights.* We are not obligated to redeem or repurchase any shares of Series C Convertible Preferred Stock. Shares of Series C Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

### **Certain Provisions Affecting Control of the Company**

*Certificate of Incorporation and Bylaw Provisions.* Some provisions of the DGCL and our certificate of incorporation and bylaws contain provisions that could make the following transactions more difficult:

- acquisition of us by means of a tender offer;
- acquisition of us by means of a proxy contest or otherwise; or
- removal of our incumbent officers and directors.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board of Directors.

*Undesignated Preferred Stock.* The ability to authorize undesignated preferred stock makes it possible for our Board of Directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

*Advance Notice Procedures.* The advance notice procedures in our bylaws with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all such stockholder notices. These requirements may have the effect of precluding stockholders from bringing proposals relating to the nomination of candidates for election as directors or new business before the stockholders at an annual or special meeting.



*Delaware Anti-Takeover Statute.* We are subject to Section 203 of the DGCL. This law prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the 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 outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 of the DGCL defines “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the corporation’s assets involving the interested stockholder;
- in general, any transaction that results in the issuance or transfer by the corporation of any of its stock to 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 of the DGCL defines an “interested stockholder” as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

## DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under an indenture to be entered into between us and a trustee to be named in a prospectus supplement. The indenture will be qualified under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”). We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indentures is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

### General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount,” or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;
- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;

- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depository for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

## Events of Default and Remedies

Unless otherwise described in the applicable prospectus supplement, an event of default with respect to any series of debt securities will be defined in the indenture or applicable supplemental indenture or authorizing resolution as being:

- our failure to pay interest on any debt security of such series when the same becomes due and payable and the continuance of any such failure for a period of 30 days;
- our failure to pay the principal or premium of any debt security of such series when the same becomes due and payable at maturity, upon acceleration, redemption or otherwise;
- our failure or the failure of any restricted subsidiary to comply with any of its agreements or covenants in, or provisions of, the debt securities of such series or the indenture (as they relate thereto) and such failure continues for a period of 60 days after our receipt of notice of the default from the trustee or from the holders of at least 25% in aggregate principal amount of the then outstanding debt securities of that series (except in the case of a default with respect to the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of the assets of us (or any other provision specified in the applicable supplemental indenture or authorizing resolution), which will constitute an event of default with notice but without passage of time);
- default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness (other than non-recourse indebtedness, as defined in the indenture) for money borrowed by us or any of our restricted subsidiaries (or the payment of which is guaranteed by us or any of our restricted subsidiaries), whether such indebtedness or guarantee now exists or is created after the date we issue debt securities, if that default: (a) is caused by a failure to pay at final stated maturity the principal amount of such indebtedness prior to the expiration of the grace period provided in such indebtedness on the date of such default (a "Payment Default"); or (b) results in the acceleration of such indebtedness prior to its express maturity without such indebtedness having been discharged or such acceleration having been cured, waived, rescinded or annulled for the period and after the notice had been provided, and, in each case, the principal amount of any such indebtedness, together with the principal amount of any other such indebtedness under which there has been a Payment Default or the maturity of which has been so accelerated, aggregates \$50 million or more; or
- certain events of bankruptcy, insolvency or reorganization occur with respect to us or any restricted subsidiary that is a significant subsidiary (as defined in the indenture).

The indenture will provide that the trustee may withhold notice to the holders of any series of debt securities of any default, except a default in payment of principal or interest, if any, with respect to such series of debt securities, if the trustee considers it in the interest of the holders of such series of debt securities to do so.

The indenture will provide that if any event of default has occurred and is continuing with respect to any series of debt securities, the trustee or the holders of not less than 25% in principal amount of such series of debt securities then outstanding may declare the principal of all the debt securities of such series to be due and payable immediately. However, the holders of a majority in principal amount of the debt securities of such series then outstanding by notice to the trustee may waive any existing default and its consequences with respect to such series of debt securities, other than any event of default in payment of principal or interest. Holders of a majority in principal amount of the then outstanding debt securities of any series may rescind an acceleration with respect to such series and its consequences, except an acceleration due to nonpayment of principal or interest on such series, if the rescission would not conflict with any judgment or decree and if all existing events of default with respect to such series have been cured or waived.

