Kindred Biosciences, Inc.
Form 424B5
January 17, 2019
Filed Pursuant to Rule 424(b)(5)
Registration No. 333-222597

The information in this preliminary prospectus supplement and the accompanying prospectus, relating to an effective registration statement under the Securities Act of 1933, as amended, is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated January 17, 2019

PRELIMINARY PROSPECTUS SUPPLEMENT
(To Prospectus dated February 7, 2018)

Shares
KINDRED BIOSCIENCES, INC.
Common Stock

We are offering shares of our common stock. Our common stock is listed on The Nasdaq Capital Market under the symbol "KIN." On January 16, 2019, the last reported sale price of our common stock was $11.03 per share.
Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-9 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds to us before expenses	$	$

(1) We have agreed to reimburse the underwriters for certain expenses. See "Underwriting."
We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to an additional shares of our common stock on the same terms and conditions set forth above. If the underwriters exercise their option in full, the total underwriting discounts and commissions payable by us will be $, and the total proceeds to us, before expenses, will be $.
Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.
The underwriters expect to deliver the shares on or about , 2019.

Barclays Stifel

Prospectus supplement dated , 2019.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to the offering of our common stock. Each share of common stock offered by this prospectus supplement and the accompanying prospectus is accompanied by one Series A preferred stock purchase right that trades with our common stock. Before purchasing any of the common stock that we are offering, you should carefully read this prospectus supplement and the accompanying prospectus, together with the information incorporated by reference into this prospectus supplement and the accompanying prospectus as described under the headings "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" on page S-22. These documents contain important information that you should consider when making your investment decision.

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the SEC using a "shelf" registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the "prospectus," we are referring to both parts combined.

This prospectus supplement may add, update, or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference into this prospectus supplement or the accompanying prospectus, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference herein and therein. If any statement in this prospectus supplement or the accompanying prospectus is inconsistent with a statement in another document having a later date, for example, a document incorporated by reference into this prospectus supplement, the statement in the document having the later date will be deemed to modify or supersede the earlier statement.

Unless the context otherwise requires, the terms "KindredBio," "the Company," "our company," "we," "us," and "our" refer to Kindred Biosciences, Inc., a Delaware corporation, including, where appropriate, our wholly owned subsidiary, KindredBio Equine, Inc. When we refer to "you," we mean the purchaser or potential purchaser of the shares of common stock offered by this prospectus supplement and the accompanying prospectus.

You should rely only on the information contained in or incorporated by reference into this prospectus supplement, the accompanying prospectus and any free writing prospectus that we may authorize for use in connection with this offering. We have not, and the underwriter has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the underwriter is offering to sell, or seeking offers to buy, our common stock in any jurisdiction where the offer or sale is not permitted. The distribution of this prospectus supplement and the offering of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of our common stock and the distribution of this prospectus supplement outside the United States. This prospectus supplement does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any common stock offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectus that we may authorize for use in connection with this offering is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus contain summaries of certain provisions contained in some of the documents described herein and therein, but reference is made to the actual documents for complete

information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of such documents have been or will be filed as exhibits to the registration statement of which this prospectus supplement and the accompanying prospectus are a part or as exhibits to documents incorporated by reference herein or therein, and you may obtain copies of those documents as described below under the headings "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" on page S-22. We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to the agreement, and should not be deemed to be a representation, warranty or covenant to you.

Unless otherwise indicated, information contained in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectus that we may authorize for use in connection with this offering concerning our industry and the markets in which we operate, including our general expectations and market opportunity, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge. We believe such estimates to be reasonable, but we have not independently verified the accuracy of information obtained from third parties. In addition, assumptions and estimates of our and our industry's future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors" in this prospectus supplement on page S-9, in the accompanying prospectus and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 which is incorporated by reference into this prospectus supplement and the accompanying prospectus. These and other important factors could cause our future performance to differ materially from our assumptions and estimates. See "Special Note Regarding Forward-Looking Statements" below.

Kindred Biosciences, Kindred Bio and "Best Medicines for Our Best Friends" are three of our trademarks that are used in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus and the accompanying prospectus. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference also include trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference sometimes appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, 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.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectus that we may authorize for use in connection with this offering contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements, other than statements of historical fact, that address activities, events or developments that we believe or anticipate will or may occur in the future are forward-looking statements, including, statements about our plans, objectives, strategies and prospects regarding, among other things, our financial condition, operating results and business.

