

PROSPECTUS SUPPLEMENT
(To prospectus dated October 22, 2021)**XENETIC BIOSCIENCES, INC.**
Up to \$4,000,000 of shares of Common Stock

Xenetic Biosciences, Inc. has entered into an At The Market Offering Agreement (the "Sales Agreement") with H.C. Wainwright & Co., LLC ("Wainwright"), as sales agent, relating to the offer and sale of up to \$4,000,000 of shares of our common stock, par value \$0.001 per share, offered by this prospectus supplement and the accompanying prospectus.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in transactions that are deemed to be "at-the-market" offerings as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), including sales made directly on or through the Nasdaq Capital Market, the trading market for our common stock, or any other trading market in the United States for our common stock, sales made to or through a market maker other than on an exchange or otherwise, directly to the sales agent as principal in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law. If we and Wainwright agree on any method of distribution other than sales of shares of our common stock into the Nasdaq Capital Market or another existing trading market in the United States at market prices, we will file a further prospectus supplement providing all information about such offering as required by Rule 424(b) under the Securities Act. Wainwright will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

We will pay Wainwright a commission equal to 3.0% of the gross sales price per share of common stock issued by us and sold through it as our sales agent under the Sales Agreement. In connection with the sale of the common stock on our behalf, Wainwright will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Wainwright will be deemed to be underwriting commissions or discounts.

Our common stock and common stock purchase warrants are listed on the Nasdaq Capital Market under the symbols "XBIO" and "XBIOW", respectively. The last reported sale price of our common stock on the Nasdaq Capital Market on November 15, 2021 was \$1.70 per share.

As of November 15, 2021, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$30.1 million based on approximately 13.4 million shares of outstanding common stock, of which approximately 13.2 million shares are held by non-affiliates, and the last reported sale price of our common stock of \$2.28 per share on September 22, 2021. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities in a primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75,000,000. We have sold \$6.0 million of securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar month period that ends on and includes the date of this prospectus supplement (excluding this offering).

Investing in our common stock involves risks. See "[Risk Factors](#)" beginning on page S-3.

Neither the Securities and Exchange Commission (the "SEC"), nor any state securities commission, or any other regulatory body has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co.

The date of this prospectus supplement is November 19, 2021.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 (File No. 333-260201) that we filed with the SEC utilizing a “shelf” registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined together with all documents incorporated by reference.

In this prospectus supplement, the terms “XBIO”, “Xenetic,” “we,” “us,” “our” and the “Company” refer to Xenetic Biosciences, Inc. unless otherwise stated or the context otherwise requires.

This prospectus supplement, and the information incorporated herein by reference, may add, update or change information in the accompanying prospectus and in any free writing prospectuses we may provide to you in connection with this offering. You should read both this prospectus supplement and the accompanying prospectus together with additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.” If there is any inconsistency between the information in this prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement.

You may rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus. Neither we nor the sales agent has authorized anyone to provide information different from that contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein. If anyone provides you with different or inconsistent information, you should not rely on it. The information in this prospectus supplement, the accompanying prospectus and in any free writing prospectuses we may provide to you in connection with this offering is accurate only as of their respective dates, regardless of time of delivery. Our business, financial condition, results of operations and prospects may have changed since those dates.

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

All references in this prospectus to our consolidated financial statements include, unless the context indicates otherwise, the related notes.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus and the information incorporated by reference herein include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus are the property of their respective owners.

The industry and market data and other statistical information contained in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference are based on management’s own estimates, independent publications, government publications, reports by market research firms or other published independent sources, and, in each case, are believed by management to be reasonable estimates. Although we believe these sources are reliable, we have not independently verified the information. None of the independent industry publications used in this prospectus supplement, the accompanying prospectus or the documents we incorporate by reference were prepared on our or our affiliates’ behalf and none of the sources cited by us consented to the inclusion of any data from its reports, nor have we sought their consent.

FORWARD-LOOKING STATEMENTS AND OTHER INFORMATION CONTAINED IN THIS PROSPECTUS SUPPLEMENT

This prospectus supplement, the accompanying prospectus and the other documents we have filed with the SEC that are incorporated by reference herein contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 27A of the Securities Act of 1933, as amended. All statements contained in this prospectus supplement and the accompanying prospectus other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, future revenues, projected costs, prospects and our objectives for future operations, are forward-looking statements. These forward-looking statements include, but are not limited to, the anticipated effects and duration of the novel coronavirus, or COVID-19 global pandemic and the responses thereto, including the pandemic’s impact on general economic and market conditions, as well as on our business, results of operations and financial condition; statements concerning our plans to develop our proposed drug candidates; our expectations regarding the nature, timing and extent of clinical trials; our expectations regarding the timing for proposed submissions of regulatory filings; the nature, timing and extent of collaboration arrangements; the expected results pursuant to collaboration arrangements including the receipts of future payments that may arise pursuant to collaboration arrangements; the outcome of our plans to obtain regulatory approval of our drug candidates; the outcome of our plans for the commercialization of our drug candidates; the development of the XCART™ Chimeric Antigen Receptor (“CAR”) T technology; our plans to apply the XCART technology to advance cell-based therapeutics by targeting the unique B cell receptor on the surface of an individual patient’s malignant tumor cells for the treatment of B-cell lymphomas; our beliefs regarding the expected results of the XCART technology, including its potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient- and tumor-specific CAR T cells; and our anticipation that our primary

focus will now be on advancing the XCART technology through regulatory approval and commercialization technology.

In some cases, these statements may be identified by terminology such as “may,” “will,” “would,” “could,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “seek,” “approximately,” “intend,” “predict,” “potential,” “projects,” or “continue,” or the negative of such terms and other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, we cannot guarantee future results, the levels of activity, performance or achievements. These statements involve known and unknown risks and uncertainties that may cause our or our industry’s results, levels of activity, performance or achievements to be materially different from those expressed or implied by forward-looking statements.

This prospectus supplement should be read together with our financial statements and related notes thereto incorporated by reference in this prospectus supplement. The forward-looking statements made herein are based on our current expectations, involve a number of risks and uncertainties and should not be considered as guarantees of future performance.

You should carefully consider these risks before you make an investment decision with respect to our securities, along with the following factors that could cause actual results to differ materially from our forward-looking statements:

- failure to realize the anticipated potential of the XCART or PolyXen technology;
- our ability to implement our business strategy;
- our need to raise additional working capital in the future for the purpose of further developing our XCART technology and to continue as a going concern;
- our ability to finance our business;
- our ability to successfully execute, manage and integrate key acquisitions and mergers;

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- product development and commercialization risks, including our ability to successfully develop the XCART technology;
- the impact of adverse safety outcomes and clinical trial results for CAR-T cell therapies;
- our ability to secure and maintain a manufacturer for the XCART technology;
- our ability to successfully commercialize our current and future drug candidates;
- our ability to achieve milestone and other payments associated with our current and future co-development collaborations and strategic arrangements;
- the impact of new technologies on our drug candidates and our competition;
- changes in laws or regulations of governmental agencies;
- interruptions or cancellation of existing contracts;
- impact of competitive products and pricing;
- product demand and market acceptance and risks;
- the presence of competitors with greater financial resources;
- continued availability of supplies or materials used in manufacturing at the current prices;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- our ability to attract and retain key personnel;
- adverse publicity related to our products or the Company itself;
- adverse claims relating to our intellectual property;
- the adoption of new, or changes in, accounting principles;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002;
- other new lines of business that we may enter in the future;
- general economic and business conditions, as well as inflationary trends;
- the impact of natural disasters or public health emergencies, such as the COVID-19 global pandemic (including any new variant strains of the underlying virus), on our financial condition and results of operations; and
- other risk factors as detailed from time to time in our reports filed with the SEC, including our annual report on Form 10-K, as amended, periodic quarterly reports on Form 10-Q, current reports on Form 8-K and other documents filed with the SEC.

These factors are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in the forward-looking statements in this prospectus supplement. Other unknown or unpredictable factors also could have material adverse effects on our future results, including, but not limited to, those discussed in the section titled “Risk Factors.” The forward-looking statements in this prospectus supplement are made only as of the date of this prospectus supplement, and we do not undertake any obligation to publicly update any forward-looking statements to reflect subsequent events or circumstances, except as required by applicable law. We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information and does not contain all the information that is important to you. You should carefully read this prospectus supplement and the accompanying prospectus, including the “Risk Factors” section and the consolidated financial statements and related notes included in this prospectus supplement or incorporated by reference into this prospectus supplement, accompanying prospectus and the documents to which we have referred to in the “Incorporation of Certain Documents by Reference” section below for information about us and our financial statements.

Overview

We are a biopharmaceutical company focused on progressing XCART™, a personalized CAR T platform technology engineered to target patient- and tumor-specific neoantigens. We are initially advancing cell-based therapeutics targeting the unique B-cell receptor on the surface of an individual patient’s malignant tumor cells, for the treatment of B-cell lymphomas. XCART has the potential to fuel a robust pipeline of the therapeutic assets targeting high-value oncology indications. The XCART technology, developed by the Scripps Research Institute (“Scripps Research”) in collaboration with the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, is believed to have the potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient-and tumor-specific CAR T cells. We are currently advancing XCART preclinical efforts through strategic collaborations, including with Scripps Research and PJSC Pharmsynthez.

Additionally, we are leveraging our proprietary drug delivery platform, PolyXen®, by partnering with biotechnology and pharmaceutical companies. PolyXen is an enabling platform technology which can be applied to protein or peptide therapeutics. It employs the natural polymer polysialic acid to prolong a drug's circulating half-life and potentially improve other pharmacological properties.

We incorporate our patented and proprietary technologies into a number of drug candidates currently under development with biotechnology and pharmaceutical industry collaborators to create what we believe will be the next-generation biologic drugs with improved pharmacological properties over existing therapeutics. Our drug candidates have resulted from our research activities or that of our collaborators and are in the development stage. As a result, we continue to commit a significant amount of our resources to our research and development activities and anticipate continuing to do so for the near future. To date, none of our drug candidates have received regulatory marketing authorization in the United States ("U.S.") by the Food and Drug Administration nor in any other territories by any applicable agencies. We are receiving ongoing royalties pursuant to a license of our PolyXen technology to an industry partner.

Although we hold a broad patent portfolio, the focus of our internal development efforts during 2021 has been on advancing the development of our XCART platform technology.

Corporate Information

We were incorporated under the laws of the State of Nevada in August 2011. Our corporate headquarters and operation facilities are located at 40 Speen Street, Suite 102, Framingham, Massachusetts 01701. Our telephone number is (781) 778-7720. We maintain a website at www.xeneticbio.com. The information on the website is not incorporated by reference in this prospectus supplement. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports are available, free of charge, on or through our website as soon as practicable after we electronically file such forms, or furnish them to, the SEC. The SEC maintains an Internet website located at www.sec.gov that contains the information we file or furnish electronically with the SEC.

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THE OFFERING

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$4,000,000.
Common stock to be outstanding after the offering	Up to 15,819,544 shares, after giving effect to the assumed sale of \$4,000,000 of shares of our common stock at an assumed price of \$1.70 per share, which was the closing price of our common stock on the Nasdaq Capital Market on November 15, 2021. The actual number of shares issued will vary depending on the price at which shares may be sold from time to time during this offering. (1)
Manner of offering	"At the market offering," as defined in Rule 415(a)(4) of the Securities Act, that may be made from time to time by Wainwright, as sales agent. See " Plan of Distribution " on page S-9 of this prospectus supplement.
Use of proceeds	We intend to use the net proceeds from this offering for working capital and other general corporate purposes. See " Use of Proceeds " for additional information.
Risk factors	Investing in our common stock involves significant risks. See the section entitled " Risk Factors " beginning on page S-3 and the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.
The Nasdaq Capital Market symbol	Our common stock is currently listed on the Nasdaq Capital Market under the symbol "XBIO."

(1) The number of shares of our common stock to be outstanding after this offering is based on approximately 13.4 million shares of common stock outstanding as of November 15, 2021 and excludes an aggregate of approximately 6.4 million shares of Common Stock underlying outstanding Series A Preferred and Series B Preferred Stock and outstanding restricted stock units, shares of Common Stock issuable upon the exercise of outstanding warrants and outstanding options, and shares of Common Stock issuable in connection with the Common Stock awards.

