

Kindred Biosciences, Inc.
Form S-1/A
December 09, 2013
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As filed with the Securities and Exchange Commission on December 9, 2013

Registration No. 333-192242

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

AMENDMENT NO. 4
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

KINDRED BIOSCIENCES, INC.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	2834 (Primary Standard Industrial Classification Code Number) 1499 Bayshore Highway, Suite 226 Burlingame, California 94010	46-1160142 (I.R.S. Employer Identification No.)
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(650) 701-7901

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

Richard Chin, M.D.

President and Chief Executive Officer

Kindred Biosciences, Inc.

1499 Bayshore Highway, Suite 226

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(650) 701-7901

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

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. "

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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

SUBJECT TO COMPLETION DATED DECEMBER 9, 2013

PRELIMINARY PROSPECTUS

5,750,000 Shares

KINDRED BIOSCIENCES, INC.

Common Stock

\$ per share

This is the initial public offering of Kindred Biosciences, Inc. We are offering 5,750,000 shares of our common stock. Prior to this offering, there has been no public market for our common stock. We estimate that the initial public offering price will be between \$6.00 and \$8.00 per share.

Our common stock has been approved for listing on the NASDAQ Capital Market under the symbol KIN, subject to official notice of issuance.

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.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page 12.

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

(1) We refer you to Underwriting beginning on page 116 of this prospectus for additional information regarding underwriter compensation.

We have granted the underwriters a 30-day option to purchase a total of up to 862,500 additional shares of common stock.

The underwriters expect to deliver shares of common stock to purchasers on _____, 2013.

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.

BMO Capital Markets

Guggenheim Securities

Roth Capital Partners

The date of this prospectus is _____, 2013.

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Until _____, 201 (25 days after the commencement of this offering), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

We have not, and the underwriters have not, 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.

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For investors outside the United States: We have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

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Kindred Biosciences, Kindred Bio, CereKin, AtoKin, SentiKin and Best Medicines for Our Best Friends are six of our trademarks that are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear without the ® and symbols, but those references are not intended to indicate that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the section in this prospectus entitled Risk Factors beginning on page 12 and our financial statements and the related notes thereto appearing at the end of this prospectus, before making an investment decision.

As used in this prospectus, references to we, us, our, our company and Kindred refer to Kindred Biosciences, Inc. References to product candidates, drugs, and compounds refer to both small molecules and biologics.

Overview

Our Company

We are a development stage biopharmaceutical company focused on saving and improving the lives of pets. Our mission is to bring to our pets the same kinds of safe and effective medicines that our human family members enjoy. Our core strategy is to identify compounds and targets that have already demonstrated safety and efficacy in humans and to develop therapeutics based on these validated compounds and targets for pets, primarily dogs, cats and horses. We believe this approach will lead to shorter development times and higher approval rates than pursuing new, non-validated compounds and targets. We have three product candidates that are in, or will shortly enter, pivotal field efficacy trials, or pivotal trials, and expect approval of one or more of these product candidates in 2015. In addition, we have seven other product candidates, including several biologics, in various stages of development. We believe there are significant unmet medical needs for pets, and that the pet therapeutics segment of the animal health industry is likely to grow substantially as new therapeutics are identified, developed and marketed specifically for pets.

Our lead product candidates are CereKin for the treatment of osteoarthritis pain and inflammation in dogs, AtoKin for the treatment of atopic dermatitis in dogs, and SentiKin for the treatment of post-operative pain in dogs. All of these product candidates, if approved, would be first-in-class drugs in the pet therapeutic market.

In August 2013, we initiated the pivotal trial for CereKin, and we expect to initiate the pivotal trials for AtoKin and SentiKin by early 2014. We have received from the U.S. Food and Drug Administration, or FDA, Protocol Concurrences for CereKin and AtoKin, and expect to receive a similar Protocol Concurrence for SentiKin. A Protocol Concurrence in animal drug development is analogous to a Special Protocol Assessment in human drug development, and means that the FDA fundamentally agrees with the design, execution and analysis proposed in a protocol, and will not later alter its perspective on these issues unless public or animal health concerns appear that were not recognized at the time of protocol assessment. Assuming positive results from these trials, we intend to submit New Animal Drug Applications, or NADAs, for marketing approval of CereKin, AtoKin and SentiKin in the United States starting in 2014, and anticipate potential marketing approvals and product launches in the second half of 2015. If approved in the United States, we may make similar regulatory filings for these products with the European Medicines Agency, or EMA, for marketing approval in the European Union, or EU.

