

Viking Therapeutics, Inc.
Form 424B3
October 26, 2017
Filed Pursuant to Rule 424(b)(3)

Registration No. 333-220992

PROSPECTUS

6,873,975 Shares

Common Stock

This prospectus relates to the sale of up to 6,873,975 shares of our common stock by Lincoln Park Capital Fund, LLC, or Lincoln Park. Lincoln Park is also referred to in this prospectus as the selling stockholder.

We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive proceeds of up to \$15.0 million from the sale of our common stock to the selling stockholder, pursuant to a purchase agreement entered into with the selling stockholder on September 28, 2017, once the registration statement of which this prospectus is a part is declared effective.

The selling stockholder is an “underwriter” within the meaning of the Securities Act of 1933, as amended. Lincoln Park may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. See “Plan of Distribution” for more information about how the selling stockholder may sell the shares of common stock being registered pursuant to this prospectus.

We will pay the expenses of registering these shares, but all selling and other expenses incurred by the selling stockholder will be paid by the selling stockholder. See “Plan of Distribution”.

Our common stock is listed on the Nasdaq Capital Market under the symbol “VKTX.” On October 25, 2017, the last reported sale price per share of our common stock was \$2.76.

We are an “emerging growth company” as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

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

Investing in our securities involves a high degree of risk. See “Risk Factors” on page 7 of this prospectus.

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

The date of this prospectus is October 26, 2017.

TABLE OF CONTENTS

<u>Disclosure Regarding Forward-Looking Statements</u>	1
<u>Prospectus Summary</u>	3
<u>Risk Factors</u>	7
<u>Use of Proceeds</u>	9
<u>The Lincoln Park Transaction</u>	10
<u>Selling Stockholder</u>	14
<u>Plan of Distribution</u>	16
<u>Description of Capital Stock</u>	18
<u>Legal Matters</u>	23
<u>Experts</u>	23
<u>Where You Can Find More Information</u>	23
<u>Disclosure of Commission Position on Indemnification for Securities Act Liabilities</u>	23
<u>Incorporation of Certain Information by Reference</u>	24

We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under the section of this prospectus entitled “Where You Can Find More Information”. You should carefully read this prospectus as well as additional information described under the section of this prospectus entitled “Incorporation of Certain Information by Reference,” before deciding to invest in our common shares.

Unless the context otherwise requires, the terms “Viking,” “we,” “us” and “our” in this prospectus refer to Viking Therapeutics, Inc., and “this offering” refers to the offering contemplated in this prospectus.

Neither we nor the selling stockholder authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under the circumstances and in the jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. We are not, and the selling stockholder is not, making an offer of these securities in any jurisdiction where such offer is not permitted.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this prospectus and the documents incorporated by reference in this prospectus include, but are not limited to, statements about:

- risks and uncertainties associated with our research and development activities, including our clinical trials and preclinical studies;
- the timing or likelihood of regulatory filings and approvals or of alternative regulatory pathways for our drug candidates;
- the potential market opportunities for commercializing our drug candidates;
- our expectations regarding the potential market size and the size of the patient populations for our drug candidates, if approved for commercial use, and our ability to serve such markets;
- estimates of our expenses, future revenue, capital requirements and our needs for additional financing;
- our ability to develop, acquire and advance our product candidates into, and successfully complete, clinical trials and preclinical studies and obtain regulatory approvals;
- the implementation of our business model and strategic plans for our business and drug candidates;
- the initiation, cost, timing, progress and results of future preclinical studies and clinical trials, and our research and development programs;
 - the terms of future licensing arrangements, and whether we can enter into such arrangements at all;
- timing and receipt or payments of licensing and milestone revenues, if any;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our drug candidates and our ability to operate our business without infringing the intellectual property rights of others;
- regulatory developments in the United States and foreign countries;
- the performance of our third party suppliers and manufacturers;
- our ability to maintain and establish collaborations or obtain additional funding;
 - the success of competing therapies that are currently or may become available;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- our ability to sell shares pursuant to our purchase agreement with Lincoln Park;
- our use of proceeds from this the sale of shares under our purchase agreement with Lincoln Park;
- our ability to continue as a going concern;
- our financial performance; and
- developments and projections relating to our competitors and our industry.

We caution you that the forward-looking statements highlighted above do not encompass all of the forward-looking statements made in this prospectus or in the documents incorporated by reference in this prospectus.

We have based the forward-looking statements contained in this prospectus and in the documents incorporated by reference in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations and prospects. The outcomes of the events described in these forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and experience to differ from those projected, including, but not limited to, the risk factors described herein and the risk factors set forth in Part I - Item 1A, "Risk Factors", in our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 21, 2017, in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, as filed with the SEC on August 9, 2017, and elsewhere in the documents incorporated by reference into this prospectus. Moreover, we operate in a very competitive and challenging environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus and in the documents incorporated by reference in this prospectus. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements contained in this prospectus and in the documents incorporated by reference in this prospectus relate only to events as of the date on which the statements are made. We do not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, other strategic transactions or investments we may make.

PROSPECTUS SUMMARY

This summary highlights selected information that is presented in greater detail elsewhere in this prospectus. Because it is only a summary, it does not contain all of the information you should consider before investing in our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information included elsewhere in this prospectus. Before you decide whether to purchase shares of our common stock, you should read this entire prospectus carefully, including the risks of investing in our securities discussed under the section of this prospectus entitled “Risk Factors” and similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

The Company

We are a clinical-stage biopharmaceutical company focused on the development of novel, first-in-class or best-in-class therapies for metabolic and endocrine disorders. We have exclusive worldwide rights to a portfolio of five drug candidates in clinical trials or preclinical studies, which are based on small molecules licensed from Ligand Pharmaceuticals Incorporated, or Ligand.

Our lead clinical program is VK5211, an orally available drug candidate, currently in a Phase 2 clinical trial for acute rehabilitation following non-elective hip fracture surgery. VK5211 is a non-steroidal selective androgen receptor modulator, or SARM. A SARM is designed to selectively interact with a subset of receptors that have a normal physiologic role of interacting with naturally-occurring hormones called androgens. Broad activation of androgen receptors with drugs, such as exogenous testosterone, can stimulate muscle growth and improve bone mineral density, but often results in unwanted side effects such as prostate growth, hair growth and acne. VK5211 is expected to selectively produce the therapeutic benefits of testosterone in muscle and bone tissue, potentially accelerating rehabilitation and improving patient outcomes. VK5211 is also expected to have improved safety, tolerability and patient acceptance relative to testosterone. We currently expect to report initial results from this Phase 2 trial in the fourth quarter of 2017.