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RISK FACTORS

You should carefully consider the following risk factors and the risk factors discussed under the heading "Risk Factors" included in our most recent annual report on Form 10-K and the subsequent quarterly reports on Form 10-Q and other reports that we file with the SEC, which are incorporated by reference in this prospectus supplement in their entirety, together with all of the other information contained in this prospectus supplement and the accompanying prospectus or incorporated by reference in this prospectus supplement and the accompanying prospectus. The risks described in any document incorporated by reference are not the only ones we have, but are considered to be the most material. Additional risks of which we are not presently aware or that we currently believe are immaterial may also harm our business and results of operations. If any of these risks actually occur, our business, financial condition and results of operations would likely suffer. In that case, the market price of the common stock could decline, and you may lose part or all of your investment in our company.

Risks Related to this Offering of Our Common Stock

Sales of our common stock in this offering, or the perception that such sales may occur, could cause the market price of our common stock to fall.

We may issue and sell shares of our common stock for aggregate gross proceeds of up to \$4,000,000 from time to time in connection with this offering. The issuance and sale from time to time of these new shares of common stock, or our ability to issue these new shares of common stock in this offering, could have the effect of depressing the market price of our common stock.

You will suffer immediate and substantial dilution in the net tangible book value per share of the common stock that you purchase in this offering.

The shares sold in this offering, if any, will be sold from time to time at various prices; however, the assumed public offering price of our common stock is substantially higher

than the as-adjusted net tangible book value per share of our common stock. Therefore, investors purchasing shares of our common stock in this offering will pay a price per share that substantially exceeds the as-adjusted net tangible book value per share after this offering. Assuming that an aggregate of 2,352,941 shares of our common stock are sold at an assumed public offering price of \$1.70 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on November 15, 2021, and after deducting commissions and estimated offering expenses payable by us, new investors in this offering will experience immediate dilution of \$0.18 per share, representing the difference between the assumed public offering price and our as adjusted net tangible book value per share after giving effect to this offering. The exercise of outstanding options and warrants will result in further dilution of your investment. See “[Dilution](#)” for a more detailed discussion of the dilution you would incur if you purchase common stock in this offering.

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

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be lower than the price per share paid by investors in this offering.

Our management will have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and our stockholders will not have the opportunity as part of their investment decisions to assess how the net proceeds are being used. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. 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 failure to apply the net proceeds of this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, in our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

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The common stock offered hereby will be sold in “at-the-market” offerings, and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold. Investors may experience a decline in the value of their shares as a result of share sales made at prices lower than the prices they paid.

The actual number of shares we will issue under the Sales Agreement, at any one time or in total, is uncertain.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver a sales notice to Wainwright at any time throughout the term of the Sales Agreement. The number of shares that are sold by Wainwright after we deliver a sales notice will fluctuate based on the market price of the common stock during the sales period and limits we set with Wainwright. Because the price per share of each share sold will fluctuate based on the market price of our common stock during the sales period, it is not possible at this stage to predict the number of shares, if any, that will ultimately be issued.

An active, liquid and orderly market for our common stock may not develop.

Our common stock trades on the Nasdaq Capital Market. An active trading market for our common stock may never develop or be sustained. If an active market for our common stock does not continue to develop or is not sustained, it may be difficult for investors in our common stock to sell shares without depressing the market price for the shares or to sell the shares at all. An inactive market may also impair our ability to raise capital by selling common stock and may impair our ability to acquire other businesses, applications or technologies using our common stock as consideration, which, in turn, could materially adversely affect our business.

The market price of our stock may be highly volatile, and you may not be able to sell shares of our stock.

Companies trading in the stock market in general have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our stock, regardless of our actual operating performance.

The market price of our stock may be volatile. Our stock price could be subject to wide fluctuations in response to a variety of factors, including the following:

- Adverse results or delays in pre-clinical or clinical studies;
- Inability to obtain additional funding;
- Any delay in filing an Investigational New Drug (“IND”) or biologics license application (“BLA”) for any of our drug candidates and any adverse development or perceived adverse development with respect to the FDA’s review of that IND or BLA;
- Failure to develop successfully our drug candidates;
- Failure to maintain our existing strategic collaborations or enter into new collaborations;
- Failure by us or our licensors and strategic collaboration partners to prosecute, maintain or enforce our intellectual property rights;
- Changes in laws or regulations applicable to future products;
- Inability to obtain adequate product supply for our drug candidates or the inability to do so at acceptable prices;
- Adverse regulatory decisions;
- Introduction of new products, services or technologies by our competitors;
- Failure to meet or exceed financial projections we may provide to the public;

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- Failure to meet or exceed the financial projections of the investment community;
- The perception of the pharmaceutical industry by the public, legislatures, regulators and the investment community;
- Announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us, our strategic collaboration partner or our competitors;
- Disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- Additions or departures of key scientific or management personnel;
- Significant lawsuits, including patent or stockholder litigation;
- Changes in the market valuations of similar companies;
- Sales of our common stock by us or our stockholders in the future; and

Trading volume of our common stock.

We have entered into several agreements with our stockholders.

We have in the past, and may continue to enter into from time to time, agreements with our stockholders, which may result in conflicts of interest. In addition, these arrangements may not have been negotiated at arm's length and may contain terms and conditions that are not in the best interest of our stockholders.

Our preferred stock has rights, preferences and privileges that are not held by, and are preferential to, the rights of our common stockholders, which could result in the interests of the holders of our preferred stock differing from those of our common stockholders.

The holders of our preferred stock have the right to receive a liquidation preference entitling them to be paid out of our assets available for distribution to stockholders before any payment may be made to holders of any of our common stock or any series of preferred stock ranked junior to such class of preferred stock. The existence of a liquidation preference may reduce the value of our common stock, make it harder for us to sell shares of common stock in offerings in the future, or prevent or delay a change of control. Additionally, each share of Series A preferred stock and Series B preferred stock are convertible into shares of our common stock, subject to a maximum issuable amount and subject to certain adjustments, which may cause significant dilution to our common stockholders. The preferential rights could result in divergent interests between the holders of shares of preferred stock and holders of our common stock.

The issuance of future shares of common stock may result in dilution to our stockholders.

On December 4, 2020, shareholders of the Company voted to approve an amendment to our Articles of Incorporation to increase the authorized shares of the Company's common stock to 50,000,000 shares and we filed a Certificate of Amendment to the Company's Articles of Incorporation with the Secretary of the State of Nevada to effect such amendment as of December 4, 2020. As of November 15, 2021, we had approximately 13.4 million shares of our common stock outstanding, excluding approximately 6.4 million of potentially dilutive common stock related to outstanding Preferred Stock, warrants, options, restricted stock and common stock awards.

The issuance and the sale of these shares of our common stock, or even the potential of such issuance and sale, may have a depressive effect on the market price of our common stock and the issuance of such common stock will cause dilution to our stockholders.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

We do not intend to pay dividends on our common stock or preferred stock so any returns will be limited to the value of our stock.

We have never declared or paid any cash dividends on our common stock or preferred stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to common or preferred stockholders will therefore be limited to the appreciation of their stock.

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Certain provisions of our Articles of Incorporation, Bylaws, and the Nevada Revised States may be deemed to have an anti-takeover effect, which could cause the market price of our common stock to decline.

Certain provisions of our Articles of Incorporation, Bylaws, and the Nevada Revised States may be deemed to have an anti-takeover effect. Such provisions may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in that stockholder's best interests, including attempts that might result in a premium over the market price for the shares held by stockholders, which could cause the market price of our common stock to decline.

We have, in the past, failed to satisfy certain continued listing requirements on Nasdaq and could fail to satisfy those requirements again in the future which could affect the market price of our common stock and liquidity and reduce our ability to raise capital.

Currently, our common stock trades on Nasdaq. During 2020, we received notifications from Nasdaq informing us that the closing bid price for our common stock had been below \$1.00 for 30 consecutive business days and that the Company, therefore, was not in compliance with the bid price requirements for continued listing on Nasdaq. Although we have since cured these deficiencies, it is possible that we could fall out of compliance again in the future. If we fail to maintain compliance with any Nasdaq listing requirements, we could be delisted and our stock would be considered a penny stock under regulations of the SEC, and would therefore be subject to rules that impose additional sales practice requirements on broker-dealers who sell our securities. The additional burdens imposed upon broker-dealers by these requirements could discourage broker-dealers from effecting transactions in our common stock, which could severely limit the market liquidity of our common stock and your ability to sell our securities in the secondary market.

We are a smaller reporting company and the reduced reporting requirements applicable to smaller reporting companies may make our common stock less attractive to investors.

We are a smaller reporting company ("SRC"), which allows us to take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not SRCs, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, reduced disclosure obligations regarding executive compensation in our Annual Report and our periodic reports and proxy statements and providing only two years of audited financial statements in our Annual Report and our periodic reports. We will remain a SRC until (a) the aggregate market value of our outstanding common stock held by non-affiliates as of the last business day our most recently completed second fiscal quarter exceeds \$250 million or (b) (1) we have over \$100 million in annual revenues and (2) the aggregate market value of our outstanding common stock held by non-affiliates as of the last business day our most recently completed second fiscal quarter exceeds \$700 million. We cannot predict whether investors will find our common stock less attractive if we rely on certain or all of these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile and may decline.

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We may issue and sell shares of our common stock having aggregate gross proceeds of up to \$4,000,000 from time to time. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions paid to Wainwright and proceeds to us, if any, are not determinable at this time. We estimate that the net proceeds from the sale of the shares of common stock that we are offering may be up to approximately \$3.7 million, assuming a public offering price of \$1.70 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on November 15, 2021, and after deducting commissions payable to Wainwright and estimated offering expenses payable by us.

We intend to use the net proceeds of this offering for working capital and other general corporate purposes. We have not yet determined the amount of net proceeds to be used specifically for any particular purposes or the timing of these expenditures. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from the sale of these securities, and investors will be relying on our judgment regarding the application of the net proceeds from this offering.

DIVIDEND POLICY

We have not declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

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DILUTION

If you purchase shares of common stock in this offering, you will experience dilution to the extent of the difference between the public offering price per share in this offering and our as adjusted net tangible book value per share after this offering.

Net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding. Our historical net tangible book value as of September 30, 2021 was approximately \$20.2 million, or \$1.51 per share of common stock.

After giving effect to the sale of our common stock in the aggregate amount of \$4,000,000 at an assumed public offering price of \$1.70 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on November 15, 2021, and after deducting commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2021 would have been approximately \$23.9 million, or \$1.52 per share. This represents an immediate increase in net tangible book value of \$0.01 per share to existing stockholders and an immediate dilution in as adjusted net tangible book value of \$0.18 per share to new investors in this offering.

The following table illustrates this dilution on a per share basis. The as adjusted information is illustrative only and will adjust based on the actual public offering price, the actual number of shares sold and other terms of the offering determined at the time shares of our common stock are sold pursuant to this prospectus supplement. The as adjusted information assumes that all of our common stock in the aggregate amount of \$4,000,000 is sold at the assumed public offering price of \$1.70 per share. The shares sold in this offering, if any, will be sold from time to time at various prices.

Assumed public offering price per share		\$	1.70
Historical net tangible book value per share as of September 30, 2021	\$	1.51	
Increase in historical net tangible book value per share after giving effect to this offering	\$	<u>0.01</u>	
As adjusted net tangible book value per share, after giving effect to this offering		\$	1.52
Dilution per share to new investors in this offering		\$	0.18

This information is supplied for illustrative purposes only, and will adjust based on the actual offering prices, the actual number of shares that we offer and sell in this offering and other terms of each sale of shares in this offering. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$1.70 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$4,000,000 is sold at that price, would increase our as adjusted net tangible book value per share after the offering to \$1.61 per share and would increase the dilution in as adjusted net tangible book value per share to new investors in this offering to \$1.09 per share, after deducting estimated offering expenses and commissions payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$1.70 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$4,000,000 is sold at that price, would decrease our as adjusted net tangible book value per share after the offering to \$1.25 per share and would result in an increase in as adjusted net tangible book value per share to new investors in this offering of \$0.55 per share, after deducting estimated offering expenses and commissions payable by us.

The above discussion and tables are based on approximately 13.4 million shares of common stock outstanding as of September 30, 2021 and excludes an aggregate of approximately 6.4 million shares of Common Stock underlying outstanding Series A Preferred and Series B Preferred Stock and outstanding restricted stock units, shares of Common Stock issuable upon the exercise of outstanding warrants and outstanding options, and shares of Common Stock issuable in connection with the Common Stock awards.