We are currently developing product candidates for ten additional indications, with the potential to launch two or more products annually for several years starting in the second half of 2015. We plan to commercialize our products in the United States through a direct sales force complemented by selected distributor relationships, and in the EU through distributors and other third parties. Because we seek to identify product candidates that are not protected by third-party patents, we typically do not need to obtain licenses or make any upfront, milestone or royalty payments in

connection with our product candidates.

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Relative to human drug development, the development of pet therapeutics is generally faster, more predictable and less expensive, since it requires fewer clinical studies involving fewer subjects and can be conducted directly in the target species. For example, studies that are typically required for approval of human drugs such as QTc studies, which detect cardiac irregularities, elderly patient studies, renal impairment studies, hepatic impairment studies or costly, long-term genotoxicity studies are not required for pet therapeutics. Based on our progress since inception in September 2012, we believe we can develop pet therapeutics from the Investigational New Animal Drug, or INAD, filing with the FDA to marketing approval in three to five years at a cost of approximately \$3 million to \$5 million per product candidate. The lower cost associated with the development of pet therapeutics permits us to pursue multiple product candidates simultaneously and avoid the binary outcome associated with some human biotechnology companies' development of a single lead therapy. The active ingredients in many of our small molecule product candidates also have established chemistry, manufacturing and controls, or CMC, which can be important gating factors in the regulatory approval process. As a result, we usually do not need to invest further in active pharmaceutical ingredient, or API, process development to comply with good manufacturing practices, or GMP, standards for our small molecule product candidates.

Our management team's extensive experience in both human and animal drug development has enabled us to quickly establish our product pipeline, obtain Protocol Concurrences from the FDA for CereKin and AtoKin and commence the pivotal trial of CereKin. Members of our management team also have extensive experience in biologics, including in the development of antibodies such as Lucentis, Tysabri, Xolair, and Rituxan.

Richard Chin, M.D., our co-founder and Chief Executive Officer, was previously Head of Clinical Research for the Biotherapeutics Unit at Genentech, Inc., where he oversaw Phase I through Phase IV clinical programs for all products, except oncology. Kevin Schultz, D.V.M., Ph.D., our Chief Scientific Officer, was one of the founding team members of Merial Limited, a leading veterinary medicine company, and served as Merial's Chief Scientific Officer, where he oversaw development of numerous animal therapeutics and vaccines, as well as Frontline Plus, one of the best-selling pet therapeutic products in history. Stephen Sundlof, D.V.M., Ph.D., our Senior Vice President of Regulatory Affairs, was the Director of the FDA's Center for Veterinary Medicine, or CVM, from 1994 to 2008, where he oversaw all veterinary products regulated by the FDA. Denise Bevers, our co-founder and Chief Operating Officer, has over 20 years of experience in clinical operations and medical affairs.

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Product Pipeline

Our current product pipeline consists of small molecules and biologics in various stages of development for a range of indications in dogs, cats and horses. Small molecules are generally chemical compounds administered orally and biologics are generally proteins and vaccines administered by injection. The USDA's Center for Veterinary Biologics and the FDA's Center for Veterinary Medicine have a memorandum of understanding under which animal products are to be regulated by the USDA as biologics, if they are intended for use to diagnose, cure, mitigate, treat, or prevent disease in animals and they work primarily through an immune process, or by the FDA as drugs, if they are intended for use in the diagnosis, cure, mitigation, treatment, or prevention of animal disease if the primary mechanism of action is not immunological or is undefined. Although we believe that most of our current animal biologics will be regulated by the USDA based on their mechanisms of action, it is possible that the agencies may determine that one or more of our animal biologics will be regulated by the FDA instead of the USDA.

