

The information contained in this preliminary prospectus supplement and the accompanying prospectus is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell nor do they seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated March 22, 2021

PRELIMINARY PROSPECTUS SUPPLEMENT  
(To prospectus dated June 21, 2019)



## Shares of Common Stock Underwriter Warrants to Purchase Shares of Common Stock

We are offering \_\_\_\_\_ shares of common stock. In addition, in connection with the offering, we are issuing common stock purchase warrants to the offering's underwriter. These warrants and the shares of common stock issuable upon exercise of the warrants will also be registered pursuant to the registration statement on Form S-3 of which this prospectus supplement and the accompanying prospectus form a part.

Our common stock is listed on the Nasdaq Capital Market under the symbol "ANIX." On March 19, 2021, the last reported sale price of the common stock on the Nasdaq Capital Market was \$6.97 per share.

The offering is being underwritten on a firm commitment basis. The underwriter may offer the shares of common stock from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on Nasdaq Capital Market, or to dealers in negotiated transactions or in a combination of such methods of sale, or otherwise, at fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices.

*Investing in our common stock involves risks that are described in the "Risk Factors" beginning on page S-3 of this prospectus supplement, page 3 of the accompanying prospectus and under similar headings in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.*

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions(1)	\$	\$
Proceeds, before expenses and fees, to us	\$	\$

(1) We have agreed to pay a management fee to the underwriter equal to 1.0% of the aggregate gross proceeds in the offering and to reimburse certain expenses of the underwriter in connection with this offering. We have also agreed to issue warrants to the underwriter, or the Underwriter Warrants, to purchase a number of shares of our common stock equal to 7.0% of the aggregate number of shares of our common stock sold in this offering at an exercise price equal to \$ \_\_\_\_\_ per share, or the Underwriter Warrants. This prospectus supplement and the accompanying prospectus also covers the Underwriter Warrants and the shares of our common stock issuable upon exercise of the Underwriter Warrants. See "Underwriting" for additional disclosure regarding underwriting compensation.

We have granted the underwriter an option for a period of up to 30 days from the date of this prospectus supplement to purchase up to \_\_\_\_\_ additional shares of our common stock at the public offering price, less the underwriting discounts and commissions. If the underwriter exercises the option in full, the total underwriting discounts and commissions payable by us will be \$ \_\_\_\_\_ and the total proceeds to us, before expenses, will be \$ \_\_\_\_\_.

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.

Delivery of the shares of our common stock being offered pursuant to this prospectus supplement and the accompanying prospectus is expected to be made on or about \_\_\_\_\_, 2021, subject to satisfaction of customary closing conditions.

### H.C. Wainwright & Co.

The date of this prospectus supplement is \_\_\_\_\_, 2021.

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## ABOUT THIS PROSPECTUS SUPPLEMENT

On June 11, 2019, we filed with the Securities and Exchange Commission, or SEC, a registration statement on Form S-3 (File No. 333-232067) utilizing a “shelf” registration process relating to the securities described in this prospectus supplement, which registration statement was declared effective on June 21, 2019. Under this shelf registration process, we may offer and sell, either individually or in combination, in one or more offerings, any of the securities described in the accompanying prospectus, for total gross proceeds of up to \$100,000,000.

This prospectus supplement describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein and into the accompanying prospectus. The second part, the accompanying prospectus, provides more general information. If the information in this prospectus supplement or any relevant free writing prospectus we may authorize for use in connection with this offering is inconsistent with the accompanying prospectus or any document incorporated by reference therein filed prior to the date of this prospectus supplement or such free writing prospectus, you should rely on the information in this prospectus supplement or such free writing prospectus.

We and the underwriter have not authorized anyone to provide you with any information or to make any representations other than those included or incorporated by reference in this prospectus supplement and the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering. If you receive any information not authorized by us, we and the underwriter take no responsibility for, and can provide no assurance as to the reliability of, such information. We are not making an offer to sell the securities offered hereby in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus or any relevant free writing prospectus we may authorize for use in connection with this offering is accurate as of any date other than its respective date, regardless of its time of delivery or any sale of the securities covered hereby. Our business, financial condition, results of operations and prospects may have changed since that date.

It is important for you to read and consider all of the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering in making your investment decision. This prospectus supplement contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. We include cross-references in this prospectus supplement and the accompanying prospectus to captions in these materials where you can find additional related discussions. The table of contents in this prospectus supplement provides the pages on which these captions are located. You should read both this prospectus supplement and the accompanying prospectus, together with the additional information described in the sections entitled “Where You Can Find Additional Information” on page S-12 and “Incorporation of Documents by Reference” on page S-12 of this prospectus supplement, before investing in our common stock.

We are offering to sell, and seeking offers to buy, the securities offered hereby only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering and the offering of the securities offered hereby in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering must inform themselves about, and observe any restrictions relating to, the offering of the securities offered hereby and the distribution of this prospectus supplement, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering outside the United States. This prospectus supplement, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering 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, the accompanying prospectus and any relevant free writing prospectus we may authorize for use in connection with this offering by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless otherwise stated, all references to “us,” “our,” “Anixa,” “we,” the “Company” and similar designations refer to Anixa Biosciences, Inc.

This prospectus supplement and the accompanying prospectus contain, or incorporate by reference, trademarks, tradenames, service marks and service names of Anixa Biosciences, Inc. and its subsidiaries.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein and any free writing prospectus that we have authorized for use in connection with this offering may contain forward-looking statements that involve risks and uncertainties. All statements other than statements of historical fact contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, including statements regarding future events, including, but not limited to, our ability to obtain approval from the U.S. Food and Drug Administration (“FDA”) to commence our clinical trials (or in the case of our anti-viral drug for COVID-19, our ability to complete our proof-of-concept animal study), our ability to successfully initiate and complete clinical trials of our products under development, our ability to pursue applications of our technologies for different indications, our ability to leverage our collaborations to develop and, in the case of our anti-viral drug for COVID-19, discover, our technologies, and our ability to establish and maintain intellectual property rights covering our products, our future financial performance, business strategy, including our acquisition strategy, and plans and objectives of management for future operations, are forward-looking statements. We have attempted to identify forward-looking statements by terminology including “anticipates,” “believes,” “can,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “should,” or “will” or the negative of these terms or other comparable terminology. Although we do not make forward-looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Risk Factors” or elsewhere in this prospectus supplement, the accompanying prospectus and the documents

incorporated by reference herein or therein, which may cause our or our industry's actual results, levels of activity, performance or achievements to vary materially from those expressed or implied by these forward-looking statements. Moreover, we operate in a highly regulated and rapidly changing environment. New risks emerge from time to time and it is not possible for us to predict all risk factors, nor can we address the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short term and long term business operations, and financial needs. These forward-looking statements are subject to certain risks and uncertainties that could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this prospectus supplement and the documents incorporated by reference herein, and in particular, the risks discussed below and under the heading "Risk Factors" and those discussed in other documents we file with the SEC. The following discussion should be read in conjunction with our financial statements filed with the SEC, including our audited financial statements for the fiscal years ended October 31, 2020 and 2019 and notes incorporated by reference therein. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus supplement may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statement.

You should not place undue reliance on any forward-looking statement, each of which applies only as of the date of this prospectus supplement. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus supplement to conform our statements to actual results or changed expectations.

Any forward-looking statement you read in this prospectus supplement, the accompanying prospectus or any document incorporated by reference herein or therein and any free writing prospectus that we have authorized for use in connection with this offering reflects our views at the time the forward-looking statement was made with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, operating results, growth strategy and liquidity. You should not place undue reliance on these forward-looking statements because such statements speak only as to the date when made. We assume no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future, except as otherwise required by applicable law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K filed with the SEC. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

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## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus supplement. This summary does not contain all the information that you should consider before investing in our common stock. You should carefully read the entire prospectus supplement, including all documents incorporated by reference herein. In particular, attention should be directed to "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes thereto contained herein or incorporated by reference herein from our Quarterly Report on Form 10-Q for the quarter ended January 31, 2021 and our Annual Report on Form 10-K for the year ended October 31, 2020, before making an investment decision.*

### Overview

Our primary operations involve developing therapies and vaccines that are focused on critical unmet needs in oncology and infectious disease. Our therapeutics programs include the development of a chimeric endocrine receptor T-cell technology, a novel form of chimeric antigen receptor T-cell ("CAR-T") technology, initially focused on treating ovarian cancer, and discovery and ultimately development of anti-viral drug candidates for the treatment of COVID-19 focused on inhibiting certain protein functions of the virus. Our vaccine programs include the development of a vaccine against breast cancer, specifically triple negative breast cancer ("TNBC"), the most lethal form of the disease, and a vaccine against ovarian cancer.

Our subsidiary, Certainty Therapeutics, Inc. ("Certainty"), is developing immuno-therapy drugs against cancer. Certainty holds an exclusive worldwide, royalty-bearing license to use certain intellectual property owned or controlled by The Wistar Institute ("Wistar") relating to Wistar's CAR-T technology. We have initially focused on the development of a treatment for ovarian cancer, but we may also pursue applications of the technology for the development of treatments for additional solid tumors. The license agreement requires Certainty to make certain cash and equity payments to Wistar upon achievement of specific development milestones. With respect to Certainty's equity obligations to Wistar, Certainty issued to Wistar shares of its common stock equal to five percent (5%) of the common stock of Certainty.

Certainty, in collaboration with the H. Lee Moffitt Cancer Center and Research Institute, Inc. ("Moffitt"), is advancing toward human clinical testing its CAR-T technology for treating ovarian cancer. Recently, an Investigational New Drug ("IND") application was submitted to the U.S. Food and Drug Administration ("FDA") and we anticipate receiving a response from the FDA in April 2021. Assuming the FDA approves the IND application, we anticipate beginning the human clinical trials during the second half of 2021.

In April 2020, we entered into a collaboration with OntoChem GmbH ("OntoChem"), to discover and ultimately develop anti-viral drug candidates against COVID-19. Through this collaboration, we utilized advanced computational methods, machine learning, and molecular modeling techniques to perform *in silico* screening of over 1.2 billion compounds in chemical libraries (including publicly available compounds and OntoChem's proprietary libraries) to evaluate if any of these compounds could disrupt one of two key enzymes of SARS-CoV-2, the virus that causes the disease COVID-19.

The screening process resulted in the identification of multiple compounds that could potentially disrupt critical enzymes of the virus. Several of these compounds were synthesized and tested in *in vitro* biological assays. Upon completion of these biological assays, we identified two of the most promising compounds and have begun testing them in animal models. In these animal studies, the two compounds are being compared to Remdesivir, which is the only anti-viral drug authorized by the FDA for COVID-19. We anticipate this proof-of-concept animal study to be completed by approximately the end of the first calendar quarter of 2021.

We hold an exclusive worldwide, royalty-bearing license to use certain intellectual property owned or controlled by The Cleveland Clinic Foundation ("Cleveland Clinic") relating to certain breast cancer vaccine technology developed at Cleveland Clinic. We are working in collaboration with Cleveland Clinic to develop a method to vaccinate women against contracting breast cancer, focused specifically on TNBC. A specific protein, alpha-lactalbumin, has been identified that is only present during lactation in healthy women, but reappears in many forms of breast cancer, especially TNBC. Studies have shown that vaccinating against this protein prevents breast cancer in mice. In December 2020, we received authorization from the FDA to commence enrollment and treatment of patients in a Phase 1a clinical trial. We are performing the activities necessary to prepare for treatment of patients in the Phase 1a clinical trial, and we anticipate being prepared to treat the first enrolled patient by mid-year 2021.