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PLAN OF DISTRIBUTION

We have entered into a Sales Agreement with Wainwright, under which we may issue and sell from time to time shares of our common stock having an aggregate offering price of not more than \$4,000,000 through Wainwright as our sales agent. Sales of the common stock, if any, will be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 promulgated under the Securities Act, including sales made directly on or through the Nasdaq Capital Market, the trading market for our common stock, or any other trading market in the United States for our common stock, sales made to or through a market maker other than on an exchange or otherwise, directly to the sales agent as principal in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law. If we and Wainwright agree on any method of distribution other than sales of shares of our common stock into the Nasdaq Capital Market or another existing trading market in the United States at market prices, we will file a further prospectus supplement providing all information about such offering as required by Rule 424(b) under the Securities Act.

Wainwright will offer our common stock at prevailing market prices subject to the terms and conditions of the Sales Agreement as agreed upon by us and Wainwright. We will designate the number of shares which we desire to sell, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in one day and any minimum price below which sales may not be made. Subject to the terms and conditions of the Sales Agreement, Wainwright will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell on our behalf all of the shares of common stock requested to be sold by us. We or Wainwright may suspend the offering of the common stock being made through Wainwright under the Sales Agreement upon proper notice to the other

party.

Settlement for sales of common stock will occur on the second business day or such other settlement cycle as may be in effect under Exchange Act Rule 15c6-1 from time to time, following the date on which any sales are made, or on some other date that is agreed upon by us and Wainwright in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and Wainwright may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Wainwright in cash, upon each sale of our shares of common stock pursuant to the Sales Agreement, a commission equal to 3.0% of the gross proceeds from each sale of shares of our common stock. Because there is no minimum offering amount required as a condition to this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. Pursuant to the terms of the Sales Agreement, we agreed to reimburse Wainwright for the reasonable fees and expenses of its legal counsel incurred in connection with entering into the transactions contemplated by the Sales Agreement in an amount not to exceed \$50,000 in the aggregate. Additionally, pursuant to the terms of the Sales Agreement, we agreed to reimburse Wainwright for the documented fees and costs of its legal counsel reasonably incurred in connection with Wainwright's ongoing due diligence from time to time arising from the transactions contemplated by the Sales Agreement in an amount not to exceed \$2,500 in the aggregate per due diligence update. We estimate that the total expenses of the offering payable by us, excluding commissions payable to Wainwright under the Sales Agreement, will be approximately \$0.2 million. We will report at least quarterly the number of shares of common stock sold through Wainwright under the Sales Agreement and the resulting net proceeds to us.

In connection with the sales of common stock on our behalf, Wainwright will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to Wainwright will be deemed to be underwriting commissions or discounts. We have agreed in the Sales Agreement to provide indemnification and contribution to Wainwright against certain liabilities, including liabilities under the Securities Act.

The offering of our shares of common stock pursuant to the Sales Agreement will terminate upon the earlier of the (i) sale of all of our shares of common stock provided for in this prospectus supplement or (ii) termination of the Sales Agreement as permitted therein.

To the extent required by Regulation M, Wainwright will not engage in any market making activities involving our shares of common stock while the offering is ongoing under this prospectus supplement.

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Wainwright and its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. On July 28, 2021, the Company completed a private placement of Common Stock. Wainwright acted as the Company's exclusive placement agent in connection with the private placement and received a cash fee and expense reimbursement for services in connection therewith.

This summary of the material provisions of the Sales Agreement does not purport to be a complete statement of its terms and conditions. We will file a copy of the Sales Agreement with the SEC on a Current Report on Form 8-K within the time required by the Exchange Act.

This prospectus in electronic format may be made available on a website maintained by Wainwright and Wainwright may distribute this prospectus electronically.

LEGAL MATTERS

Westward Law Group, Las Vegas, Nevada, will pass upon the validity of the shares of common stock offered by this prospectus supplement. Holland and Knight LLP, Miami, Florida, will pass upon certain other matters related to this offering for the Company. Certain matters will be passed upon for Wainwright by Ellenoff Grossman & Schole LLP, New York, New York.

EXPERTS

The consolidated financial statements incorporated in this prospectus supplement by reference from Xenetic Biosciences, Inc.'s and subsidiaries' Annual Report on Form 10-K, as amended, have been audited by Marcum LLP, an independent registered public accounting firm, as stated in their report, which are incorporated herein by reference. Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge by linking directly from our website at www.xeneticbio.com. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

We have filed with the SEC a registration statement under the Securities Act relating to the offering of these securities. The registration statement, including the exhibits attached thereto, contains additional relevant information about us and the securities. This prospectus supplement and the accompanying prospectus do not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to below under "Incorporation by Reference" are also available on our Internet website, www.xeneticbio.com. We are not incorporating by reference into this prospectus supplement the information on our website, and you should not consider our website to be a part of this prospectus.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information in this prospectus supplement supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus supplement.

We incorporate by reference the documents listed below that we have previously filed with the SEC:

- [Our Annual Report on Form 10-K](#) for the year ended December 31, 2020, filed with the SEC on March 16, 2021, as amended by the [Form 10-K/A](#), filed with the SEC on April 28, 2021;
- [Our Quarterly Report on Form 10-Q](#) for the quarter ended March 31, 2021, filed with the SEC on May 11, 2021;
- [Our Quarterly Report on Form 10-Q](#) for the quarter ended June 30, 2021, filed with the SEC on August 12, 2021;
- [Our Quarterly Report on Form 10-Q](#) for the quarter ended September 30, 2021, filed with the SEC on November 12, 2021;
- Our Current Reports on Form 8-K filed with the SEC on [July 16, 2021](#), [July 28, 2021](#), [October 15, 2021](#), and [November 16, 2021](#); and
- The description of our Common Stock included in our Registration Statement on [Form 8-A](#), filed on November 1, 2016.

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or documents that is not deemed filed under such provisions, on or after the date of this prospectus supplement until the termination of this offering shall be deemed incorporated by reference in this prospectus supplement and the accompanying prospectus and to be a part of this prospectus supplement from the date of filing of those documents.

We will provide to each person, including any beneficial owner, to whom a copy of this prospectus supplement is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus supplement but not delivered with this prospectus supplement (other than the exhibits to such documents which are not specifically incorporated by reference therein); we will provide this information at no cost to the requester upon written or oral request to: Corporate Secretary at Xenetic Biosciences, Inc., 40 Speen Street, Suite 102, Framingham, Massachusetts 01701, or (781) 778-7720.

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PROSPECTUS



Xenetic Biosciences, Inc.
\$50,000,000

Common Stock
Preferred Stock
Warrants
Units
Rights
Depositary Shares
Debt Securities

We may offer, issue and sell, from time to time, shares of our common stock, preferred stock, warrants, units, rights, depositary shares and debt securities which may consist of debentures, notes, or other types of debt, in one or more offerings with an aggregate offering price not to exceed \$50,000,000. We will provide specific terms of each offering and issuance of these securities, such as when we sell the securities, the amounts of securities we will sell and the prices and other terms on which we will sell them, in supplements to this prospectus. We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. You should read this prospectus and any supplement carefully before you decide to invest. This prospectus may not be used to consummate sales of these securities unless it is accompanied by a prospectus supplement.

Our common stock and common stock purchase warrants are listed on the Nasdaq Capital Market ("Nasdaq") under the symbols "XBIO" and "XBIOW", respectively. As of September 30, 2021, the aggregate market value of our outstanding common stock held by non-affiliates, or public float, was approximately \$38.4 million based on 13,199,241 shares of outstanding common stock held by non-affiliates, at a price of \$2.91 per share, which was the last reported sale price of our common stock on Nasdaq on September 1, 2021. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell the shelf securities in a public primary offering with a value exceeding more than one-third of the aggregate market value of our voting and non-voting common equity held by non-affiliates in any 12-month period as long as the aggregate market value of our outstanding voting and non-voting common equity held by non-affiliates is less than \$75 million. As of the date hereof, during the prior 12 calendar month period, we have offered and sold approximately \$6.0 million in value of shares of our common stock pursuant to General Instruction I.B.6 of Form S-3.

Our principal office is located at 40 Speen Street, Suite 102, Framingham, Massachusetts 01701. Our telephone number is (781) 778-7720.

Investing in our securities involves risks. You should carefully consider the information referred to under the heading "[Risk Factors](#)" on page 5 of this prospectus before you invest.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED THAT THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is October 22, 2021

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You should rely only on the information contained in this document or to which we have referred you. We have not authorized anyone to provide you with information that is different. This document may only be used where it is legal to sell these securities. The information in this document may only be accurate on the date of this document.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, we may sell the securities described in this prospectus in one or more offerings with an aggregate offering price not to exceed \$50,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer to sell securities, we will provide a supplement to this prospectus that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. It is important for you to consider the information contained in this prospectus and any prospectus supplement together with additional information described under the headings “*Where You Can Find More Information*” and “*Incorporation of Certain Documents by Reference*.”

You should rely only on the information incorporated by reference or set forth in this prospectus or the applicable prospectus supplement. We have not authorized anyone else to provide you with additional or different information. You should not assume that the information in this prospectus, the applicable prospectus supplement or any other offering material is accurate as of any date other than the dates on the front of those documents.

Our logo and some of our trademarks and tradenames are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of others. Solely for convenience, trademarks, tradenames and service marks referred to in this prospectus may appear without the ®, ™ and SM symbols. References to our trademarks, tradenames and service marks are not intended to indicate in any way that we will not assert to the fullest extent under applicable law our rights or the rights of the applicable licensor, nor that respective owners to other intellectual property rights will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by any other companies. Since our patents are either held by us or our wholly-owned subsidiaries, we will not distinguish between patents held by us or our subsidiaries in this prospectus.

References in this prospectus to “we,” “us,” “our,” “Xenetic” or the “Company” are to Xenetic Biosciences, Inc. and its subsidiaries.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the other documents we have filed with the SEC that are incorporated by reference herein contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 27A of the Securities Act of 1933, as amended. All statements contained in this prospectus other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, future revenues, projected costs, prospects and our objectives for future operations, are forward-looking statements. These forward-looking statements include, but are not limited to, the anticipated effects and duration of the novel coronavirus, or COVID-19, global pandemic and the responses thereto, including the pandemic’s impact on general economic and market conditions, as well as on our business, results of operations and financial condition; statements concerning our plans to develop our proposed drug candidates; our expectations regarding the nature, timing and extent of clinical trials; our expectations regarding the timing for proposed submissions of regulatory filings; the nature, timing and extent of collaboration arrangements; the expected results pursuant to collaboration arrangements including the receipts of future payments that may arise pursuant to collaboration arrangements; the outcome of our plans to obtain regulatory approval of our drug candidates; the outcome of our plans for the commercialization of our drug candidates; the development of the XCART™ Chimeric Antigen Receptor (“CAR”) T technology; our plans to apply the XCART technology to advance cell-based therapeutics by targeting the unique B cell receptor on the surface of an individual patient’s malignant tumor cells for the treatment of B-cell lymphomas; our beliefs regarding the expected results of the XCART technology, including its potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient- and tumor-specific CAR T cells; and our anticipation that our primary focus will now be on advancing the XCART technology through regulatory approval and commercialization technology.

In some cases, these statements may be identified by terminology such as “may,” “will,” “would,” “could,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “seek,” “approximately,” “intend,” “predict,” “potential,” “projects,” or “continue,” or the negative of such terms and other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, we cannot guarantee future results, the levels of activity, performance or achievements. These statements involve known and unknown risks and uncertainties that may cause our or our industry’s results, levels of activity, performance or

achievements to be materially different from those expressed or implied by forward-looking statements.

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This prospectus should be read together with our financial statements and related notes thereto incorporated by reference in this prospectus. The forward-looking statements made herein are based on our current expectations, involve a number of risks and uncertainties and should not be considered as guarantees of future performance.