The following table illustrates ten product candidates that we are developing for 13 indications. References in the table to "PLA" mean Application for United States Veterinary Biological Product License with the USDA, also called a Product License Agreement.

In addition to our product candidates currently in development, we have identified over 30 potential small molecule and biologic therapeutics that are in the pre-INAD stage. We utilize a rigorous screening and review

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process to identify compounds and targets that have demonstrated safety and efficacy in humans and would address unmet medical needs in veterinary medicine if formulated for use in pets.

Pet Therapeutics Market

U.S. consumers spent an estimated \$53 billion on their pets in 2012, according to the American Pet Products Association, or APPA, an increase of 38% from 2006. The veterinary care segment has been among the fastest growing segments of the overall U.S. pet market. This segment accounted for an estimated \$13.7 billion in 2012, an increase of 48% from 2006. In 2011, approximately \$4.3 billion was spent on parasiticides and vaccines and approximately \$2.4 billion was spent on pet therapeutics, our target segment. We believe several factors, including the increased longevity of pets and willingness of pet owners to treat their pets with medications, will contribute to continued growth in the spending on pet therapeutics.

Despite the growing market, there are relatively few therapeutic treatment options approved for use in pets as compared to humans. As a result, veterinarians often resort to prescribing products approved for use in humans but not approved, formulated or even formally studied in pets. Veterinarians must then rely upon trial and error or untested rules of thumb to assess the proper dosage needed for the human product to be effective in the particular species without undue risk of side effects. The veterinarian also must find a way to administer the human product in animals and determine the amount actually dosed, which are important considerations in treating pets with human drugs. We believe that therapeutics specifically developed for pets can extend and improve the quality of the lives of pets, help veterinarians achieve improved medical outcomes and make the process of administering therapeutics to pets much more convenient.

Although there are many similarities between the businesses of developing and commercializing therapeutics for pets and for humans, there also are a number of important differences, including:

Faster, less expensive and more predictable development. The development of pet therapeutics requires fewer clinical studies in fewer subject animals than human therapeutics and, unlike human drug development, can be conducted directly in the target animals. We believe our strategy of selecting compounds and targets with demonstrated efficacy and safety in humans enhances the predictability of results and probability of success of our pivotal trials relative to compounds and targets that have not been previously validated.

Role and incentives for veterinary practices. In the United States, veterinarians generally serve the dual role of doctor and pharmacist, and pet owners typically purchase medicines directly from their veterinarians. Therapeutics specifically developed for pets enable veterinarians to provide potentially superior treatment options, while also increasing revenue from the sale of these therapeutics.

Primarily private-pay nature of veterinary market. Pet owners in the United States generally pay for pet therapeutics out-of-pocket, and less than 5% of pet owners currently purchase pet insurance. As a result, pet owners must make decisions regarding available treatment options primarily on the advice of their veterinarians, rather than on the treatment options' eligibility for reimbursement by insurance companies or government payers. We believe this results in less pricing pressure compared to human healthcare, although the limited adoption of insurance may also reduce pet owners' ability to pay for therapeutics recommended

by their veterinarians.

Less generic competition and strong brand loyalty. There is less generic competition in the pet therapeutics industry than in the human therapeutics industry. Approximately 14% of veterinary drugs face generic competition, and the percentage of generic prescriptions in the veterinary space is only 7% as compared to approximately 81% for human drugs. We believe that stronger brand loyalty and lack of mandatory generic drug substitution, as is the case for human pharmaceuticals, partially explains the low penetration of generics in veterinary medicine.

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Lead Product Candidates

CereKin

CereKin is an oral, chewable, beef-flavored formulation of diacerein, an interleukin-1 beta inhibitor that we are developing for osteoarthritis pain and inflammation in dogs. Human drugs containing the active ingredient in CereKin are marketed extensively outside the United States for the treatment of osteoarthritis and are generally considered to be safe, except for certain gastrointestinal side effects and rare idiosyncratic skin and liver side effects in humans, for which the drug is undergoing review in the EU. These side effects appear to be less frequent or absent in dogs. Several published studies have shown that the active ingredient is effective in treating canine arthritis. We initiated the pivotal trial for CereKin in August 2013 under a Protocol Concurrence with the FDA. We expect to have data from the pivotal trial in the second quarter of 2014 and, if positive, intend to submit a NADA in mid-2014, with potential marketing approval in the second half of 2015.