Our second clinical program is VK2809, an orally available, tissue and receptor-subtype selective agonist of the thyroid hormone receptor beta, or TR β , that is in a Phase 2 clinical trial for the treatment of patients with hypercholesterolemia and fatty liver disease. Selective activation of the TR β receptor in liver tissue is believed to favorably affect cholesterol and lipoprotein levels via multiple mechanisms, including increasing the expression of low-density lipoprotein receptors and increasing mitochondrial fatty acid oxidation. We are currently conducting a Phase 2 clinical trial of VK2809 in patients with hypercholesterolemia and fatty liver disease and expect to report initial results from this Phase 2 trial in the first half of 2018.

In February 2017, we announced that we are commencing efforts to utilize VK2809 to potentially help patients who suffer from Glycogen Storage Disease type Ia, or GSD Ia. GSD Ia is a rare, orphan genetic disease caused by a deficiency of glucose-6-phosphatase (G6PC), an enzyme responsible for the liver’s production of free glucose from glycogen and gluconeogenesis. We expect to file an Investigational New Drug Application, or IND, to evaluate VK2809 in a Phase 1 study in patients with GSD Ia.

We are also developing VK0214 for X-linked adrenoleukodystrophy, or X-ALD, a rare X-linked, inherited neurological disorder characterized by a breakdown in the protective barriers surrounding brain and nerve cells. The disease, for which there is no approved treatment, is caused by mutations in a peroxisomal transporter of very long chain fatty acids, or VLCFA, known as ABCD1. As a result, transporter function is impaired and patients are unable to efficiently metabolize VLCFA. The TR β receptor is known to regulate expression of an alternative VLCFA

transporter, known as ABCD2. Various preclinical models have demonstrated that increased expression of ABCD2 can lead to normalization of VLCFA metabolism. Preliminary data suggest that VK0214 stimulates ABCD2 expression in an in vitro model and reduces VLCFA levels in an in vivo model of X-ALD. Pending completion of certain toxicology studies, we expect to commence work directed toward an IND.

We were incorporated under the laws of the State of Delaware on September 24, 2012. Since our incorporation, we have devoted most of our efforts towards conducting certain clinical trials and preclinical studies related to our

3

VK5211, VK2809 and VK0214 programs, as well as efforts towards raising capital and building infrastructure. We obtained worldwide rights to our VK5211, VK2809 and VK0214 programs and certain other assets pursuant to an exclusive license agreement with Ligand. The terms of this license agreement are detailed in the Master License Agreement, which we entered into on May 21, 2014 with Ligand, as amended, or the Master License Agreement. A summary of the Master License Agreement can be found in the section entitled “Business —Agreements with Ligand —Master License Agreement” in Part I, Item 1 of our Annual Report on Form 10-K filed with the SEC on March 21, 2017.

For a complete description of our business, financial condition, results of operations and other important information, we refer you to our filings with the SEC that are incorporated by reference in this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2016, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017. For instructions on how to find copies of these documents, see the section of this prospectus entitled “Where You Can Find More Information”.

Corporate Information

We were incorporated under the laws of the State of Delaware on September 24, 2012. Our principal executive offices are located at 12340 El Camino Real, Suite 250, San Diego, CA 92130, and our telephone number is (858) 704-4660. Our website address is www.vikingtherapeutics.com. We have included our website address in this prospectus solely as an inactive textual reference. We do not incorporate the information on, or accessible through, our website into this prospectus, and you should not consider any information on, or accessible through, our website as part of this prospectus.

Emerging Growth Company Status

We qualify as an “emerging growth company,” as that term is defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we qualify as an emerging growth company, we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that do not qualify as emerging growth companies, including, without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended, reduced disclosure obligations relating to executive compensation and exemptions from the requirements of holding advisory “say-on-pay,” “say-when-on-pay” and “golden parachute” executive compensation votes.

Under the JOBS Act, we will remain an emerging growth company until the earliest of:

- the last day of the fiscal year during which we have total annual gross revenues of \$1.07 billion or more;
- the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering, or December 31, 2020;
- the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt; and
- the date on which we are deemed to be a “large accelerated filer” under the Securities Exchange Act of 1934, or the Exchange Act (i.e., the first day of the fiscal year after we have (1) more than \$700.0 million in outstanding common equity held by our non-affiliates, measured each year on the last day of our second fiscal quarter, and (2) been public for at least 12 months).

We have elected to take advantage of certain of the reduced disclosure obligations regarding executive compensation in this prospectus and may elect to take advantage of other reduced reporting requirements in future filings with the SEC. As a result, the information that we provide to our stockholders may be different than the information you receive from other public reporting companies.

The Offering

Common Stock
Being Offered by
the Selling
Stockholder 6,873,975 shares

Common Stock
Outstanding
Before the
Offering 28,498,847 (as of October 12, 2017)

Common Stock
Outstanding After
the Offering 35,272,822 (Assuming the issuance of all of the shares that may be issued after the date of this prospectus under the purchase agreement that are being offered by this prospectus)

Use of Proceeds The selling stockholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive proceeds of up to \$15.0 million from the sale of our common stock to the selling stockholder under the purchase agreement described below. Any proceeds from the selling stockholder that we receive under the purchase agreement are expected to be used for working capital and general corporate purposes.

Nasdaq Capital
Market Symbol VKTX

Risk Factors Investing in our securities involves a high degree of risk. You should carefully review and consider the section of this prospectus entitled “Risk Factors” for a discussion of factors to consider before deciding to invest in shares of our common stock.

On September 28, 2017, we entered into a purchase agreement, or the Purchase Agreement, and a registration rights agreement, or the Registration Rights Agreement, with Lincoln Park. Under the Purchase Agreement, we have the right to sell to Lincoln Park up to \$15.0 million in shares of common stock, subject to certain limitations and conditions set forth in the Purchase Agreement. As consideration for Lincoln Park’s commitment to purchase shares of common stock pursuant to the Purchase Agreement, we issued to Lincoln Park 100,000 shares of common stock, or the Commitment Shares. We did not receive any cash proceeds from the issuance of such shares.