The holders of a majority of the outstanding principal amount of the debt securities of any series will have the right to direct the time, method and place of conducting any proceedings for any remedy available to the trustee with respect to such series, subject to limitations specified in the indenture.

## Defeasance

The indenture will permit us to terminate all our respective obligations under the indenture as they relate to any particular series of debt securities, other than the obligation to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal of and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

The indenture will also permit us to terminate all of our respective obligations under the indenture as they relate to any particular series of debt securities, including the obligations to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that (A) we have received from, or there has been published by, the Internal Revenue Service a ruling, or (B) since the date such series of debt securities were originally issued, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel shall state that, holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

In addition, the indenture will permit us to terminate substantially all our respective obligations under the indenture as they relate to a particular series of debt securities by depositing with the trustee money or government obligations sufficient to pay all principal and interest on such series at its maturity or redemption date if the debt securities of such series will become due and payable at maturity within one year or are to be called for redemption within one year of the deposit.

### **Transfer and Exchange Rights**

A holder will be able to transfer or exchange debt securities only in accordance with the indenture. The registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents, and to pay any taxes and fees required by law or permitted by the indenture.

### **Consolidation, Merger or Sale**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

### **Amendment, Supplement and Waiver**

Without notice to or the consent of any holder, we and the trustee may amend or supplement the indenture or the debt securities of a series to:

- cure any ambiguity, omission, defect or inconsistency;
- comply with the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of our assets;
- provide that specific provisions of the indenture shall not apply to a series of debt securities not previously issued or to make a change to specific provisions of the indenture that only applies to any series of debt securities not previously issued or to additional debt securities of a series not previously issued;
- create a series and establish its terms;
- provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- add a guarantor subsidiary in respect of any series of debt securities;
- secure any series of debt securities;
- comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act;
- make any change that does not adversely affect the rights of any holder; or
- conform the provisions of the indenture to the final offering document in respect of any series of debt securities.

With the exceptions discussed below, we and the trustee may amend or supplement the indenture or the debt securities of a particular series with the written consent of the holders of at least a majority in principal amount of the debt securities of such series then outstanding. In addition, the holders of a majority in principal amount of the debt securities of such series then outstanding may waive

any existing default under, or compliance with, any provision of the debt securities of a particular series or of the indenture relating to a particular series of debt securities, other than any event of default in payment of interest or principal. These consents and waivers may be obtained in connection with a purchase of, or tender offer or exchange offer for, debt securities. Without the consent of each holder affected, we and the trustee may not:

- reduce the amount of debt securities of such series whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest, including defaulted interest;
- reduce the principal of or extend the fixed maturity of any debt security or alter the provisions with respect to redemptions or mandatory offers to repurchase debt securities;
- make any change that adversely affects any right of a holder to convert or exchange any debt security into or for shares of our common shares or other securities, cash or other property in accordance with the terms of such security;
- modify the ranking or priority of the debt securities;
- make any change to any provision of the indenture relating to the waiver of existing defaults, the rights of holders to receive payment of principal and interest on the debt securities, or to the provisions regarding amending or supplementing the indenture or the debt securities of a particular series with the written consent of the holders of such series;
- waive a continuing default or event of default in the payment of principal of or interest on the debt securities; or
- make any debt security payable at a place or in money other than that stated in the debt security, or impair the right of any holder of a debt security to bring suit as permitted by the indenture.

The right of any holder to participate in any consent required or sought pursuant to any provision of the indenture, and our obligation to obtain any such consent otherwise required from such holder, may be subject to the requirement that such holder shall have been the holder of record of debt securities with respect to which such consent is required or sought as of a record date fixed by us in accordance with the indenture.

#### **Governing Law**

The laws of the State of New York will govern the indenture and the debt securities.

## DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may issue under this prospectus, which may consist of warrants to purchase common shares, preference shares or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common shares, preference shares or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

### General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common shares or preference shares, the number of common shares or preference shares, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special United States federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common shares or preference shares, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

### **Exercise of Warrants**

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Upon any purchase of common shares pursuant to the exercise of a warrant, the holder of such common shares will be subject to the provisions of our amended and restated by-laws which provide that any U.S. person, other than any excluded person, whose controlled shares would constitute 9.5% or more of the total voting power of our issued share capital, will have their aggregate votes reduced by our board of directors to the extent necessary such that the controlled shares of such U.S. person will constitute less than 9.5% of the voting power of all issued and outstanding shares, all as further described above under “Description of Share Capital—Common Shares.”

### **Governing Law**

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements will be governed by and construed in accordance with the laws of the State of New York.



## DESCRIPTION OF UNITS

We may issue units consisting of any combination of common stock, preferred stock, debt securities or warrants to purchase shares of our common stock, shares of our preferred stock or debt securities offered under this prospectus in one or more series. We may elect to evidence each series of units by unit certificates that we will issue under a separate unit agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms, and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain U.S. federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

## **EXPERTS**

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023 as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of Atossa Therapeutics Inc. as of December 31, 2022 and for the year then ended incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.C.), an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## **LEGAL MATTERS**

Certain legal matters relating to the validity of the securities offered by this prospectus will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

The Company files annual, quarterly and special reports, proxy statements and other information with the SEC. The SEC maintains an Internet site that contains all reports and other information that we file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov).

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. 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 the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement (or incorporated by reference). Neither we nor any agent, underwriter or dealer has authorized any person to provide you with information that is different from that contained in this prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We maintain a website at [www.atossatherapeutics.com](http://www.atossatherapeutics.com). Information contained in or accessible through our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

## INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus. This means that we can disclose important information about us and our financial condition to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this prospectus, except any information that is superseded by information that is included in a document subsequently filed with the SEC. This prospectus incorporates by reference the documents listed below that we have previously filed with the SEC and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, from the date of this prospectus until the termination of an offering of securities, except that we are not incorporating by reference any information furnished (and not filed) with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K:

- The Company’s Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on April 1, 2024 (including the portions of our Proxy Statement for our 2024 Annual General Meeting of Shareholders incorporated by reference therein);
- The Company’s Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2024 filed with the SEC on [May 13, 2024](#);
- The Company’s Current Reports on Forms 8-K filed with the SEC on [March 12, 2024](#) and [March 18, 2024](#) (in each case, except for information contained therein which is furnished rather than filed);
- The description of the Company’s Common Stock contained in the registration statement on [Form 8-A](#) filed with the Commission on July 24, 2012 pursuant to Section 12 of the Exchange Act, including any amendment or report filed for the purpose of updating that description; and
- All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of the original Registration Statement and prior to effectiveness of the registration statement of which this prospectus is a part, provided that all documents “furnished” by the Company to the SEC and not “filed” are not deemed incorporated by reference herein.

Any statement contained in a document, all or a portion of which is incorporated or deemed to be incorporated by reference herein, will be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified will not be deemed to constitute a part hereof, except as so modified, and any statement so superseded will not be deemed to constitute a part hereof.

A copy of any document incorporated by reference in this prospectus may be obtained at no cost by writing or telephoning us at the following address and telephone number:

Atossa Therapeutics, Inc.  
107 Spring Street  
Seattle, Washington 98104  
(206) 588-0256

We maintain a website at [www.atossatherapeutics.com](http://www.atossatherapeutics.com). Information about us, including our reports filed with the SEC, is available through that site. Such reports are accessible at no charge through our website and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. Our website and the information contained on that website, or connected to that website, are not incorporated by reference in this prospectus.

You may read and copy any materials we file with the SEC at the SEC’s website mentioned under the heading “Where You Can Find Additional Information.” The information on the SEC’s website is not incorporated by reference in this prospectus.



**Up to \$100,000,000**

**Common Stock**

---

**PROSPECTUS SUPPLEMENT**

---

**Jefferies**

---

**November 19, 2024**

---

---

---