You should carefully consider these risks before you make an investment decision with respect to our securities, along with the following factors that could cause actual results to differ materially from our forward-looking statements:

- failure to realize the anticipated potential of the XCART or PolyXen technology;
- our ability to implement our business strategy;
- our need to raise additional working capital in the future for the purpose of further developing our XCART technology and to continue as a going concern;
- our ability to finance our business;
- our ability to successfully execute, manage and integrate key acquisitions and mergers;
- product development and commercialization risks, including our ability to successfully develop the XCART technology;
- the impact of adverse safety outcomes and clinical trial results for CAR-T cell therapies;
- our ability to secure and maintain a manufacturer for the XCART technology;
- our ability to successfully commercialize our current and future drug candidates;
- our ability to achieve milestone and other payments associated with our current and future co-development collaborations and strategic arrangements;
- the impact of new technologies on our drug candidates and our competition;
- changes in laws or regulations of governmental agencies;
- interruptions or cancellation of existing contracts;
- impact of competitive products and pricing;
- product demand and market acceptance and risks;

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- the presence of competitors with greater financial resources;
- continued availability of supplies or materials used in manufacturing at the current prices;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- our ability to attract and retain key personnel;
- adverse publicity related to our products or the Company itself;
- adverse claims relating to our intellectual property;
- the adoption of new, or changes in, accounting principles;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002;
- other new lines of business that we may enter in the future;
- general economic and business conditions, as well as inflationary trends;
- the impact of natural disasters or public health emergencies, such as the COVID-19 global pandemic (including any new variant strains of the underlying virus), on our financial condition and results of operations; and
- other risk factors as detailed from time to time in our reports filed with the SEC, including our annual report on Form 10-K, as amended, periodic quarterly reports on Form 10-Q, current reports on Form 8-K and other documents filed with the SEC.

These factors are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in the forward-looking statements in this prospectus. Other unknown or unpredictable factors also could have material adverse effects on our future results, including, but not limited to, those discussed in the section titled "Risk Factors." The forward-looking statements in this prospectus are made only as of the date of this prospectus, and we do not undertake any obligation to publicly update any forward-looking statements to reflect subsequent events or circumstances. We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995.

PROSPECTUS SUMMARY

This summary highlights selected information and does not contain all the information that is important to you. You should carefully read this prospectus, including the [Risk Factors](#) section and the consolidated financial statements and related notes included in this prospectus or incorporated by reference into this prospectus, any applicable prospectus supplement and the documents to which we have referred to in the "Incorporation of Certain Documents by Reference" section below for information about us and our financial statements.

Overview

We are a biopharmaceutical company focused on progressing XCART™, a personalized CAR T platform technology engineered to target patient - and tumor - specific neoantigens. We are initially advancing cell-based therapeutics targeting the unique B-cell receptor on the surface of an individual patient's malignant tumor cells, for the treatment of B-cell lymphomas. XCART has the potential to fuel a robust pipeline of the therapeutic assets targeting high-value oncology indications. The XCART technology, developed by the Scripps Research Institute ("Scripps Research") in collaboration with the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, is believed to have the potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient-and tumor-specific CAR T cells. We are currently advancing XCART preclinical efforts through strategic collaborations, including with Scripps Research and PJSC Pharmsynthez.

Additionally, we are leveraging our proprietary drug delivery platform, PolyXen®, by partnering with biotechnology and pharmaceutical companies. PolyXen is an enabling platform technology which can be applied to protein or peptide therapeutics. It employs the natural polymer polysialic acid to prolong a drug's circulating half-life and potentially improve other pharmacological properties.

We incorporate our patented and proprietary technologies into a number of drug candidates currently under development with biotechnology and pharmaceutical industry collaborators to create what we believe will be the next-generation biologic drugs with improved pharmacological properties over existing therapeutics. Our drug candidates have resulted from our research activities or that of our collaborators and are in the development stage. As a result, we continue to commit a significant amount of our resources to our research and development activities and anticipate continuing to do so for the near future. To date, none of our drug candidates have received regulatory marketing authorization in the United States ("U.S.") by the Food and Drug Administration nor in any other territories by any applicable agencies. We are receiving ongoing royalties pursuant to a license of our PolyXen technology to an industry partner.

Although we hold a broad patent portfolio, the focus of our internal development efforts during 2021 has been on advancing the development of our XCART platform technology.

Corporate Information

We were incorporated under the laws of the State of Nevada in August 2011. Our corporate headquarters and operation facilities are located at 40 Speen Street, Suite 102, Framingham, Massachusetts 01701. Our telephone number is (781) 778-7720. We maintain a website at www.xeneticbio.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports are available, free of charge, on or through our website as soon as practicable after we electronically file such forms, or furnish them to, the SEC. The SEC maintains an Internet website located at www.sec.gov that contains the information we file or furnish electronically with the SEC.

The Offering

Under this prospectus, we may offer and sell to the public in one or more series or issuances of common stock, preferred stock, depository shares, debt securities, warrants, units and rights with an aggregate offering price not to exceed \$50,000,000.

RISK FACTORS

Investing in our securities involves risks. You should carefully consider the risks described under "Risk Factors" in our most recent Annual Report on Form 10-K, as amended, and any subsequent Quarterly Reports on Form 10-Q (which descriptions are incorporated by reference herein), as well as the other information contained or incorporated by reference in this prospectus or in any prospectus supplement hereto before making a decision to invest in our securities. See "[Where You Can Find More Information](#)" and "[Incorporation of Certain Documents by Reference](#)" below.

USE OF PROCEEDS

Unless otherwise indicated in an accompanying prospectus supplement, we intend to use all the net proceeds from the sale of the securities offered by this prospectus and any related prospectus supplement for general corporate purposes in accordance with our objectives and strategies described in our most recent Annual Report on Form 10-K, as amended, and other filings with the SEC, which may include:

- acquisitions of assets and businesses;
- funding of ongoing development programs and clinical trials;
- repayment of indebtedness outstanding at that time; and
- general working capital.

Any specific allocation of the net proceeds of an offering of securities to a specific purpose will be determined at the time of such offering and will be described in the related supplement to this prospectus.

DESCRIPTION OF CAPITAL STOCK

The following is a summary of the rights and preferences of our capital stock. While we believe that the following description covers the material terms of our capital stock, the description may not contain all of the information that is important to you. We encourage you to read carefully this entire prospectus, any future related prospectus supplement and certificates of designation relating to the securities, as applicable, our articles of incorporation, as amended (the "charter") and amended and restated bylaws (the "bylaws") and the other documents we refer to for a more complete understanding of our capital stock. Copies of our charter and bylaws are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. See "[Where You Can Find More Information](#)" and "[Incorporation of Certain Documents by Reference](#)."

General

Our charter provides that we may issue up to 50,000,000 shares of common stock, \$0.001 par value per share, and 10,000,000 shares of preferred stock, \$0.001 par value per share, 1,000,000 of which are designated as Series A Preferred Stock, 2,500,000 of which are designated as Series B Preferred Stock, and 6,500,000 of which shares of preferred stock are undesignated. Under Nevada law, stockholders are not generally liable for our debts or obligations.

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Shares of Common Stock

Voting Rights

Our common stock is entitled to one vote per share on all matters submitted to a vote of the stockholders, including the election of directors. Except as otherwise required by law or provided in any resolution adopted by our board of directors with respect to any series of preferred stock, the holders of our common stock will possess all voting power. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of our common stock that are present in person or represented by proxy, subject to any voting rights granted to holders of any preferred stock. Our stockholders do not have cumulative voting rights in the election of directors. Holders of our common stock representing 50% of our capital stock issued, outstanding and entitled to vote, represented in person or by proxy, are necessary to constitute a quorum at any meeting of our stockholders. A vote by the holders of a majority of our outstanding shares is required to effectuate certain fundamental corporate changes such as liquidation, merger or an amendment to our charter.

Dividends

Subject to the preferential rights of any other class or series of shares of stock created from time to time by our board of directors from time to time, the holders of shares of our common stock will be entitled to such cash dividends, non-cumulative, as may be declared from time to time by our board of directors from funds available therefore. We will not pay any dividends on shares of common stock (other than dividends in the form of common stock) unless and until such time as we pay dividends on our preferred stock on an as-converted basis.

Liquidation

Subject to the preferential rights of any other class or series of shares of stock created from time to time by our board of directors, upon liquidation, dissolution or winding up, the holders of shares of our common stock will be entitled to share ratably in the assets of the Company available for distribution to such holders.

Rights and Preferences

In the event of any merger or consolidation with or into another company in connection with which shares of our common stock are converted into or exchangeable for shares of stock, other securities or property (including cash), all holders of our common stock will be entitled to receive the same kind and amount of shares of stock and other securities and property (including cash). Holders of our common stock have no pre-emptive, conversion, subscription or other rights and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are duly authorized, validly issued, fully paid and nonassessable.

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Shares of Preferred Stock

The following description sets forth general terms and provisions of the preferred stock to which any prospectus supplement may relate. The statements below describing the preferred stock are in all respects subject to and qualified in their entirety by reference to our charter, bylaws, and any certificate of designation, designating terms of a series of preferred stock. The outstanding shares of our preferred stock have been validly issued, fully paid, and non-assessable. Because our board of directors has the power to establish the preferences, powers and rights of each series of preferred stock, our board of directors may afford the holders of any series of preferred stock preferences, powers and rights, voting or otherwise, senior to the rights of our common stockholders. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon a liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control of the Company or other corporate action.

The rights, preferences, privileges and restrictions of our outstanding series of preferred stock are, and of each additional series of preferred stock, when and if issued in the future will be, fixed by the certificate of designation relating to the series. A prospectus supplement, relating to each series, will specify the terms of the preferred stock, as follows:

- the title and stated value of the preferred stock;
- the voting rights of the preferred stock, if applicable;
- the preemptive rights of the preferred stock, if applicable;
- the restrictions on alienability of the preferred stock, if applicable;

- the number of shares offered, the liquidation preference per share and the offering price of the shares;
- liability to further calls or assessment of the preferred stock, if applicable;
- the dividend rate(s), period(s) and payment date(s) or method(s) of calculation applicable to the preferred stock;
- the date from which dividends on the preferred stock will accumulate, if applicable;
- the procedures for any auction and remarketing for the preferred stock, if any;
- the provision for a sinking fund, if any, for the preferred stock;
- the provision for and any restriction on redemption, if applicable, of the preferred stock;
- the provision for and any restriction on repurchase, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange;
- the terms and provisions, if any, upon which the preferred stock will be convertible into common stock, including the conversion price (or manner of calculation) and conversion period;
- the terms under which the rights of the preferred stock may be modified, if applicable;
- any other specific terms, preferences, rights, limitations or restrictions of the preferred stock;
- a discussion of certain material federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon the liquidation, dissolution or winding-up of our affairs;
- any limitation on issuance of any series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights upon the liquidation, dissolution or winding-up of our affairs; and
- any limitations on direct or beneficial ownership and restrictions on transfer of the preferred stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and preferred stock is Empire Stock Transfer, Inc.

Restrictions on Transfer

Transfers of shares of capital stock of the Company shall be made only (i) by entering upon the stock-transfer books of the Company or (ii) by transfer agents designated to transfer shares of capital stock of the Company.

Anti-takeover Effects of Certain Provisions of Nevada Law and of Our Charter and Bylaws

Our charter and bylaws and Nevada law contain provisions that may delay, defer or prevent a change in control or other transaction that might involve a premium price for shares of our common stock or otherwise be in the best interests of our stockholders, including business combination provisions, the ability of our board of directors to authorize undesignated preferred stock, supermajority vote requirements and advance notice requirements for director nominations and stockholder proposals. Likewise, if the provision in the bylaws opting out of the business combination provisions of the NRS were rescinded or if we were to opt in, these provisions of the NRS could have similar anti-takeover effects. See “Business Combinations” and “Control Share Acquisitions” below.

These provisions are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

No Right to Cumulative Voting

Pursuant to our bylaws, each of our directors is elected by holders of our common stock entitled to vote and called to serve until the next annual meeting of stockholders when his or her successor is duly elected and qualified. Holders of shares of common stock have no right to cumulative voting in the election of directors. Consequently, at each annual meeting of stockholders, the holders of a plurality of the shares of common stock entitled to vote are able to elect all of our directors. Holders of our preferred stock do not have voting rights, except that holders of our Series B Preferred Stock have certain voting rights under limited circumstances.