As of October 12, 2017, there were 28,498,847 shares of our common stock outstanding (20,621,927 shares held by non-affiliates), which includes the 100,000 Commitment Shares, but excludes the 6,773,975 shares of common stock that we may issue to Lincoln Park pursuant to the Purchase Agreement after the registration statement of which this prospectus is a part is declared effective under the Securities Act. If all of such 6,773,975 shares of our common stock offered hereby were issued and outstanding as of October 12, 2017, such shares would represent 19.2% of the total common stock outstanding. The 6,873,975 shares being registered in this offering represent 33.3% of the outstanding shares of common stock held by non-affiliates as of October 12, 2017. The number of shares of our common stock ultimately offered for sale by Lincoln Park is dependent upon the number of shares purchased by Lincoln Park under the Purchase Agreement. The number of shares of our common stock outstanding as of October 12, 2017 also excludes:

Edgar Filing: Viking Therapeutics, Inc. - Form 424B3

• 1,589,894 shares of common stock issuable upon the exercise of options outstanding as of October 12, 2017 with a weighted-average exercise price of \$2.67 per share;

• 56,250 shares of common stock reserved for future issuance in connection with service-based restricted stock units outstanding as of October 12, 2017 with a weighted-average grant date fair value of \$4.73 per share;

• 675,819 shares of common stock reserved as of October 12, 2017 for future issuance under our 2014 Equity Incentive Plan, which contains provisions that may increase its share reserve each year;

5

• 716,192 shares of common stock reserved as of October 12, 2017 for future issuance under our 2014 Employee Stock Purchase Plan, as amended, which contains provisions that may increase its share reserve each year; and
• 2,479,837 shares of common stock issuable upon the exercise of outstanding warrants as of October 12, 2017, with a weighted-average exercise price of \$1.51 per share.

Upon the satisfaction of the conditions in the Purchase Agreement, including that a registration statement that we agreed to file with the SEC pursuant to the Registration Rights Agreement is declared effective by the SEC and a final prospectus in connection therewith is filed with the SEC, or the Commencement, we will have the right, from time to time at our sole discretion over the 30-month period from and after the Commencement, to direct Lincoln Park to purchase up to 75,000 shares of common stock on any business day (subject to certain limitations contained in the Purchase Agreement), with such amounts increasing based on certain threshold prices set forth in the Purchase Agreement; however, not to exceed \$1,000,000 in total purchase proceeds per purchase date. The purchase price of shares of common stock that we elect to sell to Lincoln Park pursuant to the Purchase Agreement will be based on the market prices of the common stock at the time of such purchases as set forth in the Purchase Agreement. We have filed the registration statement of which this prospectus is a part in accordance with our obligations under the Registration Rights Agreement.

In addition to regular purchases, as described above, we may also direct Lincoln Park to purchase additional amounts as accelerated purchases or as additional purchases if the closing sale price of the common stock is not below certain threshold prices, as set forth in the Purchase Agreement and as more specifically described in the section of this prospectus entitled “The Lincoln Park Transaction”. In all instances, we may not sell shares of our common stock to Lincoln Park under the Purchase Agreement if it would result in Lincoln Park beneficially owning more than 4.99% of the common stock.

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement other than a prohibition on entering into a “Variable Rate Transaction,” as defined in the Purchase Agreement, and as more specifically described in the section of this prospectus entitled “The Lincoln Park Transaction”.

Lincoln Park has covenanted not to cause or engage in any manner whatsoever, any direct or indirect short selling or hedging of the common stock. There is no upper limit on the price per share that Lincoln Park could be obligated to pay for the common stock under the Purchase Agreement. The purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the business days used to compute such price.

Under the rules of The NASDAQ Stock Market LLC, in no event may we issue more than 5,536,743 shares, including the 100,000 Commitment Shares (which we refer to as the Exchange Cap), under the Purchase Agreement unless we obtain stockholder approval or an exception pursuant to the rules of The NASDAQ Stock Market LLC is obtained to issue more than 5,536,743 shares. This limitation will not apply if, at any time the Exchange Cap is reached and at all times thereafter, the average price paid for all shares issued and sold under the Purchase Agreement, excluding the 100,000 Commitment Shares, is equal to or greater than \$1.589 (subject to adjustment for stock dividends, splits, combinations or similar transactions), which was the consolidated closing bid price of our common stock on September 27, 2017, including an increment for the Commitment Shares we issued to Lincoln Park. We are not required or permitted to issue any shares of common stock under the Purchase Agreement if such issuance would breach our obligations under the rules or regulations of The NASDAQ Stock Market LLC.

We have the right to terminate the Purchase Agreement at any time at no cost or penalty. Actual sales of shares of common stock to Lincoln Park under the Purchase Agreement will depend on a variety of factors to be determined by us from time to time, including, among others, market conditions, the trading price of the common stock and determinations by us as to the appropriate sources of funding for our company and our operations.

We do not know what the purchase price for our common stock will be, except for the shares of common stock sold to Lincoln Park in the Initial Purchase, and therefore cannot be certain as to the number of shares we might issue to Lincoln Park under the Purchase Agreement after the date of this prospectus.

6

RISK FACTORS

Investing in shares of our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described under “Risk Factors” in our most recent Annual Report on Form 10-K, and the updates in our Quarterly Reports on Form 10-Q, together with all of the other information appearing in or incorporated by reference into this prospectus before deciding whether to purchase any of the common stock being offered. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of shares of our common stock could decline due to any of these risks, and you may lose all or part of your investment.

Risks Related to This Offering

The sale or issuance of our common stock to Lincoln Park may cause dilution and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall.

On September 28, 2017, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to \$15.0 million of our common stock, subject to certain limitations. Upon the execution of the Purchase Agreement, we issued 100,000 Commitment Shares to Lincoln Park as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement. The remaining shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 30-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement of which this prospectus is a part and that such registration statement remains effective. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some, or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all or some of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

We may not be able to access the full amounts available under the Lincoln Park Purchase Agreement, which could prevent us from accessing the capital we need to continue our operations, which could have an adverse effect on our business.

Our ability to direct Lincoln Park to purchase up to \$15.0 million of shares of our common stock over a 30-month period is subject to the satisfaction of certain conditions, including that the registration statement of which this prospectus is a part is declared effective by the SEC. Thereafter, on any trading day selected by us, we may sell shares of common stock to Lincoln Park in amounts up to 75,000 shares per regular sale (such purchases, Regular Purchases) up to the aggregate commitment of \$15.0 million. If the market price of our common stock is not below \$1.50 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions) on the purchase date,

then the Regular Purchase amount may be increased to 100,000 shares. If the market price is not below \$2.50 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions) on the purchase date, then the Regular Purchase amount may be increased to 200,000 shares. If the market price is not below \$3.00 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions) on the purchase date, then the Regular Purchase amount may be increased to 300,000 shares (subject to adjustment for stock dividends, splits, combinations or similar transactions). Although there are no upper limits on the per share price Lincoln Park may pay to purchase our common stock, we may not sell more than \$1.0 million in shares of

7

common stock to Lincoln Park per any individual Regular Purchase. The purchase price of Regular Purchases will be based on the prevailing market prices of shares of our common stock, which shall be equal to the lesser of the lowest sale price of the common shares during the purchase date and the average of the three lowest closing sale prices of the common shares during the 10 business days prior to the purchase date.