In November 2020, we executed a license agreement with Cleveland Clinic pursuant to which the Company was granted an exclusive worldwide, royalty-bearing license to use certain intellectual property owned or controlled by Cleveland Clinic relating to certain ovarian cancer vaccine technology. This technology pertains to the use of vaccines for the treatment or prevention of ovarian cancers which express the anti-Mullerian hormone receptor II protein containing an extracellular domain ("AMHR2-ED"). In healthy tissue, this protein regulates growth and development of egg-containing follicles in the ovary. While expression of AMHR2-ED naturally and markedly declines after menopause, this protein is expressed at high levels in the ovaries of postmenopausal women with ovarian cancer. Researchers at Cleveland Clinic believe that a vaccine targeting AMHR2-ED could prevent the occurrence of ovarian cancer. In January 2021, we entered into a joint development agreement with Cleveland Clinic, to advance this vaccine technology toward human clinical testing.

Over the next several quarters, we expect the development of our breast and ovarian cancer vaccines, our COVID-19 therapeutic program and Certainty's CAR-T technology to

be the primary focus of the Company. As part of our legacy operations, the Company remains engaged in limited patent licensing activities regarding the Cchek™ liquid biopsy platform (operations for which were suspended in July 2020), as well as in the area of encrypted audio/video conference calling. We do not expect these activities to be a significant part of the Company's ongoing operations nor do we expect these activities to require material financial resources or attention of senior management.

Over the past several years, our revenue was derived from technology licensing and the sale of patented technologies, including revenue from the settlement of litigation. We have not generated any revenue to date from our therapeutics or vaccine programs. In addition, while we pursue our therapeutics and vaccine programs, we may also make investments in and form new companies to develop additional emerging technologies. We do not expect to begin generating revenue with respect to any of our current therapy or vaccine programs in the near term. We hope to achieve a profitable outcome by eventually licensing our technologies to large pharmaceutical companies that have the resources and infrastructure in place to manufacture, market and sell our technologies as therapeutics or vaccines. The eventual licensing of any of our technologies may take several years, if it is to occur at all, and may depend on positive results from human clinical trials.

### Recent Developments

On March 22, 2021, we announced that an IND application for our CAR-T technology for treating ovarian cancer was submitted to the FDA.

Since October 31, 2020, we have sold an aggregate of 2,806,410 shares of our common stock in our at-the-market offering program for gross proceeds of approximately \$11.2 million.

### Principal Offices

Our principal executive offices are located at 3150 Almaden Expressway, Suite 250, San Jose, CA 95118, our telephone number is (408) 708-9808, and our Internet website address is <https://www.anixa.com/>. The information on our website is not a part of, or incorporated in any manner into this prospectus supplement.

### The Offering

Common stock offered by us	shares of common stock.
Underwriter warrants	We have agreed to issue underwriter warrants to purchase up to shares of common stock ( shares if the underwriter exercises its option to purchase additional shares in full) to the underwriter (or its designees), which represents 7% of the number of shares of common stock being sold in this offering, as part of the compensation payable to the underwriter in connection with this offering. The exercise price per share of the underwriter warrants is \$ (equal to 125% of the public offering price per share for the shares of common stock sold in this offering), and the underwriter warrants have a term of five years from the commencement of sales in this offering. The underwriter warrants will be exercisable immediately. This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the underwriter warrants.
Option to purchase additional shares	We have granted the underwriter an option for a period of 30 days after the date of this prospectus supplement to purchase up to an additional shares of common stock at the public offering price, less the underwriting discounts and commissions.
Common stock to be outstanding immediately after this offering	shares of common stock (or shares of common stock if the underwriter exercises its option to purchase additional shares in full).
Use of proceeds	We intend to use the net proceeds from this offering for general corporate purposes, including, but not limited to, ongoing research and pre-clinical studies, clinical trials, the development of new biological and pharmaceutical technologies, investing in or acquiring companies that are synergistic with or complementary to our technologies, and licensing activities related to our current and future product candidates and working capital. See "Use of Proceeds" on page S-7.
Risk factors	This investment involves a high degree of risk. You should read the description of risks set forth under "Risk Factors" beginning on page S-3 of this prospectus supplement or otherwise incorporated by reference in this prospectus supplement for a discussion of factors to consider before deciding to purchase our securities.
Nasdaq Capital Market symbol	"ANIX"

The number of shares of our common stock to be outstanding immediately after this offering is based on 27,131,485 shares outstanding as of March 19, 2021, and excludes, as of that date, the following:

- 1,874,634 shares of common stock issuable upon the exercise of outstanding vested and unvested stock options under our 2010 Share Incentive Plan, and 5,310,000 shares of common stock issuable upon the exercise of outstanding vested and unvested stock options under our 2018 Share Incentive Plan and 1,668,000 shares of common stock issuable upon the exercise of outstanding stock options granted outside of a share incentive plan.
- 500,000 shares of common stock issuable upon the exercise of outstanding warrants, having an exercise price of \$5.03 per share and 60,000 shares of common stock issuable upon the exercise of outstanding vested and unvested warrants, having an exercise price of \$2.06.
- the exercise of any of the Underwriter Warrants.

### RISK FACTORS

*Investing in our securities involves risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described below. You should also consider the risks, uncertainties and assumptions discussed under the heading "Risk Factors" in our Quarterly Report on Form 10-Q for the fiscal quarter ended January 31, 2021 and our Annual Report on Form 10-K for the fiscal year ended October 31, 2020, each as incorporated by reference in this prospectus supplement, any*

amendment or update thereto reflected in subsequent filings with the SEC, including in our annual reports on Form 10-K and quarterly reports on Form 10-Q, and all other information contained or incorporated by reference in this prospectus supplement, as updated by our subsequent filings under the Securities and Exchange Act of 1934, as amended (referred to herein as the Exchange Act). There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. If any of these risks actually occurs, our business, business prospects, financial condition or results of operations 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 above entitled "Cautionary Statement Regarding Forward-Looking Statements."

### **Risks Related to this Offering and our Common Stock**

***We have broad discretion in the use of the net proceeds from this offering and our existing cash and may not use them effectively.***

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled "Use of Proceeds," as well as our existing cash and cash equivalents, and you will be relying on the judgment of our management regarding such application. You will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply the net proceeds or our existing cash in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering or our existing cash and cash equivalents in ways that enhance stockholder value, we may fail to achieve expected business and financial results, which could cause our stock price to decline. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders.

***You will experience immediate dilution in the book value per share of the securities you purchase in this offering.***

Because the price per share of our common stock being offered is substantially higher than the pro forma net tangible book value per share of our common stock after giving effect of the ATM Sales (as hereinafter defined), you will suffer substantial dilution in the pro forma as adjusted net tangible book value of the common stock you purchase in this offering. If you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$ per share in the pro forma as adjusted net tangible book value of the common stock you purchase. Any exercise of outstanding stock options, warrants (including the Underwriter Warrants when issued) or other equity awards will result in further dilution. See "Dilution" for a more detailed discussion of the dilution you will incur if you purchase our securities in this offering.

***Because our stock price has and will likely continue to be highly volatile, the market price of our common stock may be lower or more volatile than expected.***

Our stock price has been highly volatile. Further, the stock market in general has experienced significant price and volume fluctuations, and the market prices of biotechnology companies in particular have been highly volatile. These significant price and volume fluctuations have often been unrelated to the financial condition or results of operations of particular companies. From November 1, 2020 through March 19, 2021, the closing sale price of our common stock has been as low as \$1.94 per share and as high as \$7.14 per share. While we have released our year end and first quarter financial statements during this time, our results of operations have remained largely consistent with prior periods and so we believe that this volatility may have been unrelated to the financial condition or results of operations of our company. These broad market fluctuations may adversely affect the trading price of our common stock and, consequently, adversely affect the price at which you could sell the shares that you purchase in this offering.

In general, we believe that various factors may cause the market price of our common stock to fluctuate, perhaps substantially, including, among others, the following:

- announcements of developments in the fields of CAR-T therapeutics, cancer vaccines or COVID-19 treatments;
- developments in relationships with third party vendors and laboratories;
- developments or disputes concerning our patents and other intellectual property;
- our or our competitors' technological innovations;
- variations in our quarterly operating results;
- our failure to meet or exceed securities analysts' expectations of our financial results;
- a change in financial estimates or securities analysts' recommendations;
- changes in management's or securities analysts' estimates of our financial performance;
- announcements by us or our competitors of significant contracts, acquisitions, strategic partnerships, joint ventures, capital commitments, new technologies, or patents; and
- the timing of or our failure to complete significant transactions.

In addition, we believe that fluctuations in our stock price during applicable periods can also be impacted by changes in governmental regulations in the drug development industry and/or court rulings and/or other developments in our remaining patent licensing and enforcement actions.

In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If our common stock was the object of securities class action litigation due to volatility in the market price of our stock, it could result in substantial costs and a diversion of management's attention and resources, which could materially harm our business and financial results.

***The issuance or sale of shares in the future to raise money or for strategic purposes could reduce the market price of our common stock.***

In the future, we may issue securities to raise cash for operations, to pay down then existing indebtedness, as consideration for the acquisition of assets, as consideration for receipt of goods or services, to pay for the development of our CAR-T cancer therapeutics, to pay for the development of our breast cancer vaccine, to pay for the development of our ovarian cancer vaccine, to pay for the development of our COVID-19 therapeutic and for acquisitions of companies. We have an at-the-market equity offering under which, as of March 19, 2021 we may issue up to approximately \$29.6 million of common stock, which is currently effective and under which we commenced selling shares in November 2019, and which may remain available to us in the future (subject to any lock-up agreement we enter into in connection with this offering). We have and in the future may issue securities convertible into our common stock. Any of these events may dilute stockholders' ownership interests in our company and have an adverse impact on the price of our common stock.

In addition, sales of a substantial amount of our common stock in the public market, or the perception that these sales may occur, could reduce the market price of our common stock. This could also impair our ability to raise additional capital through the sale of our securities.

Any actual or anticipated sales of shares by our stockholders may cause the trading price of our common stock to decline. The sale of a substantial number of shares of our common stock by our stockholders, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

### **Risks Related to Our Financial Condition and Operations**

***We have a history of losses and may incur additional losses in the future***

On a cumulative basis we have sustained substantial losses and negative cash flows from operations since our inception. As of January 31, 2021, our accumulated deficit was approximately \$194,044,000. As of January 31, 2021, we had approximately \$13,983,000 in cash, cash equivalents and short-term investments, and working capital of

approximately \$13,039,000. In fiscal year ended October 31, 2020, we incurred losses of approximately \$10,092,000 and we experienced negative cash flows from operations of approximately \$6,176,000. We expect to continue incurring material research and development and general and administrative expenses in connection with our operations. As a result, we anticipate that we will incur losses in the future.