Removal of Directors

Our bylaws and charter provide that the number of directors we have may be established by our board of directors but may not be less than 1, nor more than 15. Pursuant to board action, our board is currently composed of seven directors — one of whom is an affiliate and six of whom are independent as of the date hereof. Our bylaws provide that any vacancy may be filled only by a majority of the remaining directors. Any individual appointed to fill such a vacancy will serve until the next annual meeting of stockholders when a successor is duly elected and qualified. Our bylaws further provide that a director may be removed for cause and only by the affirmative vote of the holders of shares entitled to cast at least two thirds of all the votes of common stockholders entitled to be cast generally in the election of directors. This provision, when coupled with the power of our board of directors to fill vacancies on the board of directors, precludes stockholders from (1) removing incumbent directors except upon a substantial affirmative vote and (2) filling the vacancies created by such removal with their own nominees.

Nevada Business Combinations Statute

The “business combination” provisions of Sections 78.411 to 78.444, inclusive, of the NRS, generally prohibit a Nevada corporation with at least 200 stockholders from engaging in various “combination” transactions with any interested stockholder for a period of two years after the date of the transaction in which the person became an interested stockholder, unless the corporation’s board of directors approves the transaction by which the stockholder becomes an interested stockholder in advance, or the proposed combination in advance of the stockholder becoming an interested stockholder. The proposed combination may be approved after the stockholder becomes an interested stockholder with preapproval by the board of directors and a vote at a special or annual meeting of stockholders holding at least 60 percent of the voting power not owned by the interested stockholder or its affiliates or associates. A “combination” is generally defined to include mergers or consolidations or any sale, lease exchange, mortgage, pledge, transfer, or other disposition, in one transaction or a series of transactions, with an “interested stockholder” (a) having an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation, (b) having an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation, or (c) representing 10% or more of the earning power or net income of the corporation. In general, an “interested stockholder” is any

person who, together with affiliates and associates, beneficially owns (or within two years, did own) 10% or more of a corporation's voting stock. After the two-year moratorium period, additional stockholder approvals or fair value requirements must be met by the interested stockholder up to four years after the stockholder became an interested stockholder.

The statute could be used to prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire our Company even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price. Our charter states that we have elected not to be governed by the "business combination" provisions, therefore such provisions currently do not apply to us.

Control Share Acquisitions

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

A corporation may elect to not be governed by, or "opt out" of, the control share provisions by making an election in its articles of incorporation or bylaws, provided that the opt-out election must be in place on the 10th day following the date an acquiring person has acquired a controlling interest, that is, crossing any of the three thresholds described above. We have not opted out of the control share statutes, and will be subject to these statutes if we are an "issuing corporation" as defined in such statutes. As we currently have fewer than 100 stockholders of record who are residents of Nevada, we do not believe that we are an "issuing corporation" as defined by the control share statutes.

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

Meetings of Stockholders

Pursuant to our bylaws, a meeting of our stockholders for the election of directors and the transaction of any business will be held annually on a date and at the time set by our board of directors. In addition, the board of directors is authorized, with the approval of a majority of the entire board of directors, to call a special meeting of our stockholders.

Amendment to Our Charter and Bylaws

Pursuant to the NRS, our charter may be amended with the approval of the board of directors or the affirmative vote of a majority of the stockholders entitled to vote. In furtherance and not in limitation of the powers conferred by the NRS and our charter, our bylaws expressly authorize our board of directors to adopt, amend and repeal the bylaws. This authority is subject to the power of our stockholders to adopt, amend or repeal the bylaws upon the affirmative vote of the holders of at least two-thirds of the voting power of the issued and outstanding stock entitled to vote generally in the election of directors, voting together as a single class, in addition to the affirmative vote of the holders of any class or series of the shares of capital stock of the Company as may be required by law, our charter, our bylaws or our preferred stock.

Dissolution

Pursuant to the NRS, our dissolution must be approved by the board of directors along with the affirmative vote of the holders of not less than a majority of all of the shares entitled to cast a vote on the matter.

Advance Notice of Director Nominations and New Business

Our bylaws provide that, with respect to an annual meeting of stockholders, nominations of individuals for election to the board of directors and the proposal of other business to be considered by stockholders may be made only (1) pursuant to our notice of the meeting, (2) by or at the direction of our board of directors or (3) by a stockholder who was a stockholder of record at the time of giving his notice who is entitled to vote at the meeting on the election of directors or on the proposal of other business, as the case may be, and has complied with the advance notice provisions set forth in our bylaws.

With respect to special meetings of stockholders, only the business specified in our notice of meeting may be brought before the meeting. Nominations of individuals for election to our board of directors may be made only (1) by or at the direction of our board of directors or (2) provided that the board of directors has determined that directors will be elected at such meeting, by a stockholder who was a stockholder of record at the time of giving his notice and who is entitled to vote at the meeting and has complied with the advance notice provisions set forth in our bylaws.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of common stock, preferred stock or debt securities in one or more series, from time to time. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from those securities.

The warrants issued, if any, will be evidenced by warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. The prospectus supplements relating to any warrants being offered pursuant to this prospectus and any applicable prospectus supplements will contain the specific terms of the warrants, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of warrant agreements and warrant certificates containing the terms of the warrants being offered will be incorporated by reference into the registration statement of which this prospectus is a part from reports we file with the SEC.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more shares of common stock, shares of preferred stock, depositary shares, warrants, or any combination of such securities.

DESCRIPTION OF RIGHTS

The following description summarizes only the general features of the rights that we may offer from time to time under this prospectus. The specific terms of a series of rights will be described in the applicable prospectus supplement relating to that series of rights along with any general provisions applicable to that series of rights. We may issue rights to our stockholders to purchase shares of our common stock and/or any of the other securities offered hereby. In connection with any offering of rights, each series of rights may be issued under a separate rights agreement to be entered into between us and a bank or trust company, as rights agent. The following description of the rights and any description of the rights in a prospectus supplement may not be complete and is subject to, and qualified in its entirety by reference to, the underlying rights agreement, which we will file with the SEC at or prior to the time of the sale of the rights. You should refer to, and read this summary together with, the rights agreement and the applicable prospectus supplement to review the terms of a particular series of rights. You can obtain copies of any form of rights agreement or other agreement pursuant to which the rights are issued by following the directions described under the caption "*Where You Can Find More Information.*" The applicable prospectus supplement relating to any rights will describe the terms of the offered rights, including, where applicable, the following:

- the date for determining the persons entitled to participate in the rights distribution;
- the exercise price for the rights;
- the aggregate number or amount of underlying securities purchasable upon exercise of the rights;
- the number of rights issued to each stockholder and the number of rights outstanding, if any;
- the extent to which the rights are transferable;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire;
- the extent to which the rights include an over-subscription privilege with respect to unsubscribed securities;
- anti-dilution provisions of the rights, if any; and
- any other material terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights.

Holders 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 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 existing 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.

DESCRIPTION OF DEPOSITARY SHARES

General

We may issue depositary shares, each of which would represent a fractional interest of a share of a particular series of preferred stock. We will deposit shares of preferred stock represented by depositary shares under a separate deposit agreement among the Company, a preferred stock depositary and the holders of the depositary shares. Subject to the terms of the deposit agreement, each owner of a depositary share will possess, in proportion to the fractional interest of a share of preferred stock represented by the depositary share, all the rights and preferences of the preferred stock represented by the depositary shares. Depositary receipts will evidence the depositary shares issued pursuant to the deposit agreement. Immediately after the Company issues and delivers preferred stock to a preferred stock depositary, the preferred stock depositary will issue the depositary receipts.

Dividends and Other Distributions

The depositary will distribute all cash dividends on the preferred stock to the record holders of the depositary shares. Holders of depositary shares generally must file proofs, certificates and other information and pay charges and expenses of the depositary in connection with distributions. If a distribution on the preferred stock is other than in cash and it is feasible for the depositary to distribute the property it receives, the depositary will distribute the property to the record holders of the depositary shares. If such a distribution is not feasible, the depositary, with our approval, may sell the property and distribute the net proceeds from the sale to the holders of the depositary shares.

Withdrawal of Stock

Unless we have previously called the underlying preferred stock for redemption or the holder of the depositary shares has converted such shares, a holder of depositary shares may surrender them at the corporate trust office of the depositary in exchange for whole or fractional shares of the underlying preferred stock together with any money or other property represented by the depositary shares. Once a holder has exchanged the depositary shares, the holder may not redeposit the preferred stock and receive depositary shares again. If a depositary receipt presented for exchange into preferred stock represents more shares of preferred stock than the number to be withdrawn, the depositary will deliver a new depositary receipt for the excess number of depositary shares.

Redemption of Depositary Shares

Whenever we redeem shares of preferred stock held by a depositary, the depositary will redeem the corresponding amount of depositary shares with funds it receives from us for the preferred stock. The depositary will notify the record holders of the depositary shares to be redeemed not less than 30 days nor more than 60 days before the date fixed for redemption at the holders' addresses appearing in the depositary's books. The redemption price per depositary share will be equal to the applicable fraction of the redemption price and any other amounts payable with respect to the preferred stock. If we intend to redeem less than all of the underlying preferred stock, we and the depositary will select the depositary shares to be redeemed on as nearly a pro rata basis as practicable without creating fractional depositary shares or by any other equitable method determined by us.

On the redemption date:

- all dividends relating to the shares of preferred stock called for redemption will cease to accrue;
- we and the depositary will no longer deem the depositary shares called for redemption to be outstanding; and
- all rights of the holders of the depositary shares called for redemption will cease, except the right to receive any money payable upon the redemption and any money or other property to which the holders of the depositary shares are entitled upon redemption.

Voting of the Preferred Stock

When a depositary receives notice regarding a meeting at which the holders of the underlying preferred stock have the right to vote, it will mail that information to the holders of the depositary shares. Each record holder of depositary shares on the record date may then instruct the depositary to exercise its voting rights for the amount of preferred stock represented by that holder's depositary shares. The depositary will vote in accordance with these instructions. The depositary will abstain from voting to the extent it does not receive specific instructions from the holders of depositary shares. A depositary will not be responsible for any failure to carry out any instruction to vote, or for the manner or effect of any vote, as long as any action or non-action is in good faith and does not result from negligence or willful misconduct of the depositary.

Liquidation Preference

In the event of our liquidation, dissolution or winding up, a holder of depositary shares will receive the fraction of the liquidation preference accorded each share of underlying preferred stock represented by the depositary share, in the event such underlying preferred stock is entitled to any such liquidation preference.

Conversion of Preferred Stock

Depositary shares will not themselves be convertible into common stock or any other securities or property of the Company. However, if the underlying preferred stock is convertible, holders of depositary shares may surrender them to the depositary with written instructions to convert the preferred stock represented by their depositary shares into whole shares of common stock, other shares of our preferred stock or other shares of stock, as applicable. Upon receipt of these instructions and any amounts payable in connection with a conversion, we will convert the preferred stock using the same procedures as those provided for delivery of preferred stock. If a holder of depositary shares converts only part of its depositary shares, the depositary will issue a new depositary receipt for any depositary shares not converted. We will not issue fractional shares of common stock upon conversion. If a conversion will result in the issuance of a fractional share, we will pay an amount in cash equal to the value of the fractional interest based upon the closing price of the common stock on the last business day prior to the conversion.

Amendment and Termination of a Deposit Agreement

The Company and the depositary may amend any form of depositary receipt evidencing depositary shares and any provision of a deposit agreement. However, unless the existing holders of at least two-thirds of the applicable depositary shares then outstanding have approved the amendment, we and the depositary may not make any amendment that:

- would materially and adversely alter the rights of the holders of depositary shares; or
- would be materially and adversely inconsistent with the rights granted to the holders of the underlying preferred stock.

Subject to exceptions in the deposit agreement and except in order to comply with applicable law, no amendment may impair the right of any holders of depositary shares to surrender their depositary shares with instructions to deliver the underlying preferred stock and all money and other property represented by the depositary shares. Every holder of outstanding depositary shares at the time any amendment becomes effective who continues to hold the depositary shares will be deemed to consent and agree to the amendment and to be bound by the amended deposit agreement.

We may terminate a deposit agreement upon not less than 30 days prior written notice to the depositary if a majority of each series of preferred stock affected by the termination consents to the termination.

In addition, a deposit agreement will automatically terminate if:

- we have redeemed all underlying preferred stock subject to the agreement;
- a final distribution of the underlying preferred stock in connection with any liquidation, dissolution or winding up has occurred, and the depositary has distributed the distribution to the holders of the depositary shares; or
- each share of the underlying preferred stock has been converted into other capital stock of the Company not represented by depositary shares.