In addition to Regular Purchases, we may in our sole discretion direct Lincoln Park on each purchase date to make accelerated purchases on the following business day up to the lesser of (i) four times the number of shares purchased pursuant to such Regular Purchase or (ii) 30% of the trading volume on the accelerated purchase date at a purchase price equal to the lesser of (a) the closing sale price on the accelerated purchase date and (b) 97% of the accelerated purchase date's volume weighted average price (such purchases, Accelerated Purchases). We cannot submit an Accelerated Purchase notice if the market price of our common stock is below \$0.75 (subject to adjustment for stock dividends, splits, combinations or similar transactions).

In addition to Regular Purchases and Accelerated Purchases described above, we may also direct Lincoln Park, on any business day that the closing price of our common stock is not below \$0.75 (subject to adjustment for stock dividends, splits, combinations or similar transactions), to purchase additional amounts of our common stock, which we refer to as an Additional Purchase whereby, pursuant to each Additional Purchase we may sell up to \$500,000 of common stock in each Additional Purchase notice, provided, however, that (i) at least 15 business days must pass between the Company's delivery of the first Additional Purchase notice to Lincoln Park and our delivery of the second Additional Purchase notice, and (ii) the aggregate amount of all Additional Purchases shall not exceed \$4,000,000. The purchase price for each such Additional Purchase shall be equal to the lower of (i) 97% of the purchase price under a Regular Purchase on the date we give notice for the related Additional Purchase, or (ii) \$3.00 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions).

Depending on the prevailing market price of our common stock, we may not be able to sell shares to Lincoln Park for the maximum \$15.0 million over the term of the Purchase Agreement.

For example, under the rules of The NASDAQ Stock Market LLC, in no event may we issue more than 5,536,743 shares, including the 100,000 Commitment Shares (which we refer to as the Exchange Cap), under the Purchase Agreement unless we obtain stockholder approval or an exception pursuant to the rules of The NASDAQ Stock Market LLC is obtained to issue more than 5,536,743 shares. This limitation will not apply if, at any time the Exchange Cap is reached and at all times thereafter, the average price paid for all shares issued and sold under the Purchase Agreement, excluding the 100,000 Commitment Shares, is equal to or greater than \$1.589 (subject to adjustment for stock dividends, splits, combinations or similar transactions), which was the consolidated closing bid price of our common stock on September 27, 2017, including an increment for the Commitment Shares we issued to Lincoln Park. We are not required or permitted to issue any shares of common stock under the Purchase Agreement if such issuance would breach our obligations under the rules or regulations of The NASDAQ Stock Market LLC. In addition, Lincoln Park will not be required to purchase any shares of our common stock if such sale would result in Lincoln Park's beneficial ownership exceeding 4.99% of the then outstanding shares of our common stock.

Our inability to access a portion or the full amount available under the Purchase Agreement, in the absence of any other financing sources, could have a material adverse effect on our business.

USE OF PROCEEDS

The 100,000 Commitment Shares currently outstanding that are being offered for resale by Lincoln Park, the selling stockholder, will be sold for the account of Lincoln Park. As a result, all proceeds from the sales of the 100,000 shares of common stock currently outstanding and offered for resale hereby will go to Lincoln Park and we will not receive any proceeds from the resale of those shares of common stock by Lincoln Park.

We may receive up to \$15.0 million in gross proceeds if we issue to Lincoln Park all of the additional shares issuable pursuant to the Purchase Agreement. However, we may not be registering for sale or offering for resale under the registration statement of which this prospectus is a part all of the shares issuable pursuant to the Purchase Agreement. As we are unable to predict the timing or amount of potential issuances of all of the shares offered hereby (other than the Commitment Shares), we have not allocated any proceeds of such issuances to any particular purpose. Accordingly, all such proceeds are expected to be used for working capital and general corporate purposes. It is possible that no additional shares will be issued under the Purchase Agreement.

After the issuance of any of the shares issuable under the Purchase Agreement, we would not receive any proceeds from the resale of those shares by Lincoln Park because those shares will be sold for the account of Lincoln Park.

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

THE LINCOLN PARK TRANSACTION

General

On September 28, 2017, we entered into the Purchase Agreement and the Registration Rights Agreement with Lincoln Park. Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to \$15.0 million in the aggregate of our common stock (subject to certain limitations) from time to time over a 30-month period from the date the registration statement of which this prospectus is a part is declared effective by the SEC. Pursuant to the terms of the Registration Rights Agreement, we have filed with the SEC the registration statement of which this prospectus is a part to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the Purchase Agreement. The registration statement of which this prospectus is a part may not register all of the shares issuable pursuant to the Purchase Agreement. To sell additional shares to Lincoln Park under the Purchase Agreement, we may have to file one or more additional registration statements for those additional shares.

Other than 100,000 shares of our common stock that we have already issued to Lincoln Park pursuant to the terms of the Purchase Agreement as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement, we do not have the right to commence any sales to Lincoln Park under the Purchase Agreement until the SEC has declared effective the registration statement of which this prospectus is a part. Thereafter and upon satisfaction of the other conditions set forth in the Purchase Agreement, we may, from time to time and at our sole discretion, direct Lincoln Park to purchase shares of our common stock in amounts up to 75,000 shares on any single business day. We can also increase the amount of our common stock to be purchased under certain circumstances to up to 300,000 shares (subject to adjustment for stock dividends, splits, combinations or similar transactions) but not exceeding \$1.0 million per purchase plus additional “accelerated amounts” and “additional amounts” under certain circumstances. The purchase price per share is based on the market price of our common stock immediately preceding the time of sale as computed under the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