***We will need additional funding in the future which may not be available on acceptable terms, or at all, and, if available, may result in dilution to our stockholders.***

Based on currently available information as of March 19, 2021, we believe that our existing cash, cash equivalents, short-term investments and expected cash flows will be sufficient to fund our activities for the next 12 months. However, our projections of future cash needs and cash flows may differ from actual results. If current cash on hand, cash equivalents, short term investments and cash that may be generated from our business operations are insufficient to continue to operate our business, or if we elect to invest in or acquire a company or companies that are synergistic with or complementary to our technologies, we may be required to obtain more working capital. We may seek to obtain working capital through sales of our equity securities or through bank credit facilities or public or private debt from various financial institutions where possible. We cannot be certain that additional funding will be available on acceptable terms, or at all. If we do identify sources for additional funding, the sale of additional equity securities or convertible debt could result in dilution to our stockholders. Additionally, the sale of equity securities or issuance of debt securities may be subject to certain security holder approvals or may result in the downward adjustment of the exercise or conversion price of our outstanding securities. We can give no assurance that we will generate sufficient cash flows in the future to satisfy our liquidity requirements or sustain future operations, or that other sources of funding, such as sales of equity or debt, would be available or would be approved by our security holders, if needed, on favorable terms or at all. If we fail to obtain additional working capital as and when needed, such failure could have a material adverse impact on our business, results of operations and financial condition. Furthermore, such lack of funds may inhibit our ability to respond to competitive pressures or unanticipated capital needs, or may force us to reduce operating expenses, which would significantly harm the business and development of operations.

***We may have difficulty in raising capital and may consume resources faster than expected.***

We currently do not generate any revenue from our therapeutics or vaccines nor do we generate any other recurring revenues and as of January 31, 2021, the Company had approximately \$14.0 million in cash, cash equivalents and short-term investments. Therefore, we have a limited source of cash to meet our future capital requirements, which may include the expensive process of obtaining FDA approvals for our CAR-T ovarian cancer therapeutic, our breast and ovarian cancer vaccines and our COVID-19 therapy. We do not expect to generate significant revenues for the foreseeable future, and we may not be able to raise funds in the future, which would leave us without resources to continue our operations and force us to resort to raising additional capital in the form of equity or debt financings, which may not be available to us. We may have difficulty raising needed capital in the near or longer term as a result of, among other factors, the very early stage of our therapeutics and vaccine businesses and our lack of revenues as well as the inherent business risks associated with an early stage, biotechnology company and present and future market conditions. Also, we may consume available resources more rapidly than currently anticipated, resulting in the need for additional funding sooner than anticipated. Our inability to raise funds could lead to decreases in the price of our common stock and the failure of our therapeutics or vaccine businesses which would have a material adverse effect on the Company.

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## **Risks Related to our Business Activities**

***Our therapeutic and vaccine programs are pre-revenue, and subject to the risks of an early stage biotechnology company.***

Since the Company's primary focus for the foreseeable future will likely be our therapeutics and vaccine businesses, shareholders should understand that we are primarily an early stage biotechnology company with no history of revenue-generating operations, and our only assets consist of our proprietary and licensed technologies and the know-how of our officers and employees. Therefore we are subject to all the risks and uncertainties inherent in a new business, in particular new businesses engaged in CAR-T cancer therapeutics, cancer vaccines and anti-viral therapeutics. Our CAR-T ovarian cancer therapeutic, our breast and ovarian cancer vaccines and our COVID-19 treatment are in their early stages of development, and we still must establish and implement many important functions necessary to commercialize the technologies.

Accordingly, you should consider the Company's prospects in light of the costs, uncertainties, delays and difficulties frequently encountered by companies in their pre-revenue generating stages, particularly those in the biotechnology field. Shareholders should carefully consider the risks and uncertainties that a business with no operating history will face. In particular, shareholders should consider that there is a significant risk that we will not be able to:

- complete studies that successfully identify one or more clinical candidates to treat COVID-19;
- successfully complete animal studies necessary to submit an IND application to the FDA for our COVID-19 treatment;
- obtain FDA approval to commence human clinical trials of our CAR-T ovarian cancer therapeutic;
- successfully enroll sufficient numbers of qualified patients to participate in our clinical trials;
- obtain sufficient quantity and quality of materials manufactured for use in our clinical trials;
- successfully meet the primary endpoints in our clinical trials;
- implement or execute our current business plan, or that our current business plan is sound;
- raise sufficient funds in the capital markets or otherwise to fully effectuate our business plan;
- maintain our management team, including the members of our scientific advisory board;
- determine that the processes and technologies that we have developed or will develop are commercially viable; and/or
- attract, enter into or maintain contracts with potential commercial partners such as licensors of technology and suppliers or licensees of our technologies.

Any of the foregoing risks may adversely affect the Company and result in the failure of our business. In addition, we expect to encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. Over the next several quarters, we will need to transition from a company with a research and development focus to a company capable of supporting clinical trials and commercial activities. We may not be able to reach such achievements, which would have a material adverse effect on our Company.

***We are dependent on third parties to conduct our pre-clinical and clinical trials.***

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, and strategic partners such as Moffitt for our CAR-T therapy, Cleveland Clinic for our breast and ovarian cancer vaccines and OntoChem, as well as other European partners, for our COVID-19 therapy to conduct our preclinical and clinical trials under agreements with us. Negotiations of budgets and contracts with study sites may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with current good clinical practices, or cGCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these cGCPs through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of these third parties fail to comply with applicable cGCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities could require us to perform additional clinical trials before approving our marketing applications. It is possible that, upon inspection, such regulatory authorities could determine that any of our clinical trials fail to comply with the cGCP regulations. In addition, our clinical trials must be conducted with biologic product produced under current good manufacturing practices, or cGMPs, and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

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Any third parties conducting our clinical trials are not and will not be our employees and, except for remedies available to us under our agreements with these third parties, we cannot control whether they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines.

***Our business activities are expected to be adversely affected by the global COVID-19 pandemic.***

COVID-19 has spread globally and the World Health Organization (WHO) has declared it a pandemic. While still evolving, the COVID-19 pandemic has caused significant worldwide economic and financial turmoil, and has fueled concerns that it will lead to a global recession. On March 13, 2020, the United States declared a national emergency with respect to COVID-19 and the majority of states and U.S. territories, including the State of California, have since issued orders requiring the closure of non-essential businesses and/or requiring residents to stay at home. As the pandemic has evolved since March 2020, recently some restrictions have eased, and the Company is continuing to follow the recommendations of local health authorities to minimize exposure risk for its team members and visitors, including requiring its employees to work from home. The continued and prolonged implementation of restrictions by federal, state, local and foreign authorities to slow the spread of COVID-19 have disrupted and, we expect, will continue to disrupt, our business and operations.

Specifically, the pandemic has caused periodic shutdowns of the laboratories and other service providers that we rely on to develop our programs, and those laboratories and service providers that have been operating or that have begun operating recently have been doing so with limited capacity due to social distancing requirements. As a result, our progress has been slowed and there is no assurance that we will be able to meet our previously announced timelines regarding the development of our programs.

The extent to which the COVID-19 pandemic impacts our business, operations and financial results will depend on numerous evolving factors that we may not be able to accurately predict, including: the duration and scope of the pandemic; governmental, business and individuals' actions that have been and continue to be taken in response to the pandemic; the impact of the pandemic on economic activity and actions taken in response; our ability to continue daily operations, including as a result of travel restrictions and people working from home; and any closures of our and our business partners' offices and facilities.

While the Company is currently implementing solutions designed to reduce the potential impact of COVID-19, there can be no assurance that our efforts will adequately mitigate the risks of business disruptions and interruptions. Further, events such as natural disasters and public health emergencies divert our attention away from normal operations and limited resources. Our inability to timely resume normal operations following the pandemic disruption could adversely affect our business, financial condition or results of operations in a material manner.

Any of these events could materially adversely affect our business, financial condition, results of operations and/or stock price.

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**USE OF PROCEEDS**

We estimate that the net proceeds from the offering will be approximately \$ \_\_\_\_\_ million (or approximately \$ \_\_\_\_\_ million if the underwriter exercises in full its option to purchase up to \_\_\_\_\_ additional shares, in either case, assuming no exercise of the Underwriter Warrants), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from the offering for general corporate purposes, which includes, without limitation, ongoing research and pre-clinical studies, clinical trials, the development of new biological and pharmaceutical technologies, investing in or acquiring companies that are synergistic with or complementary to our technologies, licensing activities related to our current and future product candidates, the development of emerging technologies, investing in or acquiring companies that are developing emerging technologies, licensing activities, or the acquisition of other businesses and working capital. The amounts and timing of these expenditures will depend on numerous factors, including the development of our current business initiatives. We have no specific acquisition contemplated at this time. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds from this offering. The amounts and timing of our actual expenditures will depend on numerous factors, including factors described under "Risk Factors" in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein.

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**DILUTION**

If you purchase shares of our common stock in this offering, your interest will be immediately diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of January 31, 2021 was approximately \$13.0 million, or approximately \$0.50 per share of common stock. Since January 31, 2021, we have sold 905,863 shares of our common stock under an at-the-market equity offering for aggregate gross proceeds of approximately \$5.0 million (the "ATM Sales"). Our pro forma net tangible book value as of January 31, 2021 after giving effect to the ATM Sales was approximately \$18.1 million, or approximately \$0.67 per share of common stock. "Net tangible book value" is total assets minus the sum of liabilities and intangible assets. "Net tangible book value per share" is net tangible book value divided by the total number of shares of common stock outstanding.

After giving effect to the sale by us of \_\_\_\_\_ shares of common stock in this offering, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of January 31, 2021, would have been approximately \$ \_\_\_\_\_ million, or approximately \$ \_\_\_\_\_ per share of common stock. This amount represents an immediate increase in pro forma as adjusted net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and an immediate dilution in net tangible book value of \$ \_\_\_\_\_ per share to purchasers of our common stock in this offering.

The following table illustrates this dilution:

Public offering price per share of common stock		\$
Historical net tangible book value per share as of January 31, 2021	\$	0.50
Pro forma net tangible book value per share after giving effect to the ATM Sales		0.67
Increase in pro forma as adjusted net tangible book value per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to investors in this offering		\$



If the underwriter exercises its option to purchase up to \_\_\_\_\_ additional shares in full, the pro forma as adjusted net tangible book value will increase to \$ \_\_\_\_\_ per share, representing an immediate increase in pro forma as adjusted net tangible book value of \$ \_\_\_\_\_ per share of our common stock to existing stockholders and an immediate dilution of \$ \_\_\_\_\_ per share to purchasers of our common stock in this offering.

The above discussion and table are based on 26,179,122 shares of our common stock outstanding on January 31, 2021 and excludes, as of such date, the following:

- 1,901,134 shares of common stock issuable upon the exercise of outstanding vested and unvested stock options under our 2010 Share Incentive Plan, and 5,060,000 shares of common stock issuable upon the exercise of outstanding vested and unvested stock options under our 2018 Share Incentive Plan and 1,698,000 shares of common stock issuable upon the exercise of outstanding stock options granted outside of a share incentive plan.
- 500,000 shares of common stock issuable upon the exercise of outstanding warrants, having an exercise price of \$5.03 per share and 60,000 shares of common stock issuable upon the exercise of outstanding vested and unvested warrants, having an exercise price of \$2.06.

As noted above, the foregoing table does not give effect to the exercise of any outstanding options or warrants. The foregoing table also does not give effect to the exercise of the Underwriter Warrants. To the extent options are exercised or restricted shares vest, there may be further dilution to new investors.

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## DESCRIPTION OF SECURITIES WE ARE OFFERING

### **Common Stock**

We are offering shares of our common stock in this offering. As of March 19, 2021, there were 27,131,485 shares of common stock issued and outstanding, held of record by approximately 325 stockholders. See “Description of Securities we may Offer” in our prospectus for more information regarding our shares of common stock.