Canine osteoarthritis is a chronic, progressive, degenerative joint disease, diagnosed in an estimated 20% of dogs over the age of one. Non-steroidal anti-inflammatory drugs, or NSAIDs, are the only approved treatment for canine osteoarthritis (other than steroids and a vitamin-mineral based drug), but some dogs have a sensitivity to NSAIDs that results in renal, hepatic or gastrointestinal, or GI, toxicity and, in extreme cases, death. As a result, dogs that are prescribed NSAIDs must often be monitored with baseline and periodic blood tests, and up to approximately 50% of dogs remain untreated or cannot be treated in chronic cases. If approved, we believe CereKin will be effective in the treatment of canine osteoarthritis pain and inflammation, without the need for blood monitoring tests. In humans, the active ingredient in CereKin has demonstrated added effectiveness when combined with NSAIDs versus NSAIDs alone. Based on published data, we expect CereKin may have disease-modifying effects in dogs and also may protect against NSAID-induced GI tract problems.

AtoKin

AtoKin is a high-dose, oral, chewable, beef-flavored formulation of fexofenadine that we are developing for atopic dermatitis in dogs. The active ingredient in AtoKin is a potent and selective antihistamine that is approved for allergic diseases in humans. Published data indicate that the active ingredient is as effective as steroids in treating canine atopic dermatitis. We have been granted a Protocol Concurrence by the FDA for the pivotal trial of AtoKin, which we expect to initiate by early 2014. We expect to receive data from the trial in late 2014 and, if positive, we intend to submit a NADA in late 2014, with potential marketing approval in late 2015.

Atopic dermatitis is a common, potentially chronic, allergic skin disease that affects up to 10% of all dogs. Dogs with atopic dermatitis often suffer from pruritus, or severe itching, hair loss, tearing of the skin from deep scratching, frequent licking of their paws and excessive tear production. While currently approved drugs such as corticosteroids and oral cyclosporine are effective, they all suppress the dog's immune system, potentially leading to serious infections. Corticosteroids also have other side effects, including osteoporosis, endocrine problems, cataracts and frequent urination. We believe that, if approved, AtoKin could be effective as both a first-line therapy and as a long-term maintenance therapy for chronic atopic dermatitis in dogs, with a safety profile superior to currently approved therapeutics.

SentiKin

SentiKin is an oral, non-NSAID, non-opioid analgesic, formulation of flupirtine that we are developing for management of post-operative pain in dogs, cats and horses. The active ingredient in SentiKin is approved for the treatment of pain in humans in multiple countries outside the United States and has demonstrated potency comparable

to tramadol. Published studies suggest that the active ingredient is effective in treating canine pain. We are currently negotiating a Protocol Concurrence with the FDA for the pivotal trial for SentiKin for post-operative pain in dogs, and we intend to initiate the trial by early 2014. We expect to receive data from the trial in

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late 2014 and, if positive, we intend to submit a NADA in late 2014, with potential marketing approval in late 2015.

There is no standard of care for the use of pain medications following dog surgeries, and the only systemic drugs approved for treatment of post-operative pain in dogs are NSAIDs, fentanyl and pentazocine. NSAIDs are generally less effective than opioids in controlling pain and have other well-documented side effects described above in our discussion regarding CereKin. Fentanyl is a controlled narcotic drug, and pets are often kept in the hospital while receiving fentanyl. Pentazocine is a controlled narcotic drug, not widely used in dogs. We believe that, if approved, SentiKin may provide post-operative pain relief that is superior to NSAIDs and comparable to some opioids, without the potential for opioid addiction or the risk of possible diversion and abuse by pet owners.