Expenses of a Preferred Stock Depositary

We will pay all transfer and other taxes and governmental charges and expenses arising in connection with a deposit agreement. In addition, we will generally pay the fees and expenses of a depositary in connection with the performance of its duties. However, holders of depositary shares will pay the fees and expenses of a depositary for any duties requested by the holders that the deposit agreement does not expressly require the depositary to perform.

Resignation and Removal of Depositary

A depositary may resign at any time by delivering to us notice of its election to resign. We may also remove a depositary at any time. Any resignation or removal will take effect upon the appointment of a successor depositary. We will appoint a successor depositary within 60 days after delivery of the notice of resignation or removal. The successor must be a bank or trust company with its principal office in the U.S. and have a combined capital and surplus of at least \$50 million.

Miscellaneous

The depositary will forward to the holders of depositary shares any reports and communications from us with respect to the underlying preferred stock. Neither the depositary nor the company will be liable if any law or any circumstances beyond their control prevent or delay them from performing their obligations under a deposit agreement. The obligations of the Company and a depositary under a deposit agreement will be limited to performing their duties in good faith and without negligence in regard to voting of preferred stock, gross negligence or willful misconduct. Neither the Company nor a depositary must prosecute or defend any legal proceeding with respect to any depositary shares or the underlying preferred stock unless they are furnished with satisfactory indemnity.

The Company and any depositary may rely on the written advice of counsel or accountants, or information provided by persons presenting shares of preferred stock for deposit, holders of depositary shares or other persons they believe in good faith to be competent, and on documents they believe in good faith to be genuine and signed by a

proper party. In the event a depositary receives conflicting claims, requests or instructions from us and any holders of depositary shares, the depositary will be entitled to act on the claims, requests or instructions received from us.

Depositary

The prospectus supplement will identify the depositary for the depositary shares.

Listing of the Depositary Shares

The applicable prospectus supplement will specify whether or not the depositary shares will be listed on any securities exchange.

DESCRIPTION OF DEBT SECURITIES

General

The following description of the terms of our senior debt securities and subordinated debt securities (together, referred to as the “debt securities”), sets forth certain general terms and provisions of the debt securities to which any prospectus supplement may relate. Unless otherwise noted, the general terms and provisions of our debt securities discussed below apply to both our senior debt securities and our subordinated debt securities. Our debt securities may be issued from time to time in one or more series. The particular terms of any series of debt securities and the extent to which the general provisions may apply to a particular series of debt securities will be described in the prospectus supplement relating to that series.

The senior debt securities will be issued under an indenture (the “senior indenture”) between us and a Senior Indenture trustee (the “Senior Indenture Trustee”). The subordinated debt securities will be issued under an indenture (the “subordinated indenture”) and, together with the senior indenture, the “indentures”) between us and a Subordinated Indenture trustee (the “Subordinated Indenture Trustee”). The Senior Indenture Trustee and the Subordinated Indenture Trustee are both referred to, individually, as the “trustee”. The senior debt securities will constitute our unsecured and unsubordinated obligations and the subordinated debt securities will constitute our unsecured and subordinated obligations. A detailed description of the subordination provisions is provided below under the caption “- *Ranking and Subordination - Subordination*.” In general, however, if we declare bankruptcy, holders of the senior debt securities will be paid in full before the holders of subordinated debt securities will receive anything.

The statements set forth below are brief summaries of certain provisions contained in the indentures, which summaries do not purport to be complete and are qualified in their entirety by reference to the forms of indentures, which are filed as exhibits to the registration statement of which this prospectus forms a part. Terms used herein that are otherwise not defined shall have the meanings given to them in the indentures. Such defined terms shall be incorporated herein by reference.

The indentures will not limit the amount of debt securities that may be issued under the applicable indenture, and debt securities may be issued under the applicable indenture up to the aggregate principal amount that may be authorized from time to time by us. Any such limit applicable to a particular series will be specified in the prospectus supplement relating to that series.

The prospectus supplement relating to any series of debt securities in respect of which this prospectus is being delivered will contain the following terms, among others, for each such series of debt securities:

- the designation and issue date of the debt securities;
- the date or dates on which the principal amount of the debt securities is payable;
- the rate or rates (or manner of calculation thereof), if any, per annum at which the debt securities will bear interest, if any, the date or dates from which interest will accrue and the interest payment date or dates for the debt securities;
- any limit upon the aggregate principal amount of the debt securities which may be authenticated and delivered under the applicable indenture;
- the period or periods within which, the redemption price or prices or the repayment price or prices, as the case may be, at which, and the terms and conditions upon which, the debt securities may be redeemed at the Company’s option or the option of the holder of such debt securities;

- the obligation, if any, of the Company to purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of such debt securities and the period or periods within which, the price or prices at which and the terms and conditions upon which such debt securities will be purchased, in whole or in part, pursuant to such obligation;
- if other than denominations of \$1,000 and any integral multiple thereof, the denominations in which the debt securities will be issuable;
- provisions, if any, with regard to the conversion or exchange of the debt securities, at the option of the holders of such debt securities or the Company, as the case may be, for or into new securities of a different series, common stock or other securities;
- if other than U.S. dollars, the currency or currencies or units based on or related to currencies in which the debt securities will be denominated and in which payments of principal of, and any premium and interest on, such debt securities shall or may be payable;
- if the principal of (and premium, if any) or interest, if any, on the debt securities are to be payable, at the election of the Company or a holder of such debt securities, in a currency (including a composite currency) other than that in which such debt securities are stated to be payable, the period or periods within which, and the terms and conditions upon which, such election may be made;
- if the amount of payments of principal of (and premium, if any) or interest, if any, on the debt securities may be determined with reference to an index based on a currency (including a composite currency) other than that in which such debt securities are stated to be payable, the manner in which such amounts shall be determined;
- provisions, if any, related to the exchange of the debt securities, at the option of the holders of such debt securities, for other securities of the same series of the same aggregate principal amount or of a different authorized series or different authorized denomination or denominations, or both;
- the portion of the principal amount of the debt securities, if other than the principal amount thereof, which shall be payable upon declaration of acceleration of the maturity thereof as more fully described under the section “*Events of Default, Notice and Waiver*” below;
- whether the debt securities will be issued in the form of global securities and, if so, the identity of the depositary with respect to such global securities;
- if the debt securities will be guaranteed, the terms and conditions of such guarantees and provisions for the accession of the guarantors to certain obligations under the applicable indenture;

- with respect to subordinated debt securities only, the amendment or modification of the subordination provisions in the subordinated indenture with respect to the debt securities; and
- any other specific terms.

We may issue debt securities of any series at various times and we may reopen any series for further issuances from time to time without notice to existing holders of securities of that series.

Some of the debt securities may be issued as original issue discount debt securities. Original issue discount debt securities bear no interest or bear interest at below-market rates. These are sold at a discount below their stated principal amount. If we issue these securities, the prospectus supplement relating to such series of debt securities will describe any special tax, accounting or other information which we think is important. We encourage you to consult with your own tax and financial advisors on these important matters.

Unless we specify otherwise in the applicable prospectus supplement relating to such series of debt securities, the covenants contained in the indentures will not provide special protection to holders of debt securities if we enter into a highly leveraged transaction, recapitalization or restructuring.

Unless otherwise set forth in the prospectus supplement relating to such series of debt securities, interest on outstanding debt securities will be paid to holders of record on the date that is 15 days prior to the date such interest is to be paid or, if not a business day, the next preceding business day. Unless otherwise specified in the prospectus supplement, debt securities will be issued in fully registered form only. Unless otherwise specified in the prospectus supplement, the principal amount of the debt securities will be payable at the corporate trust office of the trustee in New York, New York. The debt securities may be presented for transfer or exchange at such office unless otherwise specified in the prospectus supplement, subject to the limitations provided in the applicable indenture, without any service charge, but we may require payment of a sum sufficient to cover any tax or other governmental charges payable in connection therewith.

Ranking and Subordination

General

The subordinated debt securities and the related guarantees will effectively rank junior in right of payment to any of our or the guarantors' current and future secured obligations to the extent of the value of the assets securing such obligations. The debt securities and the guarantees will be effectively subordinated to all existing and future liabilities, including indebtedness and trade payables, of our non-guarantor subsidiaries. Unless otherwise set forth in the prospectus supplement relating to such series of debt securities, the indentures will not limit the amount of unsecured indebtedness or other liabilities that can be incurred by our non-guarantor subsidiaries.

Ranking of Debt Securities

The senior debt securities described in this prospectus will be unsecured, senior obligations of the Company and will rank equally with the Company's other unsecured and unsubordinated obligations. Any guarantees of the senior debt securities will be unsecured and senior obligations of each of the guarantors, and will rank equally with all other unsecured and unsubordinated obligations of such guarantors. The subordinated debt securities will be unsecured, subordinated obligations and any guarantees of the subordinated debt securities will be unsecured and subordinated obligations of each of the guarantors.

Subordination

If issued, the indebtedness evidenced by the subordinated debt securities will be subordinate to the prior payment in full of all our Senior Indebtedness (as defined below). During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our Senior Indebtedness, we may not make any payment of principal of, or premium, if any, or interest on the subordinated debt securities. In addition, upon any payment or distribution of our assets upon any dissolution, winding up, liquidation or reorganization, the payment of the principal of, or premium, if any, and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our Senior Indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our Senior Indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

The subordination provisions also apply in the same way to any guarantor with respect to the Senior Indebtedness of such guarantor.

The term "Senior Indebtedness" of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

- all of the indebtedness of that person for borrowed money, including any indebtedness secured by a mortgage or other lien which is (1) given to secure all or part of the purchase price of property subject to the mortgage or lien, whether given to the vendor of that property or to another lender, or (2) existing on property at the time that person acquires it;
- all of the indebtedness of that person evidenced by notes, debentures, bonds or other similar instruments sold by that person for money;
- all of the lease obligations which are capitalized on the books of that person in accordance with generally accepted accounting principles;
- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above, in each case, that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and
- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above; unless, in the case of any particular indebtedness, lease, renewal, extension or refunding, the instrument or lease creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, lease, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. Our senior debt securities, and any unsubordinated guarantee obligations of ours or any guarantor to which we and the guarantors are a party, including the guarantors' guarantees of our debt securities and other indebtedness for borrowed money, constitute Senior Indebtedness for purposes of the subordinated indenture.

Consolidation, Merger, Conveyance or Transfer on Certain Terms

Except as described in the applicable prospectus supplement relating to such debt securities, we will not consolidate with or merge into any other entity or convey or transfer our properties and assets substantially as an entirety to any entity, unless:

- (1) the entity formed by such consolidation or into which we are merged or the entity that acquires by conveyance or transfer our properties and assets substantially as an entirety shall be organized and existing under the laws of the U.S. or any state or the District of Columbia, and will expressly assume, by supplemental indenture, executed and delivered to the trustee, in form reasonably satisfactory to the trustee, the due and punctual payment of the principal of (and premium, if any) and interest on all the debt securities and the performance of every covenant of the applicable indenture (as supplemented from time to time) on our part to be performed or observed;
- (2) immediately after giving effect to such transaction, no Event of Default (as defined below), and no event which, after notice or lapse of time, or both, would become an Event of Default, shall have happened and be continuing; and
- (3) we have delivered to the trustee an officers' certificate and an opinion of counsel each stating that such consolidation, merger, conveyance or transfer and such supplemental indenture comply with the requirements set forth in paragraphs (1) and (2) above and that all conditions precedent relating to such transaction have been complied with.

Upon any consolidation or merger, or any conveyance or transfer of our properties and assets substantially as an entirety as set forth above, the successor person formed by such consolidation or into which we are merged or to which such conveyance or transfer is made shall succeed to, and be substituted for, and may exercise every right and power of ours under the applicable indenture with the same effect as if such successor had been named in the applicable indenture. In the event of any such conveyance or transfer, we, as the predecessor, shall be discharged from all obligations and covenants under the applicable indenture and the debt securities issued under such indenture and may be dissolved, wound up or liquidated at any time thereafter.

Certain Covenants

Any covenants pertaining to a series of debt securities will be set forth in a prospectus supplement relating to such series of debt securities.

Except as described in the prospectus and any applicable prospectus supplement relating to such series of debt securities, the indentures and the debt securities do not contain any covenants or other provisions designed to afford holders of debt securities protection in the event of a recapitalization or highly leveraged transaction involving us.