### **Underwriter Warrants**

We are also registering hereunder the Underwriter Warrant and the shares of common stock issuable upon exercise thereof which we have agreed to grant to H.C. Wainwright & Co., LLC, or its designees, as partial consideration for the underwriting services. The Underwriter Warrants are exercisable for a number of our shares equal to 7.0% of the aggregate number of shares sold to the investors in this offering. The Underwriter Warrants will have an exercise price of \$ \_\_\_\_\_ (125% of the public offering price per share), are immediately exercisable and will terminate on five years after the date of commencement of sales in this offering. The Underwriter Warrants are exercisable on a cashless basis if there is not an effective registration statement covering the Underwriter Warrants and they contain customary adjustment for stock splits and the like.

The following summary of certain terms and provisions of the Underwriter Warrants is not complete and is subject to, and qualified in its entirety by, the provisions of the Underwriter Warrants, the form of which will be filed with the SEC as an exhibit to a Current Report on Form 8-K in connection with this offering and incorporated by reference into the registration statement of which this prospectus supplement forms a part. See also “Underwriting” on page S-10 of this prospectus for more information regarding the Underwriter Warrants.

### ***Exercise Price***

The exercise price and number of shares issuable upon exercise is subject to appropriate adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our shares and the exercise price.

### ***Exercisability***

The Underwriter Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the underwriter warrant to the extent that the holder would own more than 4.99% (or, upon election by a holder prior to the issuance of any warrants, 9.99%) of the outstanding shares immediately after exercise, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase the amount of beneficial ownership of outstanding shares after exercising the holder’s Underwriter Warrants up to 9.99% of the number of our shares outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Underwriter Warrants.

### ***Cashless Exercise***

If, at the time a holder exercises its Underwriter Warrants, a registration statement registering the issuance of the shares underlying the Underwriter Warrants under the Securities Act is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price and subject to the nominal value of the shares being paid up as described below, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares determined according to a formula set forth in the Underwriter Warrants.

### ***Fractional Shares***

No underwriter warrant for fractional shares will be issued, rather Underwriter Warrants will be issued only for whole shares. No fractional share will be issued upon the exercise of the Underwriter Warrants. Rather, the number of shares to be issued will be rounded down to the nearest whole number.

### ***Transferability***

Subject to applicable laws, an underwriter warrant may be transferred at the option of the holder upon surrender of the underwriter warrant to us together with the appropriate instruments of transfer.

### ***Trading Market***

There is no trading market available for the Underwriter Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list the Underwriter Warrants on any securities exchange or nationally recognized trading market. Without a trading market, the liquidity of the Underwriter Warrants will be extremely limited. The shares issuable upon exercise of the Underwriter Warrants are currently traded on the Nasdaq Capital Market.

### ***Right as a Shareholder***

Except as otherwise provided in the Underwriter Warrants or by virtue of such holder’s ownership of shares, the holders of the Underwriter Warrants do not have the rights or privileges of holders of our shares, including any voting rights, until they exercise their Underwriter Warrants.

### ***Fundamental Transaction***

In the event of a fundamental transaction, as described in the Underwriter Warrants and generally including any reorganization, recapitalization or reclassification of our shares,



the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding shares, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding shares, the holders of the Underwriter Warrants will be entitled to receive upon exercise of the Underwriter Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Underwriter Warrants immediately prior to such fundamental transaction.

## UNDERWRITING

Pursuant to the underwriting agreement with H.C. Wainwright & Co., LLC, or the underwriter and the sole book-running manager of this offering, we have agreed to issued and sell, and the underwriter has agreed to purchase, the number of shares of common stock listed opposite its name below, less the underwriting discounts and commissions, on the closing date, subject to the terms and conditions contained in the underwriting agreement. The underwriting agreement provides that the obligations of the underwriter are subject to certain customary conditions precedent, representations and warranties contained therein.

Underwriter	Number of Shares
H.C. Wainwright & Co., LLC	
Total	

Pursuant to the underwriting agreement, the underwriter has agreed to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the underwriter's option to purchase additional shares of common stock described below. The underwriter has advised us that they do not intend to confirm sales to any account over which it exercises discretionary authority.

### Discount, Commissions and Expenses

The underwriter may offer the shares of common stock from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on the Nasdaq Capital Market, or to dealers in negotiated transactions or in a combination of such methods of sale, or otherwise, at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. The difference between the price at which the underwriter purchases shares from us and the price at which the underwriter resells such shares may be deemed underwriting compensation. If the underwriter effects such transactions by selling shares of common stock to or through dealers, such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

The underwriter is offering the shares, subject to prior sale, when, as and if issued to and accepted by it, subject to approval of legal matters and other conditions specified in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have granted to the underwriter an option to purchase up to an additional \_\_\_\_\_ shares of common stock (up to 15% of the common shares in this offering) at the public offering price, less the underwriting discounts and commissions. The option is exercisable for 30 days from the date of this prospectus supplement.

Any shares sold by the underwriter to securities dealers will be sold at the public offering price less a selling concession not in excess of \$ \_\_\_\_\_ per share.

The following table shows the public offering price, underwriting discounts and commissions and proceeds, before expenses, to us.

	Total	
	Per Share	Without Option
Public offering price		With Option
Underwriting discounts and commissions		
Proceeds, before expenses and fees, to us		

We have agreed to pay the legal fees and expenses of the underwriter, in the sum of up to \$100,000 in connection with this offering, \$50,000 for nonaccountable expenses and clearing fees of \$15,950. We have also agreed to pay the underwriter a management fee equal to 1.0% of the aggregate gross proceeds in this offering. We estimate that the total expenses of the offering, excluding the underwriting discounts and commissions, will be approximately \$ \_\_\_\_\_ and are payable by us.

In addition, we have agreed to issue to the Underwriter Warrants to purchase up to \_\_\_\_\_ shares (representing 7.0% of the aggregate number of shares sold in this offering), at an exercise price of \$ \_\_\_\_\_ per share (representing 125% of the public offering price for a share to be sold in this offering). The Underwriter Warrants will be exercisable immediately and for five years from the date of commencement of sales in this offering. The issuance of the Underwriter Warrants and the shares issuable upon exercise of the Underwriter Warrants are registered on the registration statement of which this prospectus forms a part.

### Right of First Refusal

We have granted the underwriter a 6-month right of first refusal to act as sole book-running manager, sole underwriter, or sole placement agent if we or any of our subsidiaries raise funds by means of a public offering or a private placement or any other capital-raising financing of equity, equity-linked or debt securities using an underwriter or placement agent other than with respect to certain excluded transactions. If the underwriter or an affiliate of the underwriter accepts any such engagement, the agreement governing such engagement will contain, among other things, provisions for customary fees and terms for transactions of similar size and nature, including indemnification, which are appropriate to such a transaction.

### Tail

In the event that any investors that were contacted about this offering or were introduced to us in connection with this offering by the underwriter provide any capital to us in a public or private offering or capital-raising transaction within twelve months following the date of our engagement of the underwriter, we shall pay the underwriter the cash and warrant compensation provided above on the gross proceeds from such investors.

### Indemnification

We have agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act, or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

### Lock-Up Agreements

We have agreed to not sell any shares of our common stock or any securities convertible into or exercisable or exchangeable into share of common stock, subject to certain exceptions, for a period of 90 days after the closing of this offering unless we obtain prior written consent of the underwriter. This consent may be given at any time without public notice, and the underwriter may consent in its sole discretion. The exceptions to the restriction include, among other things, the issuance of any shares of our capital stock or securities convertible into shares of our capital stock that are issued (i) pursuant to a stock or option plan, (ii) pursuant to the exercise or exchange of or conversion of any securities exercisable or exchangeable for or convertible into shares of common stock issued and outstanding on the date of this prospectus supplement, (iii) as consideration in an acquisition, merger or similar strategic transaction approved by a majority of the disinterested directors, provided that such securities issued under, or (iv) are issued as “restricted securities” as defined in Rule 144 and carry no registration rights that require or permit the filing of any registration statement in connection therewith within 90 days following the closing of this offering, and provided that any such issuance shall only be to a person providing us business synergies and additional benefits in addition to the investment of funds, but shall not include a transaction in which we are issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

In addition, each of our directors and executive officers has entered into a lock-up agreement with the underwriter. Under the lock-up agreements, subject to certain limited circumstances, the directors and executive officers may not, directly or indirectly, sell, offer to sell, contract to sell, or grant any option for the sale (including any short sale), grant any security interest in, pledge, hypothecate, hedge, establish an open “put equivalent position” (within the meaning of Rule 16a-1(h) under the Exchange Act), or otherwise dispose of, or enter into any transaction which is designed to or could be expected to result in the disposition of, any shares of our common stock or securities convertible into or exchangeable for shares of our common stock, or publicly announce any intention to do any of the foregoing, unless such directors and executive officers obtain prior written consent of the underwriter for a period of 90 days from the date of this prospectus supplement. This consent may be given at any time without public notice, and the underwriter may consent in its sole discretion. Such lock-up restriction does not apply to any shares of common stock acquired in this offering by our directors and executive officers.

### **Price Stabilization, Short Positions and Penalty Bids**

In connection with this offering, the underwriter may engage in stabilizing transactions, syndicate covering transactions and penalty bids in connection with our common stock.

Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum.

Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.

Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions. These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriter makes any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriter also may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker’s bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

### **Electronic Distribution**

A prospectus supplement and the accompanying prospectus in electronic format may be made available on the websites maintained by the underwriter, if any, participating in this offering and the underwriter may distribute such prospectuses electronically. Other than the prospectus supplement and the accompanying prospectus in electronic format, the information on these websites is not part of this prospectus supplement and the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus form a part, has not been approved or endorsed by us or the underwriter, and should not be relied upon by investors.

### **Other Relationships**

From time to time, the underwriter and its affiliates have provided, and may provide in the future, various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which it has received and may continue to receive customary fees and commissions.

### **Transfer Agent**

The transfer agent for our common stock is American Stock Transfer & Trust Company, LLC, 6201 15th Avenue, Brooklyn, NY 11219.

### **Listing on the Nasdaq Capital Market**

Our common stock is listed on the Nasdaq Capital Market under the symbol “ANIX.”

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## **LEGAL MATTERS**

The validity of the common stock being offered hereby will be passed upon for us by Ellenoff Grossman & Schole LLP. Lowenstein Sandler LLP is acting as counsel for the underwriter in connection with certain legal matters related to this offering.

## **EXPERTS**

The financial statements of the Company for the years ended October 31, 2020 and 2019, consisting of our balance sheets as of October 31, 2020 and 2019, and the related statements of operations, shareholders’ equity, and cash flows for the years then ended, incorporated by reference in this prospectus supplement from the Company’s Annual Report on Form 10-K for the year ended October 31, 2020 have been audited by Haskell and White, LLP, independent registered public accounting firm, to the extent and for the periods set forth in their report, incorporated by reference herein, and are included in reliance upon such report given upon the authority of said firm as experts in auditing and accounting.

## **WHERE YOU CAN FIND ADDITIONAL INFORMATION**

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC using the SEC’s EDGAR system. The SEC maintains a web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of such site is <http://www.sec.gov>.

We have filed a registration statement with the SEC relating to the offering of the shares. The registration statement contains information which is not included in this prospectus supplement. You may inspect or copy the registration statement at the SEC's public reference facilities or its website.

You should rely only on the information contained in this prospectus supplement. We have not authorized any person to provide you with any information that is different.