Business Strategy

Our mission is to bring to pets the same kinds of safe and effective medicines that our human family members enjoy. Key elements of our business strategy are as follows:

advance CereKin, AtoKin, SentiKin and our other product candidates through development and continue to focus on execution of cost-effective research and development;

leverage our antibody and biologics experience;

leverage our current product pipeline in additional animal species;

expand our pipeline with additional product candidates; and

commercialize our products with our own direct sales force in the United States and with distributors in other regions.

Risks Related to Our Business

Our ability to successfully implement our business strategy is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary. These risks include, among others:

we have a limited operating history, are not profitable and may never become profitable;

we will have no material product revenue for the foreseeable future, and we may need to raise additional capital to achieve our goals;

we are substantially dependent on the success of our current lead product candidates, and cannot be certain that any of them will be approved for marketing or successfully commercialized;

most of our current and future small molecule product candidates are or will be based on generic human drugs, and other companies may develop substantially similar products that may compete with our products;

the results of earlier studies may not be predictive of the results of our pivotal trials, and we may be unable to obtain regulatory approval for our existing or future product candidates under applicable regulatory requirements;

development of pet therapeutics is inherently expensive, time-consuming and uncertain, and any delay or discontinuance of our current or future pivotal trials would significantly harm our business and prospects;

even if we obtain regulatory approval for our current or future product candidates, they may never achieve market acceptance or commercial success;

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we do not own any issued patents covering our product candidates;

we are dependent upon third-party manufacturers for supplies of our current product candidates and intend to rely on third-party manufacturers for commercial quantities of any of our product candidates that may be approved; and

if we are not successful in identifying, developing and commercializing additional product candidates, our ability to expand our business and achieve our strategic objectives would be impaired.

Corporate Information

We were incorporated on September 25, 2012 by our co-founder, Richard Chin, M.D., our President and Chief Executive Officer. Our principal executive offices are located at 1499 Bayshore Highway, Suite 226, Burlingame, California 94010, and our telephone number is (650) 701-7901. We also maintain a mailing address at 58 West Portal Avenue, #105, San Francisco, California 94127. Our website address is *www.kindredbio.com*. The information contained in, or accessible through, our website should not be considered a part of this prospectus.

Implications of Being an Emerging Growth Company

As a company with less than \$1.0 billion in revenue during our last fiscal year, we qualify as an emerging growth company as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These reduced reporting requirements include:

not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;

reduced disclosure obligations regarding executive compensation in this prospectus and in our future periodic reports, proxy statements and registration statements; and

not being required to hold a nonbinding advisory vote on executive compensation or to seek stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these reduced reporting obligations until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act, which fifth anniversary will occur in 2018. However, if certain events occur prior to the end of such five-year period, including if we become a large accelerated filer, our annual gross revenue exceeds \$1.0 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company.

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 Securities and Exchange Commission, or the SEC. As a result, the information that we provide to our stockholders may be different than the information you might receive from other public reporting companies in which you hold

equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

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THE OFFERING

Common stock offered by us	5,750,000 shares (or 6,612,500 shares if the underwriters exercise their option to purchase additional shares in full)
Common stock to be outstanding after this offering	13,297,881 shares (or 14,160,381 shares if the underwriters exercise their option to purchase additional shares in full)
Option to purchase additional shares	We have granted the underwriters a 30-day option to purchase up to 862,500 additional shares of our common stock to cover over-allotments, if any
Use of proceeds	We intend to use the net proceeds of this offering for the research and development of our product candidates, to establish our commercial infrastructure in the United States and for general corporate and working capital purposes. See Use of Proceeds on page 38 for a more detailed description of the intended use of proceeds from this offering
Offering price	\$ per share
Risk Factors	See Risk Factors beginning on page 12 and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock
Directed share program	At our request, the underwriters have reserved up to 5% of the shares to be offered in this offering for sale at the initial public offering price to certain of our directors, officers, existing stockholders, employees, business associates and related persons. Any directed shares not purchased will be offered by the underwriters to the general public on the same basis as all other shares offered