Purchase of Shares Under the Purchase Agreement

Under the Purchase Agreement, on any business day selected by us, we may direct Lincoln Park to purchase up to 75,000 shares of our common stock on any such business day so long as one business day has passed since the last purchase. On any day that the closing sale price of our common stock is not below (a) \$1.50 (subject to adjustment for stock dividends, splits, combinations or similar transactions), the purchase amount may be increased, at our sole discretion, to up to 100,000 shares of our common stock per purchase, (b) \$2.50 (subject to adjustment for stock dividends, splits, combinations or similar transactions), the purchase amount may be increased, at our sole discretion, to up to 200,000 shares of our common stock per purchase, and (c) \$3.00 (subject to adjustment for stock dividends, splits, combinations or similar transactions), the purchase amount may be increased, at our sole discretion, to up to 300,000 shares of our common stock (subject to adjustment for stock dividends, splits, combinations or similar transactions) per purchase, provided in each instance that the amount cannot exceed \$1.0 million (such purchases, Regular Purchases). Lincoln Park will not be required to purchase any shares of our common stock if such sale would result in Lincoln Park’s beneficial ownership exceeding 4.99% of the then outstanding shares of our common stock. The purchase price per share for each such Regular Purchase will be equal to the lower of:

- the lowest sale price for our common stock on the purchase date of such shares; or
- the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares.

In addition to Regular Purchases described above, we may also direct Lincoln Park, on any business day on which we have properly submitted a Regular Purchase notice and the closing price of our common stock is not below \$0.75 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions), to purchase an

additional amount of our common stock (such purchase, an Accelerated Purchase), not to exceed the lesser of:

10

80% of the aggregate shares of our common stock traded during normal trading hours on the purchase date; and four times the number of purchase shares purchased pursuant to the corresponding Regular Purchase. The purchase price per share for each such Accelerated Purchase will be equal to the lower of:

- 97% of the volume weighted average price during (i) the entire trading day on the purchase date, if the volume of shares of our common stock traded on the purchase date has not exceeded a volume maximum calculated in accordance with the Purchase Agreement, or (ii) the portion of the trading day of the purchase date (calculated starting at the beginning of normal trading hours) until such time at which the volume of shares of our common stock traded has exceeded such volume maximum; or
- the closing sale price of our common stock on the purchase date.

In addition to Regular Purchases and Accelerated Purchases described above, we may also direct Lincoln Park, on any business day that the closing price of our common stock is not below \$0.75 (subject to adjustment for stock dividends, splits, combinations or similar transactions), to purchase additional amounts of our common stock, which we refer to as an Additional Purchase whereby, pursuant to each Additional Purchase we may sell up to \$500,000 of common stock in each Additional Purchase notice, provided, however, that (i) at least 15 business days must pass between the Company's delivery of the first Additional Purchase notice to Lincoln Park and our delivery of the second Additional Purchase notice, and (ii) the aggregate amount of all Additional Purchases shall not exceed \$4,000,000. The purchase price for each such Additional Purchase shall be equal to the lower of (i) 97% of the purchase price under a Regular Purchase on the date we give notice for the related Additional Purchase, or (ii) \$3.00 per share (subject to adjustment for stock dividends, splits, combinations or similar transactions).

In the case of Regular Purchases, Accelerated Purchases and Additional Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Under the rules of The NASDAQ Stock Market LLC, in no event may we issue more than 5,536,743 shares, including the 100,000 Commitment Shares (which we refer to as the Exchange Cap), under the Purchase Agreement unless we obtain stockholder approval or an exception pursuant to the rules of The NASDAQ Stock Market LLC is obtained to issue more than 5,536,743 shares. This limitation will not apply if, at any time the Exchange Cap is reached and at all times thereafter, the average price paid for all shares issued and sold under the Purchase Agreement, excluding the 100,000 Commitment Shares, is equal to or greater than \$1.589 (subject to adjustment for stock dividends, splits, combinations or similar transactions), which was the consolidated closing bid price of our common stock on September 27, 2017, including an increment for the Commitment Shares we issued to Lincoln Park. We are not required or permitted to issue any shares of common stock under the Purchase Agreement if such issuance would breach our obligations under the rules or regulations of The NASDAQ Stock Market LLC.

Other than as set forth above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

Events of Default

Events of default under the Purchase Agreement include the following:

- the effectiveness of the registration statement of which this prospectus is a part, or any future registration statement relating to the resale of shares issuable pursuant to the Purchase Agreement, lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park of our common stock offered hereby, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period;

- suspension by our principal market of our common stock from trading for a period of one full business day;
- the de-listing of our common stock from the NASDAQ Capital Market, provided our common stock is not immediately thereafter trading on The NASDAQ Global Market, The NASDAQ Global Select Market, the NYSE American, the NYSE Arca, the OTC Bulletin Board or OTC Markets (or nationally recognized successor to any of the foregoing);
- our transfer agent's failure for three business days to issue to Lincoln Park shares of our common stock which Lincoln Park is entitled to receive under the Purchase Agreement;
- our breach of any representation, warranty, covenant or other term or condition contained in the Purchase Agreement or any related agreement which would reasonably be expected to have a material adverse effect on us, subject to a cure period of five business days;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us;
- if at any time we are not eligible to transfer our common stock electronically; or
- if at any time the Exchange Cap is reached (to the extent the Exchange Cap is applicable).

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of default set forth above. During an event of default, all of which are outside of Lincoln Park's control, we cannot initiate any Regular Purchases or Accelerated Purchases under the Purchase Agreement.

Our Termination Rights

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give notice to Lincoln Park to terminate the Purchase Agreement. In the event of bankruptcy proceedings by or against us, the Purchase Agreement will automatically terminate without action of any party.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

No Variable Rate Transactions

We agreed with Lincoln Park that we will not enter into any "variable rate" transactions with any third party from the date of the Purchase Agreement until the 30-month anniversary of the date of the Purchase Agreement, subject to certain exceptions set forth in the Purchase Agreement. Additionally, we agreed with Lincoln Park that we will not effect any issuance of shares of our common stock in any "continuous offering" in which we enter into any agreement, including, but not limited to, an equity line of credit, whereby we may sell securities at a future determined price until the earlier of the expiration of the 30-month period following the date of the Purchase Agreement or the six (6) month anniversary of the date on which Lincoln Park has purchased the full \$15.0 million of shares of common stock pursuant to the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

All shares of common stock registered in this offering are expected to be freely tradable. It is anticipated that shares registered in this offering will be sold by us to Lincoln Park over a period of up to 30 months commencing on the date that the registration statement of which this prospectus is a part becomes effective. The resale by Lincoln Park of a significant amount of shares registered in this offering at any given time, or the perception that these sales may occur, could cause the market price of our common stock to decline and to be highly volatile. Lincoln Park may ultimately purchase all, some or none of the shares of common stock not yet issued but registered in this offering. If

we sell these shares to Lincoln Park, Lincoln Park may resell all or some of such shares. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares to Lincoln Park under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any sales of our shares to Lincoln Park and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Lincoln Park to purchase up to \$15.0 million of our common stock. We have registered only a portion of the shares issuable under the Purchase Agreement and, therefore, we may seek to issue and sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus. If we choose to do so, we must first register for resale under the Securities Act any such additional shares, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Lincoln Park under this prospectus is dependent upon the number of shares we direct Lincoln Park to purchase under the Purchase Agreement.