#### INCORPORATION OF DOCUMENTS BY REFERENCE

We are "incorporating by reference" in this prospectus supplement certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus supplement. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus supplement will automatically update and supersede information contained in this prospectus supplement, including information in previously filed documents or reports that have been incorporated by reference in this prospectus supplement, to the extent the new information differs from or is inconsistent with the old information. We have filed the following documents with the SEC and they are incorporated herein by reference as of their respective dates of filing:

1. Our Annual Report on Form 10-K for the year ended October 31, 2020 as filed with the SEC on January 7, 2021;
2. Our Quarterly Report on Form 10-Q for the quarter ended January 31, 2021 as filed with the SEC on March 11, 2021;
3. Our Current Reports on Form 8-K as filed with the SEC on December 1, 2020 and January 28, 2021; and
4. The description of the Company's common stock contained in the Company's registration statement on Form 8-A, as filed with the Commission on July 9, 2015 under Section 12 of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All reports and other documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed in such forms that are related to such items unless such Form 8-K expressly provides to the contrary) we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of this offering, will also be incorporated by reference in this prospectus supplement and deemed to be part of this prospectus supplement from the date of the filing of such reports and documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus supplement shall be deemed modified, superseded or replaced for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement, or in any subsequently filed document that also is deemed to be incorporated by reference in this prospectus supplement, modifies, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus supplement. None of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K or any corresponding information, either furnished under Item 9.01 or included as an exhibit therein, that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus supplement, except as otherwise expressly set forth in the relevant document. Subject to the foregoing, all information appearing in this prospectus supplement is qualified in its entirety by the information appearing in the documents incorporated by reference.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporated by reference), by contacting us at Anixa Biosciences, Inc., 3150 Almaden Expressway, Suite 250, San Jose, CA 95118, or by telephone at (408) 708-9808. Information about us is also available at our website at [www.anixa.com](http://www.anixa.com). However, the information in our website is not a part of this prospectus supplement and is not incorporated by reference.

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#### Prospectus

#### ANIXA BIOSCIENCES, INC.

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\$100,000,000

COMMON STOCK  
PREFERRED STOCK  
PURCHASE CONTRACTS  
WARRANTS  
SUBSCRIPTION RIGHTS  
DEPOSITARY SHARES  
DEBT SECURITIES  
UNITS

We may offer and sell from time to time, in one or more series, any one of the following securities of our company, for total gross proceeds of up to \$100,000,000:

- common stock;
- preferred stock;
- purchase contracts;
- warrants to purchase our securities;
- subscription rights to purchase any of the foregoing securities;
- depositary shares;
- secured or unsecured debt securities consisting of notes, debentures or other evidences of indebtedness which may be senior debt securities, senior subordinated debt securities or subordinated debt securities, each of which may be convertible into equity securities; or
- units comprised of, or other combinations of, the foregoing securities.

We may offer and sell these securities separately or together, in one or more series or classes and in amounts, at prices and on terms described in one or more offerings. We may offer securities through underwriting syndicates managed or co-managed by one or more underwriters or dealers, through agents or directly to purchasers. The prospectus supplement for each offering of securities will describe in detail the plan of distribution for that offering. For general information about the distribution of securities offered, please see "Plan of Distribution" in this prospectus.

Each time our securities are offered, we will provide a prospectus supplement containing more specific information about the particular offering and attach it to this prospectus. The prospectus supplements may also add, update or change information contained in this prospectus.

**This prospectus may not be used to offer or sell securities without a prospectus supplement which includes a description of the method and terms of this offering.**

Our common stock is quoted on the Nasdaq Capital Market under the symbol "ANIX." The last reported sale price of our common stock on the NASDAQ Capital Market on June 10, 2019 was \$4.28 per share. The aggregate market value of our outstanding common stock held by non-affiliates is \$83,002,683 based on 20,096,743 shares of outstanding common stock, of which 17,474,249 shares are held by non-affiliates, and a per share price of \$4.75 which was the closing sale price of our common stock as quoted on the NASDAQ Capital Market on May 7, 2019.

If we decide to seek a listing of any preferred stock, purchase contracts, warrants, subscriptions rights, depository shares, debt securities or units offered by this prospectus, the related prospectus supplement will disclose the exchange or market on which the securities will be listed, if any, or where we have made an application for listing, if any.

**Investing in our securities involves certain risks. See “Risk Factors” beginning on page 3 and the risk factors in our most recent Annual Report on Form 10-K, which is incorporated by reference herein, as well as in any other recently filed quarterly or current reports and, if any, in the relevant prospectus supplement. We urge you to carefully read this prospectus and the accompanying prospectus supplement, together with the documents we incorporate by reference, describing the terms of these securities before investing.**

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

The date of this Prospectus is \_\_\_\_\_, 2019.

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may offer and sell, either individually or in combination, in one or more offerings, any of the securities described in this prospectus, for total gross proceeds of up to \$100,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this prospectus, we will provide a prospectus supplement to this prospectus that will contain more specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus.

We urge you to read carefully this prospectus, any applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described under the heading “Incorporation of Documents by Reference,” before investing in any of the securities being offered. You should rely only on the information contained in, or incorporated by reference into, this prospectus and any applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

The information appearing in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section entitled “Where You Can Find Additional Information.”

This prospectus contains, or incorporates by reference, trademarks, tradenames, service marks and service names of Anixa Biosciences, Inc. and its subsidiaries.

## CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement and the documents incorporated by reference herein may contain forward looking statements that involve risks and uncertainties. All statements other than statements of historical fact contained in this prospectus and any accompanying prospectus supplement and the documents incorporated by reference herein, including statements regarding future events, our future financial performance, business strategy, and plans and objectives of management for future operations, are forward-looking statements. We have attempted to identify forward-looking statements by terminology including “anticipates,” “believes,” “can,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “should,” or “will” or the negative of these terms or other comparable terminology. Although we do not make forward looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Risk Factors” or elsewhere in this prospectus and the documents incorporated by reference herein, which may cause our or our industry’s actual results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Moreover, we operate in a highly regulated, very competitive, and rapidly changing environment. New risks emerge from time to time and it is not possible for us to predict all risk factors, nor can we address the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short term and long term business operations, and financial needs. These forward-looking statements are subject to certain risks and uncertainties that could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this prospectus, and in particular, the risks discussed below and under the heading “Risk Factors” and those discussed in other documents we file with the SEC. The following discussion should be read in conjunction with the consolidated financial statements for the fiscal years ended October 31, 2018 and 2017 and notes incorporated by reference herein. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statement.

You should not place undue reliance on any forward-looking statement, each of which applies only as of the date of this prospectus. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus to conform our statements to actual results or changed expectations.

Any forward-looking statement you read in this prospectus, any prospectus supplement or any document incorporated by reference reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, operating results, growth strategy and liquidity. You should not place undue reliance on these forward-looking statements because such statements speak only as to the date when made. We assume no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future, except as otherwise required by applicable law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K filed with the SEC. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in our Company. You should carefully read the entire prospectus, including all documents incorporated by reference herein. In particular, attention should be directed to our “Risk Factors,” “Information With Respect to the Company,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and related notes thereto contained herein or otherwise incorporated by reference hereto, before making an investment decision.*

As used herein, and any amendment or supplement hereto, unless otherwise indicated, “we,” “us,” “our,” the “Company,” or “Anixa” means Anixa Biosciences, Inc. and its subsidiaries. Unless otherwise indicated, all references in this prospectus to “dollars” or “\$” refer to US dollars.

### Business Overview

Our primary operations involve research and development of cancer therapeutics and diagnostics. Our cancer therapeutics program consists of development of chimeric endocrine receptor T-cell (“CER-T”) technology, a novel form of CAR-T technology, initially focused on treating ovarian cancer. Our cancer diagnostics program consists of development of the artificial intelligence (AI) driven Cchek™ liquid biopsy platform for early cancer detection.

Our subsidiary, Certainty Therapeutics, Inc. (“Certainty”), is developing immuno-therapy drugs against cancer. Certainty holds an exclusive worldwide, royalty-bearing license to use certain intellectual property owned or controlled by The Wistar Institute (“Wistar”) relating to Wistar’s CER-T technology. We have initially focused on the development of a treatment for ovarian cancer, but we may also pursue applications of the technology for the development of treatments for additional solid tumors. The license agreement requires Certainty to make certain cash and equity payments to Wistar. With respect to Certainty’s equity obligations to Wistar, Certainty issued to Wistar shares of its common stock equal to five percent (5%) of the common stock of Certainty.

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Certainty, in collaboration with the H. Lee Moffitt Cancer Center and Research Institute, Inc. (“Moffitt”), is advancing toward human clinical testing its CER-T technology for treating ovarian cancer. Certainty is working with researchers at Moffitt to complete studies necessary to submit an Investigational New Drug (“IND”) application with the U.S. Food and Drug Administration (“FDA”). We anticipate filing the IND with the FDA in the fall of 2019, with human clinical trials commencing thereafter, by late 2019 or early 2020.

Our subsidiary, Anixa Diagnostics Corporation (“Anixa Diagnostics”), is developing Cchek™, an AI driven platform of non-invasive blood tests for the early detection of cancer which is based on the body’s immune response to the presence of a malignancy. We have demonstrated the efficacy of Cchek™ with 20 different types of cancer, including: breast, lung, colon, melanoma, ovarian, liver, thyroid, pancreatic, appendiceal, uterine, osteosarcoma, leiomyosarcoma, liposarcoma, vulvar, prostate, bladder, cervical, head and neck, gastric and testicular cancers. Breast, lung, colon and prostate cancers represent the four largest categories of cancer worldwide.

We are currently developing tests for the detection of multiple types of cancer and are working with our development and commercialization partner, ResearchDx, a CLIA-certified laboratory, to launch Cchek™ Prostate Cancer Confirmation as a Laboratory Developed Test by the end of the third quarter of 2019.

Over the next several quarters, we expect the development of Certainty’s CER-T technology and Cchek™ to be the primary focus of the Company. As part of our legacy operations, the Company remains engaged in limited patent licensing activities in the area of encrypted audio/video conference calling. We do not expect these activities to be a significant part of the Company’s ongoing operations nor do we expect these activities to require material financial resources or attention of senior management.

Over the past several quarters, our revenue was derived from technology licensing and the sale of patented technologies, including revenue from the settlement of litigation. In addition to Certainty and Anixa Diagnostics, the Company may make investments in and form new companies to develop additional emerging technologies.

### Corporate Information

Our principal executive offices are located at 3150 Almaden Expressway, Suite 250, San Jose, CA 95118, our telephone number is (408) 708-9808, and our Internet website address is <https://www.anixa.com/>. The information on our website is not a part of, or incorporated in, this prospectus supplement.

## RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risk factors we describe in any prospectus supplement and in any related free writing prospectus for a specific offering of securities, as well as those incorporated by reference into this prospectus or such prospectus supplement. You should also carefully consider other information contained and incorporated by reference in this prospectus and any applicable prospectus supplement, including our financial statements and the related notes thereto incorporated by reference in this prospectus. The risks and uncertainties described in the applicable prospectus supplement and our other filings with the SEC incorporated by reference herein are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also adversely affect us. If any of the described risks occur, our business, financial condition or results of operations could be materially harmed. In such case, the value of our securities could decline and you may lose all or part of your investment.

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## USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from these sales for general corporate purposes, which includes, without limitation, ongoing clinical work, the development of new cancer related technologies, investing in or acquiring companies that are synergistic with or complimentary to our technologies, licensing activities related to our current and future product candidates, the development of emerging technologies, investing in or acquiring companies that are developing emerging technologies, licensing activities, or the acquisition of other businesses and working capital. The amounts and timing of these expenditures will depend on numerous factors, including the development of our current business initiatives. We have no specific acquisition contemplated at this time.