NASDAQ Capital Market symbol KIN

The number of shares of our common stock to be outstanding after this offering is based on 3,012,675 shares of our common stock outstanding as of September 30, 2013 and 4,535,206 shares of our common stock that will be issued upon the automatic conversion of our outstanding shares of convertible preferred stock as of September 30, 2013, which will occur immediately upon the effectiveness of the registration statement of which this prospectus is a part. The number of shares of our common stock to be outstanding after this offering excludes:

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1,165,423 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2013 at a weighted-average exercise price of \$0.55 per share; and

2,827,102 shares of common stock reserved as of September 30, 2013 for future issuance under our 2012 equity incentive plan.

Unless otherwise indicated, the information in this prospectus assumes the following:

the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, which will be in effect as of the closing of this offering;

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the automatic conversion of all outstanding shares of our convertible preferred stock into shares of our common stock on a one-for-one basis immediately upon the effectiveness of the registration statement of which this prospectus is a part;

no exercise of the outstanding options, and no issuance or award of shares of our common stock reserved for issuance, under our 2012 equity incentive plan as described above; and

no exercise by the underwriters of their option to purchase additional shares of our common stock. Our board of directors has indicated its intention to grant options to purchase an aggregate of 45,000 shares of our common stock to certain of our directors and employees concurrent with the pricing of this offering with an exercise price equal to the initial public offering price.

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The following tables set forth a summary of our selected historical financial data as of and for the periods ended on the dates indicated. We have derived the statement of operations and comprehensive loss data for the period from September 25, 2012 (inception) through December 31, 2012 from our audited financial statements included elsewhere in this prospectus. The statement of operations and comprehensive loss data for the nine months ended September 30, 2013 and for the cumulative period from September 25, 2012 (inception) through September 30, 2013 and the balance sheet data as of September 30, 2013 have been derived from our unaudited financial statements appearing elsewhere in this prospectus. This unaudited interim financial information has been prepared on the same basis as our audited financial statements and, in our opinion, reflects all adjustments, consisting only of normal and recurring adjustments, which we consider necessary for a fair presentation of our financial position as of September 30, 2013. You should read this data together with our financial statements and related notes appearing elsewhere in this prospectus and the sections in this prospectus entitled *Selected Financial Data* and *Management's Discussion and Analysis of Financial Condition and Results of Operations*. The historical results are not necessarily indicative of the results to be expected for any future periods and the results for the nine months ended September 30, 2013 should not be considered indicative of results expected for the full fiscal year 2013. The results of operations for the period from September 25, 2012 (inception) through September 30, 2012 are not presented as they were insignificant.

	For The Period From September 25, 2012 (Inception) Through December 31, 2012	Nine Months Ended September 30, 2013 (unaudited)	Cumulative Period From September 25, 2012 (Inception) Through September 30, 2013 (unaudited)
Statement of Operations and Comprehensive Loss Data:			
Operating expenses:			
Research and development	\$ 74,772	\$ 1,394,547	\$ 1,469,319
General and administrative	44,864	437,737	482,601
Total operating expenses	119,636	1,832,284	1,951,920
Loss from operations	(119,636)	(1,832,284)	(1,951,920)
Other income (expense):			
Interest income	25	2,662	2,687
Interest expense		(48)	(48)
Total other income, net	25	2,614	2,639
Net loss and comprehensive loss	\$ (119,611)	\$ (1,829,670)	\$ (1,949,281)
Net loss per share attributable to common stockholders, basic and diluted ⁽¹⁾	\$ (0.06)	\$ (0.61)	

Weighted-average common shares outstanding, basic and diluted ⁽¹⁾	2,112,520	3,001,286
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited) ⁽¹⁾	\$ (0.04)	\$ (0.39)
Weighted-average shares used in computing pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited) ⁽¹⁾	2,718,082	4,713,320