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase ⁽¹⁾	Percentage of Outstanding Shares After Giving Effect to the Issuance to Lincoln Park ⁽²⁾	Additional Proceeds from the Sale of Registered Shares to Lincoln Park Under the Purchase Agreement
\$0.75	6,773,975	19%	\$5,080,481
\$1.00	6,773,975	19%	\$6,773,975
\$2.00	6,773,975	19%	\$13,547,950
\$2.29 (3)	6,550,218	19%	\$15,000,000
\$3.00	5,000,000	15%	\$15,000,000
\$4.00	3,750,000	12%	\$15,000,000

(1)Although the Purchase Agreement provides that we may sell up to \$15.0 million of our common stock to Lincoln Park, we are only registering 6,873,975 shares (inclusive of the 100,000 commitment shares issued to Lincoln Park) under this prospectus, which may or may not cover all of the shares we ultimately sell to Lincoln Park under the Purchase Agreement. The number of registered shares to be issued as set forth in this column excludes the 100,000 commitment shares previously issued and registered because no proceeds will be attributable to such shares.

(2)The denominator is based on 28,498,847 shares outstanding as of October 12, 2017, and the number of shares set forth in the adjacent column which we would have sold to Lincoln Park, assuming the purchase price in the adjacent column. The numerator is based on the number of shares issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column. The number of shares in such column does not include shares that may be issued to Lincoln Park under the Purchase Agreement which are not registered in this offering. The table

does not give effect to the prohibition contained in the Purchase Agreement that prevents us from selling and issuing to Lincoln Park shares such that, after giving effect to such sale and issuance, Lincoln Park and its affiliates would beneficially own more than 4.99% of the then outstanding shares of our common stock or the Exchange Cap.

(3)The closing sales price of our common stock, as reported by The NASDAQ Stock Market LLC, on October 12, 2017 was \$2.29.

SELLING STOCKHOLDER

The selling stockholder may from time to time offer and sell any or all of the shares of our common stock set forth below pursuant to this prospectus. When we refer to the “selling stockholder” in this prospectus, we mean Lincoln Park Capital Fund, LLC, and its respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of the selling stockholder’s interests in shares of our common stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of the selling stockholder for whom we are registering shares for sale to the public, the number of shares of common stock beneficially owned by the selling stockholder prior to this offering, the total number of shares of common stock that the selling stockholder may offer pursuant to this prospectus and the number of shares of common stock that the selling stockholder will beneficially own after this offering. The percentages in the table below reflect the shares beneficially owned by the selling stockholder as a percentage of the 28,498,847 shares of common stock outstanding as of October 12, 2017, adjusted as required by rules promulgated by the SEC. These rules attribute beneficial ownership of shares of common stock issuable upon conversion of convertible securities or upon exercise of warrants that are convertible or exercisable, as applicable, either immediately or on or before the date that is 60 days after October 12, 2017. These shares are deemed to be outstanding and beneficially owned by the person holding such convertible securities or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Except as noted below, the selling stockholder does not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates and the selling stockholder is not or was not affiliated with registered broker-dealers.

Based on the information provided to us by the selling stockholder, assuming that the selling stockholder sells all of the shares of our common stock beneficially owned by it that have been registered by us and does not acquire any additional shares during the offering, the selling stockholder will not own any shares other than those appearing in the column entitled “Beneficial Ownership After This Offering.” We cannot advise you as to whether the selling stockholder will in fact sell any or all of such shares of common stock. In addition, the selling stockholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which it provided the information set forth in the table below.

Name	Beneficial Ownership		Shares of Common Stock Being Offered	Beneficial Ownership After this Offering (1)	
	Number of Shares Beneficially Owned Before this Offering	%		Number of Shares	%
Lincoln Park Capital Fund, LLC (2)	1,302,982 (3)	4.49%	6,873,975	1,202,982	3.36%

- (1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although the selling stockholder is under no obligation known to us to sell any shares of common stock at this time.
- (2) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus filed with the SEC in connection with the transactions contemplated under the Purchase Agreement. Lincoln Park Capital, LLC is not a licensed broker dealer or an affiliate of a licensed broker dealer. The address of the selling stockholder is 440 North Wells, Suite 410, Chicago, IL 60654.

14

(3) As of the date of this prospectus, 100,000 shares of our common stock have been acquired by Lincoln Park under the Purchase Agreement, consisting of shares we issued to Lincoln Park as a commitment fee and 655,982 shares of common stock Lincoln Park has acquired in other purchases. Lincoln Park also holds warrants to purchase 547,000 shares of common stock that are currently exercisable, which warrants are subject to a blocker provision that restricts the exercise of the warrants if, as a result of such exercise, the warrant holder, together with its affiliates and any other person whose beneficial ownership of common

stock would be aggregated with the warrant holder's for purposes of Section 13(d) of the Exchange Act, would beneficially own in excess of 4.99% of our then issued and outstanding shares of common stock (including the shares of common stock issuable upon such exercise). Lincoln Park also holds an additional warrant to purchase 1,012,500 shares of common stock that will become exercisable on December 19, 2017, and this warrant is also subject to a blocker provision that restricts the exercise of the warrant if, as a result of such exercise, the warrant holder, together with its affiliates and any other person whose beneficial ownership of common stock would be aggregated with the warrant holder's for purposes of Section 13(d) of the Exchange Act, would beneficially own in excess of 4.99% of our then issued and outstanding shares of common stock (including the shares of common stock issuable upon such exercise). This warrant is not included in the calculations in this table because it is not exercisable within 60 days of October 12, 2017. We may elect in our sole discretion to sell to Lincoln Park up to an additional 6,773,975 shares under the Purchase Agreement (subject to the 19.99% limitation described in the section of this prospectus entitled "The Lincoln Park Transaction— Purchase of Shares Under the Purchase Agreement"), but Lincoln Park does not presently beneficially own those shares as determined in accordance with the rules of the SEC.