Certain Definitions

The following are certain of the terms defined in the indentures:

“Comparable Treasury Issue” means, with respect to the debt securities, the U.S. Treasury security selected by an Independent Investment Banker as having a maturity comparable to the remaining term, or the Remaining Life, of the debt securities being redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the Remaining Life of such debt securities.

“Comparable Treasury Price” means, with respect to any redemption date for the debt securities: (1) the average of two Reference Treasury Dealer Quotations for that redemption date, after excluding the highest and lowest of four such Reference Treasury Dealer Quotations; or (2) if the trustee obtains fewer than four Reference Treasury Dealer Quotations, the average of all quotations obtained by the trustee.

“GAAP” means generally accepted accounting principles as such principles are in effect in the U.S. as of the date of the applicable indenture.

“Independent Investment Banker” means one of the Reference Treasury Dealers, to be appointed by us.

“Reference Treasury Dealer” means four primary U.S. Government securities dealers to be selected by us.

“Reference Treasury Dealer Quotations” means, with respect to each Reference Treasury Dealer and any redemption date, the average, as determined by the trustee, of the bid and asked prices for the Comparable Treasury Issue, expressed in each case as a percentage of its principal amount, quoted in writing to the trustee by such Reference Treasury Dealer at 3:00 p.m., New York City time, on the third business day preceding such redemption date.

“Remaining Scheduled Payments” means, with respect to each debt security to be redeemed, the remaining scheduled payments of the principal thereof and interest thereon that would be due after the related redemption date but for such redemption; provided, however, that, if such redemption date is not an interest payment date with respect to such debt security, the amount of the next succeeding scheduled interest payment thereon will be deemed to be reduced by the amount of interest accrued thereon to such redemption date.

“Significant Subsidiary” means any Subsidiary which would be a “significant subsidiary” as defined in Rule 1-02 of Regulation S-X, promulgated pursuant to the Securities Act, as in effect on the date of the applicable indenture.

“Subsidiary” means, with respect to any person, any corporation more than 50% of the voting stock of which is owned directly or indirectly by such person, and any partnership, association, joint venture or other entity in which such person owns more than 50% of the equity interests or has the power to elect a majority of the board of directors or other governing body.

“Treasury Rate” means, with respect to any redemption date for the debt securities: (1) the yield, under the heading which represents the average for the immediately preceding week, appearing in the most recently published statistical release designated “H.15(5 19)” or any successor publication which is published weekly by the Board of Governors of the Federal Reserve System and which establishes yields on actively traded U.S. Treasury debt securities adjusted to constant maturity under the caption “Treasury Constant Maturities,” for the maturity corresponding to the Comparable Treasury Issue; provided that if no maturity is within three months before or after the maturity date for the debt securities, yields for the two published maturities most closely corresponding to the Comparable Treasury Issue will be determined and the Treasury Rate will be interpolated or extrapolated from those yields on a straight line basis, rounding to the nearest month; or (2) if that release, or any successor release, is not published during the week preceding the calculation date or does not contain such yields, the rate per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue,

calculated using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that redemption date. The Treasury Rate will be calculated on the third business day preceding the redemption date.

Optional Redemption

Unless we specify otherwise in the applicable prospectus supplement, we may redeem any of the debt securities as a whole at any time or in part from time to time, at our option, on at least 15 days, but not more than 45 days, prior notice mailed to the registered address of each holder of the debt securities to be redeemed, at respective redemption prices equal to the greater of:

- 100% of the principal amount of the debt securities to be redeemed, and
- the sum of the present values of the Remaining Scheduled Payments (as defined below) discounted to the redemption date, on a semi-annual basis, assuming a 360 day year consisting of twelve 30 day months, at the Treasury Rate plus the number, if any, of basis points specified in the applicable prospectus supplement; plus, in each case, accrued interest to the date of redemption that has not been paid, such redemption price referred to as the "Redemption Price".

On and after the redemption date, interest will cease to accrue on the debt securities or any portion thereof called for redemption, unless we default in the payment of the Redemption Price, and accrued interest. On or before the redemption date, we shall deposit with a paying agent, or the applicable trustee, money sufficient to pay the Redemption Price of and accrued interest on the debt securities to be redeemed on such date. If we elect to redeem less than all of the debt securities of a series, then the trustee will select the particular debt securities of such series to be redeemed in a manner it deems appropriate and fair.

Defeasance

Except as otherwise set forth in the prospectus supplement relating to such series of debt securities, each indenture will provide that we, at our option,

- (a) will be discharged from any and all obligations in respect of any series of debt securities (except in each case for certain obligations to register the transfer or exchange of debt securities, replace stolen, lost or mutilated debt securities, maintain paying agencies and hold monies for payment in trust), or

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- (b) need not comply with any restrictive covenants described in a prospectus supplement relating to such series of debt securities, the guarantors will be released from the guarantees and certain Events of Default (other than those arising out of the failure to pay interest or principal on the debt securities of a particular series and certain events of bankruptcy, insolvency and reorganization) will no longer constitute Events of Default with respect to such series of debt securities, in each case, if we deposit with the trustee, in trust, money or the equivalent in securities of the government which issued the currency in which the debt securities are denominated or government agencies backed by the full faith and credit of such government, or a combination thereof, which through the payment of interest thereon and principal thereof in accordance with their terms will provide money in an amount sufficient to pay all the principal (including any mandatory sinking fund payments) of, and interest on, such series on the dates such payments are due in accordance with the terms of such series.

To exercise any such option, we are required, among other things, to deliver to the trustee an opinion of counsel to the effect that the deposit and related defeasance would not cause the holders of such series to recognize income, gain or loss for federal income tax purposes and, in the case of a discharge pursuant to clause (a) above, accompanied by a ruling to such effect received from or published by the U.S. Internal Revenue Service, or IRS.

In addition, we are required to deliver to the trustee an officers' certificate stating that such deposit was not made by us with the intent of preferring the holders over other creditors of ours or with the intent of defeating, hindering, delaying or defrauding creditors of ours or others.

Events of Default, Notice and Waiver

Except as otherwise set forth in the prospectus supplement relating to such series of debt securities, each indenture will provide that, if an Event of Default specified therein with respect to any series of debt securities issued thereunder shall have happened and be continuing, either the trustee thereunder or the holders of 33 1/3% in aggregate principal amount of the outstanding debt securities of such series (or 33 1/3% in aggregate principal amount of all outstanding debt securities under such indenture, in the case of certain Events of Default affecting all series of debt securities issued under such indenture) may declare the principal of all the debt securities of such series to be due and payable.

Except as otherwise set forth in the prospectus supplement relating to such series of debt securities, an "Event of Default" in respect of any series will be defined in the indentures as being any one of the following events:

- default in payment of principal of, or premium, if any, on, or any sinking or purchase fund or analogous obligation with respect to, debt securities of such series when due at their stated maturity, by declaration or acceleration, when called for redemption or otherwise;
- default for 30 days in payment of any interest installment with respect to such series;
- default for 90 days after written notice to us by the trustee thereunder or by holders of 33 1/3% in aggregate principal amount of the outstanding debt securities of such series in the performance, or breach, of any covenant or warranty pertaining to debt securities of such series; and
- certain events of bankruptcy, insolvency and reorganization with respect to us or any Significant Subsidiary of ours which is organized under the laws of the U.S. or any political sub-division thereof or the entry of an order ordering the winding up or liquidation of our affairs.

Each indenture will provide that the trustee thereunder will, within 90 days after the occurrence of a default with respect to the debt securities of any series issued under such indenture, give to the holders of the debt securities of such series notice of all uncured and unwaived defaults known to it; provided, however, that, except in the case of default in the payment of principal of, premium, if any, or interest, if any, on any of the debt securities of such series, the trustee will be protected in withholding such notice if it in good faith determines that the withholding of such notice is in the interests of the holders of the debt securities of such series. The term "default" for the purpose of this provision means any event which is, or after notice or lapse of time or both would become, an Event of Default with respect to debt securities of such series.

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Each indenture will contain provisions entitling the trustee under such indenture, subject to the duty of the trustee during an Event of Default to act with the required standard of care, to be indemnified to its reasonable satisfaction by the holders of the debt securities before proceeding to exercise any right or power under the applicable indenture at the request of holders of such debt securities.

Each indenture will provide that the holders of a majority in aggregate principal amount of the outstanding debt securities of any series issued under such indenture may direct the time, method and place of conducting proceedings for remedies available to the trustee or exercising any trust or power conferred on the trustee in respect of such series, subject to certain conditions.

Except as otherwise set forth in the prospectus supplement relating to the debt securities, in certain cases, the holders of a majority in principal amount of the outstanding debt securities of any series may waive, on behalf of the holders of all debt securities of such series, any past default or Event of Default with respect to the debt securities of such series except, among other things, a default not theretofore cured in payment of the principal of, or premium, if any, or interest, if any, on any of the senior debt securities of such series or payment of any sinking or purchase fund or analogous obligations with respect to such senior debt securities.

Each indenture will include a covenant that we will file annually with the trustee a certificate of no default or specifying any default that exists.

Modification of the Indentures

Except as set forth in the prospectus supplement relating to the debt securities, we and the trustee may, without the consent of the holders of the debt securities issued under the indenture governing such debt securities, enter into indentures supplemental to the applicable indenture for, among others, one or more of the following purposes:

- (1) to evidence the succession of another person to us or to a guarantor, if any, and the assumption by such successor of our or the guarantor's obligations under the applicable indenture and the debt securities of any series;
- (2) to add to our covenants or those of any guarantor, if any, or to surrender any of our rights or powers or those of any guarantor for the benefit of the holders of debt securities of any or all series issued under such indenture;
- (3) to cure any ambiguity, to correct or supplement any provision in the applicable indenture which may be inconsistent with any other provision therein, or to make any other provisions with respect to matters or questions arising under such indenture;
- (4) to add to the applicable indenture any provisions that may be expressly permitted by the Trust Indenture Act of 1939, as amended, or the TIA, excluding the provisions referred to in Section 316(a)(2) of the TIA as in effect at the date as of which the applicable indenture was executed or any corresponding provision in any similar federal statute hereafter enacted;
- (5) to establish the form or terms of any series of debt securities to be issued under the applicable indenture, to provide for the issuance of any series of debt securities and/or to add to the rights of the holders of debt securities;
- (6) to evidence and provide for the acceptance of any successor trustee with respect to one or more series of debt securities or to add or change any of the provisions of the applicable indenture as shall be necessary to facilitate the administration of the trusts thereunder by one or more trustees in accordance with the applicable indenture;

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- (7) to provide any additional Events of Default;
- (8) to provide for uncertificated securities in addition to or in place of certificated securities; provided that the uncertificated securities are issued in registered form for certain federal tax purposes;
- (9) to provide for the terms and conditions of converting those debt securities that are convertible into common stock or another such similar security;
- (10) to secure any series of debt securities;
- (11) to add guarantees in respect of any series or all of the debt securities;
- (12) to make any change necessary to comply with any requirement of the SEC in connection with the qualification of the applicable indenture or any supplemental indenture under the TIA; and
- (13) to make any other change that does not adversely affect the rights of the holders of the debt securities.

No supplemental indenture for the purpose identified in clauses (2), (3) or (5) above may be entered into if to do so would adversely affect the rights of the holders of debt securities of any series issued under the same indenture in any material respect.

Except as set forth in the prospectus supplement relating to such series of debt securities, each indenture will contain provisions permitting us and the trustee under such indenture, with the consent of the holders of a majority in principal amount of the outstanding debt securities of all series issued under such indenture to be affected voting as a single class, to execute supplemental indentures for the purpose of adding any provisions to or changing or eliminating any of the provisions of the applicable indenture or modifying the rights of the holders of the debt securities of such series to be affected, except that no such supplemental indenture may, without the consent of the holders of affected debt securities, among other things:

- change the maturity of the principal of, or the maturity of any premium on, or any installment of interest on, any such debt security, or reduce the principal amount or the interest or any premium of any such debt securities, or change the method of computing the amount of principal or interest on any such debt securities on any date or change any place of payment where, or the currency in which, any debt securities or any premium or interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the maturity of principal or premium, as the case may be;
- reduce the percentage in principal amount of any such debt securities the consent of whose holders is required for any supplemental indenture, waiver of compliance with certain provisions of the applicable indenture or certain defaults under the applicable indenture;
- modify any of the provisions of the applicable indenture related to (i) the requirement that the holders of debt securities issued under such indenture consent to certain amendments of the applicable indenture, (ii) the waiver of past defaults and (iii) the waiver of certain covenants, except to increase the percentage of holders required to make such amendments or grant such waivers; or
- impair or adversely affect the right of any holder to institute suit for the enforcement of any payment on, or with respect to, such senior debt securities on or after the maturity of such debt securities.