## PLAN OF DISTRIBUTION

We may sell the securities from time to time to or through underwriters or dealers, through agents, or directly to one or more purchasers. A distribution of the securities offered by this prospectus may also be effected through the issuance of derivative securities, including without limitation, warrants, rights to purchase and subscriptions. In addition, the manner in which we may sell some or all of the securities covered by this prospectus includes, without limitation, through:

- a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction;
- purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account; or
- ordinary brokerage transactions and transactions in which a broker solicits purchasers.

A prospectus supplement or supplements with respect to each series of securities will describe the terms of the offering, including, to the extent applicable:

- the terms of the offering;
- the name or names of the underwriters or agents and the amounts of securities underwritten or purchased by each of them, if any;
- the public offering price or purchase price of the securities or other consideration therefor, and the proceeds to be received by us from the sale;
- any delayed delivery requirements;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

The offer and sale of the securities described in this prospectus by us, the underwriters or the third parties described above may be effected from time to time in one or more transactions, including privately negotiated transactions, either:

- at a fixed price or prices, which may be changed;
- in an "at the market" offering within the meaning of Rule 415(a)(4) of the Securities Act of 1933, as amended, or the Securities Act;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Only underwriters named in the prospectus supplement will be underwriters of the securities offered by the prospectus supplement.

### Underwriters and Agents; Direct Sales

If underwriters are used in a sale, they will acquire the offered securities for their own account and may resell the offered securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate.

Unless the prospectus supplement states otherwise, the obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than securities covered by any over-allotment option. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may change from time to time. 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 sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase 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. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

### Dealers

We may sell the offered securities to dealers as principals. The dealer may then resell such securities to the public either at varying prices to be determined by the dealer or at a fixed offering price agreed to with us at the time of resale.

### Institutional Purchasers

We may authorize agents, dealers or underwriters to solicit certain institutional investors to purchase offered securities on a delayed delivery basis pursuant to delayed delivery contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement or other offering materials, as the case may be, will provide the details of any such arrangement, including the offering price and commissions payable on the solicitations.

We will enter into such delayed contracts only with institutional purchasers that we approve. These institutions may include commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions.

### Indemnification; Other Relationships

We may provide agents, underwriters, dealers and remarketing firms with indemnification against certain civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents, underwriters, dealers and remarketing firms, and their affiliates, may engage in transactions with, or perform services for, us in the ordinary course of business. This includes commercial banking and investment banking

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### Market-Making; Stabilization and Other Transactions

There is currently no market for any of the offered securities, other than our common stock, which is quoted on the Nasdaq Capital Market. If the offered securities are traded after their initial issuance, they may trade at a discount from their initial offering price, depending upon prevailing interest rates, the market for similar securities and other factors. While it is possible that an underwriter could inform us that it intends to make a market in the offered securities, such underwriter would not be obligated to do so, and any such market-making could be discontinued at any time without notice. Therefore, no assurance can be given as to whether an active trading market will develop for the offered securities. We have no current plans for listing of the debt securities, preferred stock, warrants or subscription rights on any securities exchange or quotation system; any such listing with respect to any particular debt securities, preferred stock, warrants or subscription rights will be described in the applicable prospectus supplement or other offering materials, as the case may be.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended, or 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 price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or 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 stabilizing or 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.

Any underwriters or agents that are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in our common stock on the Nasdaq Capital Market in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of our common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

### Fees and Commissions

If 5% or more of the net proceeds of any offering of securities made under this prospectus will be received by a FINRA member participating in the offering or affiliates or associated persons of such FINRA member, the offering will be conducted in accordance with FINRA Rule 5121.

## DESCRIPTION OF SECURITIES WE MAY OFFER

### General

This prospectus describes the general terms of our capital stock. The following description is not complete and may not contain all the information you should consider before investing in our capital stock. For a more detailed description of these securities, you should read the applicable provisions of Delaware law and our certificate of incorporation, as amended, referred to herein as our certificate of incorporation, and our amended and restated bylaws, referred to herein as our bylaws. When we offer to sell a particular series of these securities, we will describe the specific terms of the series in a supplement to this prospectus. Accordingly, for a description of the terms of any series of securities, you must refer to both the prospectus supplement relating to that series and the description of the securities described in this prospectus. To the extent the information contained in the prospectus supplement differs from this summary description, you should rely on the information in the prospectus supplement.

The total number of shares of capital stock we are authorized to issue is 48,020,000 shares, of which (a) 48,000,000 shares are common stock and (b) 20,000 shares are preferred stock.

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We, directly or through agents, dealers or underwriters designated from time to time, may offer, issue and sell, together or separately, up to \$100,000,000 in the aggregate of:

- common stock;
- preferred stock;
- purchase contracts;
- warrants to purchase our securities;
- subscription rights to purchase our securities;
- depository shares;
- secured or unsecured debt securities consisting of notes, debentures or other evidences of indebtedness which may be senior debt securities, senior subordinated debt securities or subordinated debt securities, each of which may be convertible into equity securities; or
- units comprised of, or other combinations of, the foregoing securities.

We may issue the debt securities as exchangeable for or convertible into shares of common stock, preferred stock or other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing. The preferred stock may also be exchangeable for and/or convertible into shares of common stock, another series of preferred stock or other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing. When a particular series of securities is offered, a supplement to this prospectus will be delivered with this prospectus, which will set forth the terms of the offering and sale of the offered securities.

### Common Stock

As of June 10, 2019, there were 20,096,743 shares of common stock issued and outstanding, held of record by approximately 338 stockholders. Subject to preferential rights with respect to any outstanding preferred stock, all outstanding shares of common stock are of the same class and have equal rights and attributes.

#### *Dividend Rights*

Holders of the common stock may receive dividends when, as and if declared by our board of directors out of the assets legally available for that purpose and subject to the preferential dividend rights of any other classes or series of stock of our Company. We have never paid, and have no plans to pay, any dividends on our shares of common stock.

#### *Voting Rights*



Holders of the common stock are entitled to one vote per share in all matters as to which holders of common stock are entitled to vote. Holders of not less than a majority of the outstanding shares of common stock entitled to vote at any meeting of stockholders constitute a quorum unless otherwise required by law.

#### *Election of Directors*

Directors hold office until the next annual meeting of stockholders and are eligible for re-election at such meeting. Directors are elected by a plurality of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. There is no cumulative voting for directors.

#### *Liquidation*

In the event of any liquidation, dissolution or winding up of the Company, holders of the common stock have the right to receive ratably and equally all of the assets remaining after payment of liabilities and liquidation preferences of any preferred stock then outstanding.

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#### *Redemption*

The common stock is not redeemable or convertible and does not have any sinking fund provisions.

#### *Preemptive Rights*

Holders of the common stock do not have preemptive rights.

#### *Other Rights*

Our common stock is not liable to further calls or to assessment by the registrant and for liabilities of the registrant imposed on its stockholders under state statutes.

#### *Right to Amend Bylaws*

The board of directors has the power to adopt, amend or repeal the bylaws. Bylaws adopted by the board of directors may be repealed or changed, and new bylaws made, by the stockholders, and the stockholders may prescribe that any bylaw made by them shall not be altered, amended or repealed by the board of directors.

#### *Change in Control*

Provisions of Delaware law and our certificate of incorporation and bylaws could make the acquisition of our company by means of a tender offer, proxy contest or otherwise, and the removal of incumbent officers and directors, more difficult. These provisions include:

Section 203 of the DGCL, which prohibits a merger with a 15%-or-greater stockholder, such as a party that has completed a successful tender offer, until three years after that party became a 15%-or-greater stockholder;

The authorization in our certificate of incorporation of undesignated preferred stock, which could be issued without stockholder approval in a manner designed to prevent or discourage a takeover; and

Provisions in our bylaws regarding stockholders' rights to call a special meeting of stockholders limit such rights to stockholders holding together at least a sixty-six and two-thirds percent of the shares of the Company entitled to vote at the meeting, which could make it more difficult for stockholders to wage a proxy contest for control of our board of directors or to vote to repeal any of the anti-takeover provisions contained in our certificate of incorporation and bylaws.

Together, these provisions may make the removal of management more difficult and may discourage transactions that could otherwise involve payment of a premium over prevailing market prices for our common stock.

#### *Market, Symbol and Transfer Agent*

Our common stock is listed for trading on the Nasdaq Capital Market under the symbol "ANIX". The transfer agent and registrar for our common stock is American Stock Transfer and Trust Company.

### **Preferred Stock**

Our certificate of incorporation empowers our board of directors, without action by our shareholders, to issue up to 20,000 shares of blank check preferred stock from time to time in one or more series, which preferred stock may be offered by this prospectus and supplements thereto. As of June 10, 2019, 140 shares of Series A convertible preferred stock, the Series A preferred stock, were designated and 0 shares of Series A preferred stock was outstanding.

We will fix the rights, preferences, privileges and restrictions of the preferred stock of each series in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. This description will include any or all of the following, as required:

- the title and stated value;

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- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- any contractual limitations on our ability to declare, set aside or pay any dividends;

- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, after receipt of payment therefor, the shares will be fully paid and non-assessable.

The Delaware General Corporation Law provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights provided for in the applicable certificate of designation.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our Company or make removal of management more difficult. Additionally, the issuance of preferred stock could have the effect of decreasing the market price of our common stock.

#### *Series A Convertible Preferred Stock*

##### *Conversion*

The Series A preferred stock is convertible into shares of common stock at any time following issuance at the option of the holder (subject to certain limitations described below). Each share of Series A preferred stock is convertible into approximately 5,285.4 shares of common stock pursuant to the terms of the Certificate of Designations, Preferences and Rights of Series A Convertible Preferred Stock, or the Certificate of Designations. Such ratio is calculated by dividing the stated value of each share of Series A preferred stock (\$25,000) by \$4.73.

##### *Ranking; Dividends*

The Company may not, directly or indirectly, incur any indebtedness or create a new class of equity that is expressly senior in right of payment to the Series A preferred stock without prior written consent of at least two-thirds of the outstanding Series A preferred stock holders. The Series A preferred stock holders are not entitled to receive cash dividends. In the event that the Company declares a stock dividend or otherwise makes a distribution to the common stock holders, the terms of the Series A preferred stock will be adjusted proportionately so that the holder after such dividend or distribution will be entitled to receive the aggregate number and kind of shares, evidences, rights, options, warrants or securities which, the holder would have owned if the Series A preferred stock had been converted immediately prior to the time of the distribution.

##### *Subsequent Equity Sales*

In the event that the Company issues additional shares of common stock and/or any rights, warrants, options or other securities or debt convertible, exercisable or exchangeable for shares of common stock or otherwise entitling any person to acquire shares of common stock in connection with a financing pursuant to which the effective net price to the Company for such securities, or the Effective Price, is less than 75% of the then conversion price, then subject to certain exceptions set forth in the Certificate of Designations, the conversion price will be reduced to the Effective Price.

##### *Maximum Conversion*

The Company will not effect any conversion of the Series A preferred stock if after giving effect to such conversion, the holder, together with any affiliate thereof, would beneficially own (as determined in accordance with Section 13(d) of the Exchange Act) on an as-converted basis with the common stock in excess of 4.99%, or the Maximum Percentage, of the number of shares of common stock outstanding immediately after giving effect to such conversion. A holder may increase the Maximum Percentage by providing written notice to the Company of its intention to exceed the Maximum Percentage at a time no earlier than 60 days after such notice.