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	As of September 30, 2013		
	Actual	Pro Forma ⁽²⁾	Pro Forma as Adjusted ⁽²⁾⁽³⁾
Balance Sheet Data:			
Cash and cash equivalents	\$ 10,991,682	\$ 10,991,682	\$ 47,372,270
Total assets	11,364,946	11,364,946	47,745,534
Total current liabilities	806,682	806,682	806,682
Convertible preferred stock	12,083,952		
Deficit accumulated during the development stage	(1,949,281)	(1,949,281)	(1,949,281)
Total stockholders' equity	(1,525,688)	10,558,264	46,938,852
Total liabilities, convertible preferred stock and stockholders' equity	11,364,946	11,364,946	47,745,534

- (1) See Note 11 of the notes to financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the historical and pro forma basic and diluted net loss per share attributable to common stockholders and the number of shares used in the computation of the per share amounts.
- (2) The pro forma balance sheet gives effect to the automatic conversion of all of our outstanding shares of convertible preferred stock as of September 30, 2013 into an aggregate of 4,535,206 shares of common stock immediately upon the effectiveness of the registration statement of which this prospectus is a part.
- (3) The pro forma as adjusted balance sheet gives further effect to the issuance and sale of 5,750,000 shares of common stock in this offering at the assumed initial public offering price of \$7.00 per share, the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each \$1.00 increase (decrease) in the assumed initial public offering price of \$7.00 per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total assets, total stockholders' equity and total liabilities, convertible preferred stock and stockholders' equity by approximately \$5.3 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, total assets, total stockholders' equity and total liabilities, convertible preferred stock and stockholders' equity by approximately \$6.5 million. The pro forma information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

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RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and Management's Discussion and Analysis of Financial Condition and Results of Operations, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our financial condition, results of operations, business and prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may have similar adverse effects on us.

Risks Related to Our Business

We have a limited operating history, are not profitable and may never become profitable.

We are a development stage biopharmaceutical company. Since our formation in September 2012, our operations have been limited to the identification of product candidates and research and development of our lead product candidates, primarily CereKin, AtoKin and SentiKin. As a result, we have no meaningful historical operations upon which to evaluate our business and prospects and have not yet demonstrated an ability to obtain marketing approval for any of our product candidates or successfully overcome the risks and uncertainties frequently encountered by companies in emerging fields such as the pet therapeutics industry. We also have not generated any revenue to date, and continue to incur significant research and development and other expenses. Our net loss and comprehensive loss for the nine months ended September 30, 2013 was \$1,829,670 and for the period from September 25, 2012 (inception) through December 31, 2012 was \$119,611. As of September 30, 2013, we had a deficit accumulated during the development stage of \$1,949,281. For the foreseeable future, we expect to continue to incur losses, which will increase significantly from historical levels as we expand our product development activities, seek regulatory approvals for our product candidates and begin to commercialize them if they are approved by the Center for Veterinary Medicine branch of the U.S. Food and Drug Administration, or FDA, the U.S. Department of Agriculture, or USDA, or the European Medicines Agency, or EMA. Even if we succeed in developing and commercializing one or more product candidates, we expect to continue to incur losses for the foreseeable future, and we may never become profitable. If we fail to achieve or maintain profitability, it would adversely affect the value of our common stock.

We will have no material product revenue for the foreseeable future, and we may need to raise additional capital to achieve our goals.

Until, and unless, we receive approval from the FDA, USDA or EMA, as applicable, for one or more of our product candidates, we cannot market or sell our products in the United States or in the European Union, or EU, and will have no material product revenue. Currently, our only product candidate in a pivotal trial, also known as a field efficacy trial, is CereKin. We expect to initiate the pivotal trials for AtoKin and SentiKin by early 2014. Our other current product candidates will require from three to five years of further development at a cost of approximately \$3 million to \$5 million per product candidate before we expect to be able to apply for marketing approval in the United States. We also are actively involved in identifying additional human therapeutics for development and commercialization as pet therapeutics, and will continue to expend substantial resources for the foreseeable future to develop our current product candidates and any other product candidates we may develop or acquire. These expenditures will include: costs of identifying additional potential product candidates; costs associated with drug formulation; costs associated with conducting pilot, pivotal, and toxicology studies; costs associated with completing other research and development activities