PLAN OF DISTRIBUTION

An aggregate of up to 6,873,975 shares of our common stock may be offered by this prospectus by Lincoln Park pursuant to the Purchase Agreement. The common stock may be sold or distributed from time to time by Lincoln Park directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus could be affected in one or more of the following methods:

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

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

Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park has informed us that it intends to use an unaffiliated broker-dealer to effectuate all sales, if any, of the common stock that it may purchase from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that each such broker-dealer will receive commissions from Lincoln Park that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from Lincoln Park and/or purchasers of the common stock for whom the broker-dealers may act as agent. The compensation paid to a particular broker-dealer may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters or dealers and any compensation from Lincoln Park, and any other required information.

We will pay the expenses incident to the registration, offering, and sale of the shares to Lincoln Park. We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Lincoln Park has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Lincoln Park specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Lincoln Park has represented to us that at no time prior to the Purchase Agreement has it or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale

16

(as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Lincoln Park has agreed that during the term of the Purchase Agreement, it, its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

We have advised Lincoln Park that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes Lincoln Park, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the date that all shares offered by this prospectus have been sold by Lincoln Park.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes the most important terms of our capital stock. Because it is only a summary of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, it does not contain all of the information that may be important to you. For a complete description of the matters set forth in this “Description of Capital Stock,” you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and the Registration Rights Agreement, each of which are included as exhibits to the registration statement of which this prospectus is a part, and to the applicable provisions of Delaware law. Our authorized capital stock consists of 300,000,000 shares of common stock, \$0.00001 par value per share, and 10,000,000 shares of undesignated preferred stock, \$0.00001 par value per share.

As of October 12, 2017, there were 28,498,847 shares of our common stock outstanding, held by approximately 18 stockholders of record, not including beneficial holders whose shares are held in names other than their own. Our board of directors is authorized, without stockholder approval except as required by the rules and listings standards of The Nasdaq Stock Market LLC, to issue additional shares of our capital stock.

Common Stock

Dividend Rights

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine.

Voting Rights

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders. Our amended and restated certificate of incorporation does not provide for cumulative voting for the election of directors, and it establishes a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election at each annual meeting of our stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights, and is not subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

If we become subject to a liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Fully Paid and Non-Assessable

All of the outstanding shares of our common stock are, and the shares of our common stock to be issued pursuant to this prospectus or which may be issued upon conversion of or exchange for preferred stock or debt securities that provide for conversion or exchange, or upon exercise of warrants or units to be issued pursuant to this prospectus, will be, fully paid and non-assessable.

Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue up to 10,000,000 shares of our preferred stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Our board of

18

directors can also increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock.

Equity Awards

As of October 12, 2017, options to purchase 1,589,894 shares of our common stock with a weighted-average exercise price of \$2.67 per share were outstanding, restricted stock awards representing an aggregate of 245,096 shares of our common stock were unvested and outstanding, and restricted stock units representing 56,250 shares of our common stock were outstanding.

Outstanding Warrants

As of October 12, 2017, warrants to purchase an aggregate of 12,479,837 shares of our common stock with a weighted-average exercise price of \$1.51 per share were outstanding. Our warrants to purchase an aggregate of 8,625,000 shares of our common stock issued in April 2016 are listed on the Nasdaq Capital Market under the symbol "VKTXW".

Ligand Convertible Note

As of September 30, 2017, the aggregate outstanding principal amount under that certain Secured Convertible Promissory Note issued by us to Ligand on May 21, 2014 or the Note, plus all accrued and previously unpaid interest thereon, was approximately \$1,926,490. We may repay any portion of the outstanding principal amount of the loans under the Note, plus accrued and previously unpaid interest thereon, by delivering a notice to Ligand, or the Additional Repayment Notice, specifying the amount that we wish to repay, or the Additional Payment Amount. Ligand will have five days to elect to receive the Additional Payment Amount in cash, our equity securities or a combination of cash and our equity securities. If Ligand does not make an election within such five-day period, the form of the Additional Payment Amount will be at our sole election and discretion, subject to the number of equity securities being reduced to the extent that the issuance of such equity securities would increase Ligand's beneficial ownership of our common stock to greater than 49.9%. To the extent that any portion of an Additional Payment Amount will be paid in the form of our equity securities, we will issue to Ligand, with respect to the portion of the Additional Payment Amount that will be paid in our equity securities, such number of shares of our common stock equal to the greater of (a) such number of shares of common stock equal to the quotient obtained by dividing the Additional Payment Amount by the volume weighted-average closing price of our common stock for the 30 days prior to the date we deliver the Additional Repayment Notice, and (b) such number of shares of common stock equal to the quotient obtained by dividing the Additional Payment Amount by \$8.00 (subject to adjustment for stock dividends, splits, combinations or similar transactions). Each \$1.00 of any Additional Payment Amount will reduce the amount of accrued and unpaid interest and then unpaid principal amount under the Note by \$0.50.

Registration Rights

On September 28, 2017, we entered into the Registration Rights Agreement with Lincoln Park pursuant to which we agreed to file with the SEC one or more registration statements as necessary to register for sale under the Securities Act shares of common stock that we issued or may issue to Lincoln Park under the Purchase Agreement. We are registering 6,873,975 of such shares of common stock for resale pursuant to the registration statement of which this

prospectus is a part as required by the Registration Rights Agreement.

On May 21, 2014, we entered into a Registration Rights Agreement with Ligand, as amended, or the Ligand Registration Rights Agreement, pursuant to which we agreed, among other things, that we would file with the Securities and Exchange Commission, by no later than January 23, 2017, a Registration Statement on Form S-1 under the Securities Act that covers the resale of (1) the securities issued by us to Ligand pursuant to the Master License Agreement we previously entered into with Ligand and the securities issuable by us to Ligand pursuant to the Note, or, collectively, the Viking Securities, (2) the shares of our common stock issued or issuable upon conversion of the Viking Securities, if applicable, and (3) the shares of our common stock issued as a dividend or other distribution with respect to, in exchange for or in replacement of the Viking Securities.

We issued to Laidlaw & Company (UK) Ltd., the representative of the underwriters for our initial public offering as additional compensation a warrant, or the Representative's Warrant, to purchase an aggregate of 82,500 shares of our common stock. Pursuant to the terms of the Representative's Warrant, the holders of 51% of the shares issuable upon exercise of the Representative's Warrant, or the Registrable Warrant Shares, have the right to demand, on one occasion, the registration by us of the Registrable Warrant Shares. Additionally, we have agreed under the terms of the Representative's Warrant to provide the holder of the Registrable Warrant Shares with certain piggyback registration rights.