##### *Board and Observer Rights*

For so long as any holder of Series A preferred stock beneficially owns at least 2,000,000 shares of common stock, such holder has the right to designate one representative, reasonably acceptable to the Company as a board observer, to the Company's board of directors. In lieu of the right to designate an observer to the board of directors, the holder may designate one representative, reasonably acceptable to the Company, to serve on the board of directors.

### *Redemption; Mandatory Conversion*

Upon at least 60 days prior written notice to the Company, on November 11, 2016, any holder of Series A preferred stock has a one-time right to require the Company to redeem all or some of its shares of Series A preferred stock for cash that is specifically generated from the sale of the Company's equity securities. The redemption price per share is equal to the "stated value."

After November 11, 2016, the Company has the right to convert any outstanding shares of Series A preferred stock into shares of common stock, subject to certain volume restrictions, if the average of the high and low trading price of the common stock for any 10 out of 20 consecutive trading days exceeds the then conversion price.

### *Liquidation Preference*

In the event of a liquidation, dissolution or winding up of the Company, then the holders of the Series A preferred stock are entitled to receive out of the assets of the Company legally available for distribution, prior to and in preference to distributions to the holders of common stock and either in preference to or pari passu with the holders of any other series of preferred stock that may be issued in the future, an amount equal to the "stated value" of the Series A preferred stock. The remaining assets of the Company will then be distributed to the holders of the Series A preferred stock and the holders of the common stock on an as converted basis.

### *Other Provisions*

This section is a summary and may not describe every aspect of the common stock and Series A preferred stock that may be important to you. We urge you to read applicable Delaware law, our certificate of incorporation, including the Certificate of Designations, and bylaws, because they, and not this description, define your rights as a holder of common stock.

### **Purchase Contracts**

We may issue purchase contracts, representing contracts obligating holders to purchase from us, and us to sell to the holders, a specific or varying number of common stock, preferred stock, warrants, depository shares, debt securities, warrants or any combination of the above, at a future date or dates. Alternatively, the purchase contracts may obligate us to purchase from holders, and obligate holders to sell to us, a specific or varying number of common stock, preferred stock, warrants, depository shares, debt securities, or any combination of the above. The price of the securities and other property subject to the purchase contracts may be fixed at the time the purchase contracts are issued or may be determined by reference to a specific formula set forth in the purchase contracts.

The purchase contracts may be issued separately or as a part of a unit that consists of (a) a purchase contract and (b) one or more of the other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing, which may secure the holders' obligations to purchase the securities under the purchase contract. The purchase contracts may require us to make periodic payments to the holders or require the holders to make periodic payments to us. These payments may be unsecured or prefunded and may be paid on a current or on a deferred basis. The purchase contracts may require holders to secure their obligations under the contracts in a manner specified in the applicable prospectus supplement.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the purchase contracts and purchase contract agreement, if any. The applicable prospectus supplement will describe the terms of any purchase contracts in respect of which this prospectus is being delivered, including, to the extent applicable, the following:

- whether the purchase contracts obligate the holder or us to purchase or sell, or both purchase and sell, the securities subject to purchase under the purchase contract, and the nature and amount of each of those securities, or the method of determining those amounts;

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- whether the purchase contracts are to be prepaid or not;
- whether the purchase contracts are to be settled by delivery, or by reference or linkage to the value, performance or level of the securities subject to purchase under the purchase contract;
- any acceleration, cancellation, termination or other provisions relating to the settlement of the purchase contracts; and
- whether the purchase contracts will be issued in fully registered or global form.

### **Warrants**

We may issue warrants to purchase our securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing and may be attached to, or separate from, such securities. To the extent warrants that we issue are to be publicly-traded, each series of such warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the warrant and warrant agreement, if any. The prospectus supplement relating to any warrants that we may offer will contain the specific terms of the warrants and a description of the material provisions of the applicable warrant agreement, if any. These terms may include the following:

- the title of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the securities or other rights for which the warrants are exercisable;
- the designation and terms of the other securities, if any, with which the warrants are to be issued and the number of warrants issued with each other security;
- the aggregate number of warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which the securities or other rights purchasable upon exercise of the warrants may be purchased;
- if applicable, the date on and after which the warrants and the securities or other rights purchasable upon exercise of the warrants will be separately transferable;

- a discussion of any material U.S. federal income tax considerations applicable to the exercise of the warrants;
- the date on which the right to exercise the warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of warrants that may be exercised at any time;

- information with respect to book-entry procedures, if any; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

*Exercise of Warrants.* Each warrant will entitle the holder of warrants to purchase the amount of securities or other rights, at the exercise price stated or determinable in the prospectus supplement for the warrants. Warrants may be exercised at any time up to the close of business on the expiration date shown in the applicable prospectus supplement, unless otherwise specified in such prospectus supplement. After the close of business on the expiration date, if applicable, unexercised warrants will become void. Warrants may be exercised in the manner described in the applicable prospectus supplement. When the warrant holder makes the payment and properly completes and signs the warrant certificate at the corporate trust office of the warrant agent, if any, or any other office indicated in the prospectus supplement, we will, as soon as possible, forward the securities or other rights that the warrant holder has purchased. If the warrant holder exercises less than all of the warrants represented by the warrant certificate, we will issue a new warrant certificate for the remaining warrants.

### **Subscription Rights**

We may issue rights to purchase our securities. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to holders of our capital stock a prospectus supplement will be distributed to such holders on the record date for receiving rights in the rights offering set by us.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the subscription rights, standby underwriting agreement or other agreements, if any. The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate amount of securities purchasable upon exercise of the rights;
- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase the principal amount of securities at the exercise price set forth in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

Holder may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent, if any, or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as described in the applicable prospectus supplement.

### **Depository Shares**

*General.* We may offer fractional shares of preferred stock, rather than full shares of preferred stock. If we decide to offer fractional shares of our preferred stock, we will issue receipts for depository shares. Each depository share will represent a fraction of a share of a particular series of our preferred stock, and the applicable prospectus supplement will indicate that fraction. The shares of preferred stock represented by depository shares will be deposited under a deposit agreement between us and a depository that is a bank or trust company that meets certain requirements and is selected by us. The depository will be specified in the applicable prospectus supplement. Each owner of a depository share will be entitled to all of the rights and preferences of the preferred stock represented by the depository share.

The depository shares will be evidenced by depository receipts issued pursuant to the deposit agreement. Depository receipts will be distributed to those persons purchasing the fractional shares of our preferred stock in accordance with the terms of the offering. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the deposit agreement, form of certificate of designation of underlying preferred stock, form of depository receipts and any other related agreements.

*Dividends and Other Distributions.* The depository will distribute all cash dividends or other cash distributions received by it in respect of the preferred stock to the record holders of depository shares relating to such preferred shares in proportion to the numbers of depository shares held on the relevant record date.

In the event of a distribution other than in cash, the depository will distribute securities or property received by it to the record holders of depository shares in proportion to the numbers of depository shares held on the relevant record date, unless the depository determines that it is not feasible to make such distribution. In that case, the depository may make the distribution by such method as it deems equitable and practicable. One such possible method is for the depository to sell the securities or property and then distribute the net proceeds from the sale as provided in the case of a cash distribution.

*Redemption of Depository Shares.* Whenever we redeem the preferred stock, the depository will redeem a number of depository shares representing the same number of shares of preferred stock so redeemed. If fewer than all of the depository shares are to be redeemed, the depository shares to be redeemed will be selected by lot, pro rata or by any other equitable method as the depository may determine.

*Voting of Underlying Shares.* Upon receipt of notice of any meeting at which the holders of our preferred stock of any series are entitled to vote, the depository will

mail the information contained in the notice of the meeting to the record holders of the depositary shares relating to that series of preferred stock. Each record holder of the depositary shares on the record date will be entitled to instruct the depositary as to the exercise of the voting rights represented by the number of shares of preferred stock underlying the holder's depositary shares. The depositary will endeavor, to the extent it is practical to do so, to vote the number of whole shares of preferred stock underlying such depositary shares in accordance with such instructions. We will agree to take all action that the depositary may deem reasonably necessary in order to enable the depositary to do so. To the extent the depositary does not receive specific instructions from the holders of depositary shares relating to such preferred shares, it will abstain from voting such shares of preferred stock.

*Withdrawal of Shares.* Upon surrender of depositary receipts representing any number of whole shares at the depositary's office, unless the related depositary shares previously have been called for redemption, the holder of the depositary shares evidenced by the depositary receipts will be entitled to delivery of the number of whole shares of the related series of preferred stock and all money and other property, if any, underlying such depositary shares. However, once such an exchange is made, the preferred stock cannot thereafter be re-deposited in exchange for depositary shares. Holders of depositary shares will be entitled to receive whole shares of the related series of preferred stock on the basis set forth in the applicable prospectus supplement. If the depositary receipts delivered by the holder evidence a number of depositary shares representing more than the number of whole shares of preferred stock of the related series to be withdrawn, the depositary will deliver to the holder at the same time a new depositary receipt evidencing the excess number of depositary shares.

*Amendment and Termination of Depositary Agreement.* The form of depositary receipt evidencing the depositary shares and any provision of the applicable depositary agreement may at any time be amended by agreement between us and the depositary. We may, with the consent of the depositary, amend the depositary agreement from time to time in any manner that we desire. However, if the amendment would materially and adversely alter the rights of the existing holders of depositary shares, the amendment would need to be approved by the holders of at least a majority of the depositary shares then outstanding.

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The depositary agreement may be terminated by us or the depositary if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution in respect of the shares of preferred stock of the applicable series in connection with our liquidation, dissolution or winding up and such distribution has been made to the holders of depositary receipts.

*Resignation and Removal of Depositary.* The depositary may resign at any time by delivering to us notice of its election to do so. We may remove a depositary at any time. Any resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of appointment.

*Charges of Depositary.* We will pay all transfer and other taxes and governmental charges arising solely from the existence of any depositary arrangements. We will pay all charges of each depositary in connection with the initial deposit of the preferred shares of any series, the initial issuance of the depositary shares, any redemption of such preferred shares and any withdrawals of such preferred shares by holders of depositary shares. Holders of depositary shares will be required to pay any other transfer taxes.

*Notices.* Each depositary will forward to the holders of the applicable depositary shares all notices, reports and communications from us which are delivered to such depositary and which we are required to furnish the holders of the preferred stock represented by such depositary shares.

*Miscellaneous.* The depositary agreement may contain provisions that limit our liability and the liability of the depositary to the holders of depositary shares. Both the depositary and we are also entitled to an indemnity from the holders of the depositary shares prior to bringing, or defending against, any legal proceeding. We or any depositary may rely upon written advice of counsel or accountants, or information provided by persons presenting preferred shares for deposit, holders of depositary shares or other persons believed by us to be competent and on documents believed by us or them to be genuine.

## **Debt Securities**

As used in this prospectus, the term "debt securities" means the debentures, notes, bonds and other evidences of indebtedness that we may issue from time to time. The debt securities will either be senior debt securities, senior subordinated debt or subordinated debt securities. We may also issue convertible debt securities. Debt securities may be issued under an indenture (which we refer to herein as an Indenture), which are contracts entered into between us and a trustee to be named therein. The Indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part. We may issue debt securities and incur additional indebtedness other than through the offering of debt securities pursuant to this prospectus. It is likely that convertible debt securities will not be issued under an Indenture.