In addition, the subordinated indenture will provide that we may not make any change in the terms of the subordination of the subordinated debt securities of any series in a manner adverse in any material respect to the holders of any series of subordinated debt securities without the consent of each holder of subordinated debt securities that would be adversely affected.

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The trustee shall be named in the applicable prospectus supplement.

Governing Law

The indentures will be governed by, and construed in accordance with, the laws of the State of New York.

Global Securities

We may issue debt securities through global securities. A global security is a security, typically held by a depository, that represents the beneficial interests of a number of purchasers of the security. If we do issue global securities, the following procedures will apply.

We will deposit global securities with the depository identified in the prospectus supplement. After we issue a global security, the depository will credit on its book-entry registration and transfer system the respective principal amounts of the debt securities represented by the global security to the accounts of persons who have accounts with the depository. These account holders are known as "participants." The underwriters or agents participating in the distribution of the debt securities will designate the accounts to be credited. Only a participant or a person who holds an interest through a participant may be the beneficial owner of a global security. Ownership of beneficial interests in the global security will be shown on, and the transfer of that ownership will be effected only through, records maintained by the depository and its participants.

We and the trustee will treat the depository or its nominee as the sole owner or holder of the debt securities represented by a global security. Except as set forth below, owners of beneficial interests in a global security will not be entitled to have the debt securities represented by the global security registered in their names. They also will not receive or be entitled to receive physical delivery of the debt securities in definitive form and will not be considered the owners or holders of the debt securities.

Principal, any premium and any interest payments on debt securities represented by a global security registered in the name of a depository or its nominee will be made to the depository or its nominee as the registered owner of the global security. None of us, the trustee or any paying agent will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests in the global security or maintaining, supervising or reviewing any records relating to the beneficial ownership interests.

We expect that the depository, upon receipt of any payments, will immediately credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the principal amount of the global security as shown on the depository's records. We also expect that payments by participants to owners of beneficial interests in the global security will be governed by standing instructions and customary practices, as is the case with the securities held for the accounts of customers registered in "street names," and will be the responsibility of the participants.

If the depository is at any time unwilling or unable to continue as depository and a successor depository is not appointed by us within 90 days, we will issue registered securities in exchange for the global security. In addition, we may at any time in our sole discretion determine not to have any of the debt securities of a series represented by global securities. In that event, we will issue debt securities of that series in definitive form in exchange for the global securities.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus from time to time in one or more transactions, including without limitation:

- directly to purchasers;
- through agents;
- to or through underwriters or dealers; or
- through a combination of these methods.

A distribution of the securities offered by this prospectus may also be effected through the issuance of derivative securities, including without limitation, warrants, exchangeable securities, forward delivery contracts and the writing of options.

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;
- ordinary brokerage transactions and transactions in which a broker solicits purchasers; or
- privately negotiated transactions.

We may also enter into hedging transactions. For example, we may:

- enter into transactions with a broker-dealer or affiliate thereof in connection with which such broker-dealer or affiliate will engage in short sales of securities pursuant to this prospectus, in which case such broker-dealer or affiliate may use common stock received from us to close out its short positions;
- sell securities short and redeliver such securities to close out our short positions;
- enter into option or other types of transactions that require us to deliver common stock to a broker-dealer or an affiliate thereof, who will then resell or transfer the common stock under this prospectus; or
- loan or pledge the common stock to a broker-dealer or an affiliate thereof, who may sell the loaned shares or, in an event of default in the case of a pledge, sell the pledged shares pursuant to this prospectus.

In addition, we may enter into derivative or hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. In connection with such a transaction, the third parties may sell securities covered by and pursuant to this prospectus and an applicable prospectus supplement or pricing supplement, as the case may be. If so, the third party may use securities borrowed from us or others to settle such sales and may use securities received from us to close out any related short positions. We may also loan or pledge securities covered by this prospectus and an applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement or

pricing supplement, as the case may be.

A prospectus supplement with respect to each series of securities will state the terms of the offering of the securities, including:

- the name or names of any 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 and the net proceeds to be received by us from the sale;
- any delayed delivery arrangements;
- any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchange 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;
- at market prices prevailing at the time of sale;
- at prices related to the prevailing market prices; or
- at negotiated prices; or
- through a rights offering or similar arrangement.

General

Any public offering price and any discounts, commissions, concessions or other items constituting compensation allowed or reallocated or paid to underwriters, dealers, agents or remarketing firms may be changed from time to time. Underwriters, dealers, agents and remarketing firms that participate in the distribution of the offered securities may be "underwriters" as defined in the Securities Act. Any discounts or commissions they receive from us and any profits they receive on the resale of the offered securities may be treated as underwriting discounts and commissions under the Securities Act. We will identify any underwriters, agents or dealers and describe their commissions, fees or discounts in the applicable prospectus supplement or pricing supplement, as the case may be.

At-the-Market Offerings

If we reach an agreement with an underwriter on a placement, including the number of shares of stock to be offered in the placement and any minimum price below which sales may not be made, such underwriter would agree to use its commercially reasonable efforts, consistent with its normal trading and sales practices, to try to sell such shares on such terms. Underwriters could make sales in privately negotiated transactions and/or any other method permitted by law, including sales deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act, sales made directly on the Nasdaq, the existing trading market for our stock, or sales made to or through a market maker other than on an exchange. The name of any such underwriter or agent involved in the offer and sale of our stock, the amounts underwritten, and the nature of its obligations to take our stock will be described in the applicable prospectus supplement.

Underwriters and Agents

If underwriters are used in a sale, they will acquire the offered securities for their own account. The underwriters may resell the offered securities in one or more transactions, including negotiated transactions. These sales may be made at a fixed public offering price or prices, which may be changed, at market prices prevailing at the time of the sale, at prices related to such prevailing market price or at negotiated prices. We may offer the securities to the public through an underwriting syndicate or through a single underwriter. The underwriters in any particular offering will be identified in the applicable prospectus supplement or pricing supplement, as the case may be.

Unless otherwise specified in connection with any particular offering of securities, the obligations of the underwriters to purchase the offered securities will be subject to certain conditions contained in an underwriting agreement that we will enter into with the underwriters at the time of the sale to them. The underwriters will be obligated to purchase all of the securities of the series offered if any of the securities are purchased, unless otherwise specified in connection with any particular offering of securities. Any initial offering price and any discounts or concessions allowed, reallocated or paid to dealers may be changed from time to time.

We may designate agents to sell the offered securities. Unless otherwise specified in connection with any particular offering of securities, the agents will agree to use their best efforts to solicit purchases for the period of their appointment. We may also sell the offered securities to one or more remarketing firms, acting as principals for their own accounts or as agents for us. These firms will remarket the offered securities upon purchasing them in accordance with a redemption or repayment pursuant to the terms of the offered securities. A prospectus supplement or pricing supplement, as the case may be, will identify any remarketing firm and will describe the terms of its agreement, if any, with us and its compensation.

In connection with offerings made through underwriters or agents, we may enter into agreements with such underwriters or agents pursuant to which we receive our outstanding securities in consideration for the securities being offered to the public for cash. In connection with these arrangements, the underwriters or agents may also sell securities covered by this prospectus to hedge their positions in these outstanding securities, including in short sale transactions. If so, the underwriters or agents may use the securities received from us under these arrangements to close out any related open borrowings of securities.

Dealers

We may sell the offered securities to dealers as principals. We may negotiate and pay dealers' commissions, discounts or concessions for their services. 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. Dealers engaged by us may allow other dealers to participate in resales.

Direct Sales

We may choose to sell the offered securities directly. In this case, no underwriters or agents would be involved.

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 pricing supplement, 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 have agreements with agents, underwriters, dealers and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act. 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 transactions.

Market Making, Stabilization and Other Transactions

There is currently no market for any of the offered securities other than the shares of common stock, which are listed on Nasdaq. If certain of 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 intended 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 certain of the offered securities. We have no current plans for listing of the offered securities (other than the common stock) on any securities exchange; any such listing with respect to any particular securities will be described in the applicable prospectus supplement or pricing supplement, as the case may be.

In connection with any offering of common stock or preferred stock, the underwriters may purchase and sell common stock or preferred stock in the open market. These transactions may include short sales, syndicate covering transactions and stabilizing transactions. Short sales involve syndicate sales of common stock or preferred stock in excess of the number of shares to be purchased by the underwriters in the offering, which creates a syndicate short position. "Covered" short sales are sales of shares made in an amount up to the number of shares represented by the underwriters' over-allotment option. In determining the source of shares to close out the covered syndicate short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. Transactions to close out the covered syndicate short involve either purchases of the common stock or preferred stock in the open market after the distribution has been completed or the exercise of the over-allotment option. The underwriters may also make "naked" short sales of shares in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing common stock or preferred stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of bids for or purchases of shares in the open market while the offering is in progress for the purpose of pegging, fixing or maintaining the price of the securities.

In connection with any offering, the underwriters may also engage in penalty bids. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

LEGAL MATTERS

Certain legal matters, including the validity of the offered securities, will be passed upon for us by Westward Law Group, Las Vegas, Nevada or such other counsel identified in any applicable prospectus supplement.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from Xenetic Biosciences, Inc.'s and subsidiaries' Annual Report on Form 10-K, as amended, have been audited by Marcum LLP, an independent registered public accounting firm, as stated in their report, which are incorporated herein by reference. Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement, of which this prospectus is a part, covering the securities offered hereby. As allowed by SEC rules, this prospectus does not contain all of the information set forth in the registration statement and the exhibits thereto. We refer you to the registration statement and the exhibits thereto for further information. This prospectus is qualified in its entirety by such other information.

Copies of the registration statement, including the exhibits and schedules to the registration statement, may be examined without charge at the public reference room of the SEC, 100 F Street, N.E., Room 1580, Washington, DC 20549. Information about the operation of the public reference room may be obtained by calling the SEC at 1-800-SEC-0330. Copies of all or a portion of the registration statement can be obtained from the public reference room of the SEC upon payment of prescribed fees. Our SEC filings, including our registration statement, are also available to you on the SEC's website at www.sec.gov.

We file reports, proxy statements and other information with the SEC as required by the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Those reports, proxy statements and other information are available for inspection and copying at the Public Reference Room and on the SEC's website referred to above.

We maintain a website on the Internet with the address of www.xeneticbio.com. We are not incorporating by reference into this prospectus the information on our website, and you should not consider our website to be a part of this prospectus.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus from the date of filing those documents. Any reports filed by us with the SEC on or after the date of this prospectus will automatically update and, where applicable, supersede any information contained in this prospectus or incorporated by reference in this prospectus. We have filed the documents listed below with the SEC under the Exchange Act, and these documents are incorporated herein by reference (other than information in such documents that is furnished and not deemed to be filed):

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2020, filed with the SEC on March 16, 2021, as amended by that [Form 10-K/A](#), filed with the SEC on April 28, 2021;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2021, filed with the SEC on May 11, 2021;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2021, filed with the SEC on August 12, 2021;
- Our Current Reports on Form 8-K filed with the SEC on [July 16, 2021](#), [July 28, 2021](#), and [October 15, 2021](#); and
- The description of our Common Stock included in our Registration Statement on [Form 8-A](#), filed on November 1, 2016.

All documents we subsequently file pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and prior to the termination of the offering of the securities to which this prospectus relates (other than information in such documents that is furnished and not deemed to be filed) shall be deemed to be incorporated by reference into this prospectus and to be a part hereof from the date of filing of those documents. All documents we file pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement that contains this prospectus and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus and to be a part hereof from the date of filing those documents.

We will provide to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus (other than the exhibits to such documents which are not specifically incorporated by reference therein); we will provide this information at no cost to the requester upon written or oral request to: Corporate Secretary at Xenetic Biosciences, Inc., 40 Speen Street, Suite 102, Framingham, Massachusetts 01701, or (781) 778-7720.



XENETIC BIOSCIENCES, INC.

Up to \$4,000,000 of shares of Common Stock

**PROSPECTUS SUPPLEMENT
NOVEMBER 19, 2021**

H.C. Wainwright & Co.