On February 8, 2017, we issued to PoC Capital, LLC, or PoC Capital an aggregate of 1,286,173 shares of common stock, or the PoC Shares pursuant to a stock purchase agreement. Under the terms of such stock purchase agreement, we agreed to file with the SEC, by no later than February 23, 2017, a Registration Statement under the Securities Act that covers the resale of all of the PoC Shares.

We filed a registration statement registering the Viking Securities, the Registrable Warrant Shares and the PoC Shares for resale on February 14, 2017, and the registration statement was declared effective on March 27, 2017.

Anti-Takeover Provisions

Certain provisions of Delaware law, along with certain provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, may have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of our company to first negotiate with our board of directors. However, these provisions could have the effect of delaying, discouraging or preventing attempts to acquire us, which could deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Delaware Law

We are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware, or the DGCL, regulating corporate takeovers. In general, those provisions prohibit a public Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the transaction is approved by the board of directors before the date the interested stockholder attained that status;

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or

- on or after the date of the transaction, the transaction is approved by the board of directors and authorized at a meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

• In general, Section 203 of the DGCL defines a business combination to include the following:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;

subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;

20

or

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 of the DGCL defines an interested stockholder as any entity or person beneficially owning, or who within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any such entity or person.

A Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of, and do not currently intend to opt out of, this provision. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire our company.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Our amended and restated certificate of incorporation and our amended and restated bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes relating to the control of our board of directors or management team, including the following:

Board of Directors Vacancies. Our amended and restated certificate of incorporation and amended and restated bylaws authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors can be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors and promotes continuity of management.

Classified Board. Our amended and restated certificate of incorporation and amended and restated bylaws provide that our board of directors is classified into three classes of directors. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of our company as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.

Stockholder Action; Special Meeting of Stockholders. Our amended and restated certificate of incorporation provides that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our amended and restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our amended and restated bylaws. Our amended and restated bylaws further provide that special meetings of our stockholders may be called only by a majority of our board of directors, the Chairperson of our board of directors, our Chief Executive Officer or our President, thus prohibiting a stockholder (in the capacity as a stockholder) from calling a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

-

Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our amended and restated bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from

21

conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

•**No Cumulative Voting.** The DGCL provides that stockholders may cumulate votes in the election of directors if the corporation's certificate of incorporation allows for such mechanism. Our amended and restated certificate of incorporation does not provide for cumulative voting.

•**Directors Removed Only for Cause.** Our amended and restated certificate of incorporation provides that stockholders may remove directors only for cause.

•**Exclusive Jurisdiction for Certain Actions.** Our amended and restated bylaws require, to the fullest extent permitted by law, that derivative actions brought in our name, actions against our directors, officers and employees for breach of fiduciary duty and other similar actions be brought only in the Court of Chancery in the State of Delaware, unless we otherwise consent. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

•**Amendment of Charter Provisions.** Any amendment of the above provisions in our amended and restated certificate of incorporation, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the affirmative vote of the holders of at least 66 2/3% of our then outstanding common stock.

•**Issuance of Undesignated Preferred Stock.** Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock would enable our board of directors to render more difficult or to discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or other means.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and the warrants we issued in April 2016 is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, NY 11219.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "VKTX". Our warrants issued in April 2016 are listed on the Nasdaq Capital Market under the symbol "VKTXW".

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Paul Hastings LLP, Palo Alto, California.

EXPERTS

Marcum LLP, independent registered public accounting firm, has audited our financial statements included in our annual report on Form 10-K for the year ended December 31, 2016, which is incorporated by reference into this prospectus and elsewhere in the registration statement of which this prospectus is a part. Our financial statements are incorporated by reference in reliance on Marcum LLP's report (which includes an explanatory paragraph as to Viking Therapeutics, Inc.'s ability to continue as a going concern), given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock being offered by this prospectus. This prospectus does not contain all of the information in the registration statement of which this prospectus is a part and the exhibits to such registration statement. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement of which this prospectus is a part and the exhibits to such registration statement. Statements contained in this prospectus as to the contents of any contract or any other document are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement of which this prospectus is a part. Each of these statements is qualified in all respects by this reference.

You may read and copy the registration statement of which this prospectus is a part, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including Viking Therapeutics, Inc. The SEC's Internet site can be found at <http://www.sec.gov>. You may also request a copy of these filings, at no cost, by writing us at 12340 El Camino Real, Suite 250, San Diego, California 92130 or telephoning us at (858) 704-4660.

We are subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, and, in accordance with this law, file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www.vikingtherapeutics.com. You may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and persons controlling us pursuant to the provisions described in Item 14 of the registration statement of which this prospectus is a part or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than our payment of expenses incurred or paid by our directors, officers, or controlling persons in the successful defense of any action, suit, or proceeding) is asserted by our directors, officers,

or controlling persons in connection with the common stock being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of the issue.

23

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus. We are incorporating by reference the documents listed below, which we have already filed with the SEC:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the SEC on March 21, 2017;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, filed with the SEC on May 10, 2017;
- our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed with the SEC on August 9, 2017;
- our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 7, 2017;
- our Current Reports on Form 8-K filed with the SEC on February 14, 2017, May 24, 2017, June 14, 2017, June 19, 2017, July 6, 2017 and September 29, 2017; and
- the description of our common stock set forth in the Registrant's Registration Statement on Form 8-A (File No. 001-37355), filed with the SEC on April 23, 2015, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and such future filings will become a part of this prospectus from the respective dates that such documents are filed with the SEC. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated or deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Documents incorporated by reference are available from us, without charge. You may obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone at the following address:

Viking Therapeutics, Inc.

12340 El Camino Real, Suite 250

San Diego, California 92130

Telephone: (858) 704-4660

You also may access these filings on our Internet site at www.vikingtherapeutics.com. Our web site and the information contained on that site, or connected to that site, are not incorporated into this prospectus or the registration statement of which this prospectus is a part.

This prospectus is part of a registration statement we filed with the SEC. We have incorporated exhibits into the registration statement of which this prospectus is a part. You should read the exhibits carefully for provisions that may be important to you.

Neither we nor the selling stockholder authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but

only under the circumstances and in the jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. We are not, and the selling stockholder is not, making an offer of these securities in any jurisdiction where such offer is not permitted.

6,873,975 Shares

Common Stock

PROSPECTUS

October 26, 2017