The debt securities may be fully and unconditionally guaranteed on a secured or unsecured senior or subordinated basis by one or more guarantors, if any. The obligations of any guarantor under its guarantee will be limited as necessary to prevent that guarantee from constituting a fraudulent conveyance under applicable law. In the event that any series of debt securities will be subordinated to other indebtedness that we have outstanding or may incur, the terms of the subordination will be set forth in the prospectus supplement relating to the subordinated debt securities.

We may issue debt securities from time to time in one or more series, in each case with the same or various maturities, at par or at a discount. Unless indicated in a prospectus supplement, we may issue additional debt securities of a particular series without the consent of the holders of the debt securities of such series outstanding at the time of the issuance. Any such additional debt securities, together with all other outstanding debt securities of that series, will constitute a single series of debt securities under the applicable Indenture and will be equal in ranking.

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Should an Indenture relate to unsecured indebtedness, in the event of a bankruptcy or other liquidation event involving a distribution of assets to satisfy our outstanding indebtedness or an event of default under a loan agreement relating to secured indebtedness of our company or its subsidiaries, the holders of such secured indebtedness, if any, would be entitled to receive payment of principal and interest prior to payments on the unsecured indebtedness issued under an Indenture.

Each prospectus supplement will describe the terms relating to the specific series of debt securities. These terms will include some or all of the following:

- the title of debt securities and whether the debt securities are senior or subordinated;
- any limit on the aggregate principal amount of debt securities of such series;
- the percentage of the principal amount at which the debt securities of any series will be issued;
- the ability to issue additional debt securities of the same series;
- the purchase price for the debt securities and the denominations of the debt securities;
- the specific designation of the series of debt securities being offered;

- the maturity date or dates of the debt securities and the date or dates upon which the debt securities are payable and the rate or rates at which the debt securities of the series shall bear interest, if any, which may be fixed or variable, or the method by which such rate shall be determined;
- the basis for calculating interest;
- the date or dates from which any interest will accrue or the method by which such date or dates will be determined;
- the duration of any deferral period, including the period during which interest payment periods may be extended;
- whether the amount of payments of principal of (and premium, if any) or interest on the debt securities may be determined with reference to any index, formula or other method, such as one or more currencies, commodities, equity indices or other indices, and the manner of determining the amount of such payments;
- the dates on which we will pay interest on the debt securities and the regular record date for determining who is entitled to the interest payable on any interest payment date;
- the place or places where the principal of (and premium, if any) and interest on the debt securities will be payable, where any securities may be surrendered for registration of transfer, exchange or conversion, as applicable, and notices and demands may be delivered to or upon us pursuant to the applicable Indenture;
- the rate or rates of amortization of the debt securities;
- any terms for the attachment to the debt securities of warrants, options or other rights to purchase or sell our securities;

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- if the debt securities will be secured by any collateral and, if so, a general description of the collateral and the terms and provisions of such collateral security, pledge or other agreements;
- if we possess the option to do so, the periods within which and the prices at which we may redeem the debt securities, in whole or in part, pursuant to optional redemption provisions, and the other terms and conditions of any such provisions;
- our obligation or discretion, if any, to redeem, repay or purchase debt securities by making periodic payments to a sinking fund or through an analogous provision or at the option of holders of the debt securities, and the period or periods within which and the price or prices at which we will redeem, repay or purchase the debt securities, in whole or in part, pursuant to such obligation, and the other terms and conditions of such obligation;
- the terms and conditions, if any, regarding the option or mandatory conversion or exchange of debt securities;
- the period or periods within which, the price or prices at which and the terms and conditions upon which any debt securities of the series may be redeemed, in whole or in part at our option and, if other than by a board resolution, the manner in which any election by us to redeem the debt securities shall be evidenced;
- any restriction or condition on the transferability of the debt securities of a particular series;
- the portion, or methods of determining the portion, of the principal amount of the debt securities which we must pay upon the acceleration of the maturity of the debt securities in connection with any event of default;
- the currency or currencies in which the debt securities will be denominated and in which principal, any premium and any interest will or may be payable or a description of any units based on or relating to a currency or currencies in which the debt securities will be denominated;
- provisions, if any, granting special rights to holders of the debt securities upon the occurrence of specified events;
- any deletions from, modifications of or additions to the events of default or our covenants with respect to the applicable series of debt securities, and whether or not such events of default or covenants are consistent with those contained in the applicable Indenture;
- any limitation on our ability to incur debt, redeem stock, sell our assets or other restrictions;
- the application, if any, of the terms of the applicable Indenture relating to defeasance and covenant defeasance (which terms are described below) to the debt securities;
- what subordination provisions will apply to the debt securities;
- the terms, if any, upon which the holders may convert or exchange the debt securities into or for our securities or property;
- whether we are issuing the debt securities in whole or in part in global form;
- any change in the right of the trustee or the requisite holders of debt securities to declare the principal amount thereof due and payable because of an event of default;
- the depositary for global or certificated debt securities, if any;

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- any material federal income tax consequences applicable to the debt securities, including any debt securities denominated and made payable, as described in the prospectus supplements, in foreign currencies, or units based on or related to foreign currencies;
- any right we may have to satisfy, discharge and defease our obligations under the debt securities, or terminate or eliminate restrictive covenants or events of default in the Indentures, by depositing money or U.S. government obligations with the trustee of the Indentures;
- the names of any trustees, depositories, authenticating or paying agents, transfer agents or registrars or other agents with respect to the debt securities;
- to whom any interest on any debt security shall be payable, if other than the person in whose name the security is registered, on the record date for such interest, the extent to which, or the manner in which, any interest payable on a temporary global debt security will be paid;

- if the principal of or any premium or interest on any debt securities is to be payable in one or more currencies or currency units other than as stated, the currency, currencies or currency units in which it shall be paid and the periods within and terms and conditions upon which such election is to be made and the amounts payable (or the manner in which such amount shall be determined);
- the portion of the principal amount of any debt securities which shall be payable upon declaration of acceleration of the maturity of the debt securities pursuant to the applicable Indenture;
- if the principal amount payable at the stated maturity of any debt security of the series will not be determinable as of any one or more dates prior to the stated maturity, the amount which shall be deemed to be the principal amount of such debt securities as of any such date for any purpose, including the principal amount thereof which shall be due and payable upon any maturity other than the stated maturity or which shall be deemed to be outstanding as of any date prior to the stated maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined); and
- any other specific terms of the debt securities, including any modifications to the events of default under the debt securities and any other terms which may be required by or advisable under applicable laws or regulations.

Unless otherwise specified in the applicable prospectus supplement, we do not anticipate the debt securities will be listed on any securities exchange. Holders of the debt securities may present registered debt securities for exchange or transfer in the manner described in the applicable prospectus supplement. Except as limited by the applicable Indenture, we will provide these services without charge, other than any tax or other governmental charge payable in connection with the exchange or transfer.

Debt securities may bear interest at a fixed rate or a variable rate as specified in the prospectus supplement. In addition, if specified in the prospectus supplement, we may sell debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate, or at a discount below their stated principal amount. We will describe in the applicable prospectus supplement any special federal income tax considerations applicable to these discounted debt securities.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by referring to one or more currency exchange rates, commodity prices, equity indices or other factors. Holders of such debt securities may receive a principal amount on any principal payment date, or interest payments on any interest payment date, that are greater or less than the amount of principal or interest otherwise payable on such dates, depending upon the value on such dates of applicable currency, commodity, equity index or other factors. The applicable prospectus supplement will contain information as to how we will determine the amount of principal or interest payable on any date, as well as the currencies, commodities, equity indices or other factors to which the amount payable on that date relates and certain additional tax considerations.

#### **Units**

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we may issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent, if any, may be a bank or trust company that we select. We will indicate the name and address of the unit agent, if any, in the applicable prospectus supplement relating to a particular series of units. Specific unit agreements, if any, will contain additional important terms and provisions. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report that we file with the SEC, the form of unit and the form of each unit agreement, if any, 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 United States federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

#### **FORMS OF SECURITIES**

Each security may be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, warrants or units represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

#### ***Registered Global Securities***

We may issue the securities in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

The specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in



the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depository, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depository, or its nominee, is the registered owner of a registered global security, that depository or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, warrant agreement or unit agreement.

Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, warrant agreement or unit agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depository for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, warrant agreement or unit agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, warrant agreement or unit agreement, the depository for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Payments to holders with respect to securities represented by a registered global security registered in the name of a depository or its nominee will be made to the depository or its nominee, as the case may be, as the registered owner of the registered global security. None of the Company, the trustees, the warrant agents, the unit agents or any other agent of the Company, agent of the trustees, the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depository for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other payment or distribution to holders of that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depository. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers or registered in "street name," and will be the responsibility of those participants.

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If the depository for any of these securities represented by a registered global security is at any time unwilling or unable to continue as depository or ceases to be a clearing agency registered under the Exchange Act and a successor depository registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depository. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depository gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depository's instructions will be based upon directions received by the depository from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depository.

#### **LEGAL MATTERS**

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus will be passed upon for us by Ellenoff Grossman & Schole LLP, New York, New York. If legal matters in connection with offerings made by this prospectus are passed on by counsel for the underwriters, dealers or agents, if any, that counsel will be named in the applicable prospectus supplement.

#### **EXPERTS**

The consolidated financial statements of Anixa Biosciences, Inc. and subsidiaries as of and for the years ended October 31, 2018 and 2017 have been incorporated by reference in the registration statement in reliance upon the report of Haskell & White LLP, independent registered public accounting firm, and upon the authority of said firm as experts in accounting and auditing.

#### **WHERE YOU CAN FIND ADDITIONAL INFORMATION**

We file annual, quarter and periodic reports, proxy statements and other information with the Securities and Exchange Commission using the Commission's EDGAR system. The Commission maintains a web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. The address of such site is <http://www.sec.gov>.

#### **INCORPORATION OF DOCUMENTS BY REFERENCE**

We are "incorporating by reference" in this prospectus certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information. We have filed or may file the following documents with the SEC and they are incorporated herein by reference as of their respective dates of filing.

1. Our Annual Report on Form 10-K for the year ended October 31, 2018 filed with the SEC on January 11, 2019;
2. Our Quarterly Report on Form 10-Q for the quarter ended January 31, 2019 filed with the SEC on March 13, 2019;
3. Our Definitive Proxy Statement on Schedule 14A filed with the SEC on August 17, 2018;
4. Our Current Reports on Form 8-K filed with the SEC on January 25, 2019 and May 23, 2019; and
5. The description of our common stock contained in our Current Report on Form 8-K filed on March 31, 2014 and as it may further be amended from time to time.

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All documents that we filed with the SEC pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act subsequent to the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement that indicates that all securities offered under this prospectus have been sold, or that deregisters all securities then remaining unsold, will be deemed to be incorporated in this registration statement by reference and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus, or in any subsequently filed document that also is deemed to be incorporated by reference in this prospectus, modifies, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus. None of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K or any corresponding information, either furnished under Item 9.01 or included as an exhibit therein, that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus, except as otherwise expressly set forth in the relevant document. Subject to the foregoing, all information appearing in this prospectus is qualified in its entirety by the information appearing in the documents incorporated by reference.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporate by reference), by contacting Dr. Amit Kumar, c/o Anixa Biosciences, Inc., at 3150 Almaden Expressway, Suite 250, San Jose, CA 95118. Our telephone number is (408) 708-9808. Information about us is also available at our website at <https://www.anixa.com/>. However, the information in our website is not a part of this prospectus and is not incorporated by reference.



**Shares of Common Stock**  
**Underwriter Warrants to Purchase                      Shares of Common Stock**

**H.C. Wainwright & Co.**

\_\_\_\_\_, 2021

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