We have identified some of these forward-looking statements with words such as "believe," "may," "will," "should," "could," "expect," "intend," "plan," "predict," "anticipate," "estimate," "continue" or other words and terms of similar meaning and the future dates. These forward-looking statements are based on current expectations about future events affecting us and are subject to uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control and could cause our actual results to differ materially from those matters expressed or implied by our forward-looking statements. Forward-looking statements are only predictions or statements of current plans and can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties, including the risks

described under the "Risk Factors" sections that are contained in this prospectus supplement on page S-9, in the accompanying prospectus and in our filings with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus, including, without limitation, the "Risk Factors" sections of our most recently filed Annual Report on Form 10-K and Quarterly Report on Form 10-Q. Such risks and uncertainties are not exclusive and further information concerning us and our business, including factors that potentially could materially affect our financial results or condition, may emerge from time to time.

These risks and uncertainties include, but are not limited to, the following:

- our limited operating history and expectations of losses for the foreseeable future;
- the absence of significant revenue from our product candidates for the foreseeable future;
- our potential inability to obtain any necessary additional financing;
- our substantial dependence on the success of our lead product candidates, which may not be successfully commercialized even if they are approved for marketing;
- the effect of competition;
- our potential inability to obtain regulatory approval for our existing or future product candidates;
- our dependence on third parties to conduct some of our development activities;
- our dependence upon third-party manufacturers for supplies of our product candidates;
- uncertainties regarding the outcomes of trials pertaining to our product candidates;
- our potential failure to attract and retain senior management and key scientific personnel;
- uncertainty about our ability to develop a satisfactory sales organization;
- our significant costs of operating as a public company;
- our potential inability to obtain patent protection and other intellectual property protection for our product candidates;
- potential claims by third parties alleging our infringement of their patents and other intellectual property rights;
- our potential failure to comply with regulatory requirements, which are subject to change on an ongoing basis;
- the potential volatility of our stock price; and
- the significant control over our business by our principal stockholders and management.

Each forward-looking statement is based on information available to us as of the date of the document in which the forward-looking statement is contained. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as otherwise required by law.

All forward-looking statements that are made by us in this prospectus supplement, in the accompanying prospectus, in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and in any free writing prospectus that we may authorize for use in connection with this offering are qualified by these cautionary statements.

PROSPECTUS SUPPLEMENT SUMMARY

The following summary highlights selected information about us, this offering and information contained elsewhere in or incorporated by reference into this prospectus supplement or the accompanying prospectus. This summary does not contain all of the information that may be important to you. Before purchasing any of the common stock that we are offering, you should carefully read in their entirety this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we may authorize for use in this offering. In particular, you should carefully review the "Risk Factors" sections that are contained in this prospectus supplement on page S-9, in the accompanying prospectus and in our filings with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus, including, without limitation, the "Risk Factors" sections of our most recently filed Annual Report on Form 10-K and Quarterly Report on Form 10-Q.

Our Company

We are a commercial-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 that this approach will lead to shorter development times and higher approval rates than pursuing new, non-validated compounds and targets. Our current portfolio includes over 20 product candidates in development consisting of both small molecules and biologics.

Mirataz® (mirtazapine transdermal ointment), our transdermal drug for the management of unintended weight loss in cats, was approved by the Food and Drug Administration (the "FDA") in May 2018. The product became commercially available to U.S. veterinarians on July 9, 2018. Approximately 33% of veterinary clinics in the United States purchased Mirataz in the second half of 2018, with approximately 56% of veterinary clinics placing re-orders in that period.

We recorded net product revenues of $0.6 million in the quarter ended September 30, 2018. Based on our unaudited internal financial statements, we expect to record approximately $2.0 million in net product revenues for the year ended December 31, 2018, and based on information currently available, further estimate that, as of December 31, 2018, our unaudited cash, cash equivalents and investment in marketable securities balances were approximately $73.9 million. These preliminary estimates have been prepared by, and are the responsibility of, our management. Our independent registered public accounting firm has not audited or reviewed, and does not express an opinion with respect to, these estimates. Actual results and financial data as of December 31, 2018 may differ from the above estimates due to the completion of our closing procedures with respect to the fiscal year ended December 31, 2018, final adjustments and other developments that may arise between now and the time the financial results for the fiscal year are finalized. We expect to complete our closing procedures with respect to the fiscal year ended December 31, 2018 after this offering is consummated. Accordingly, our financial statements as of and for the fiscal year ended December 31, 2018 will not be available until after this offering is completed.

On December 21, 2017, the European Medicines Agency (the "EMA") accepted our Mirataz submission for review, and we are currently responding to the EMA's questions. We expect that Mirataz will be approved by the EMA in 2019. Regulatory approval is subject to the typical risks inherent in such a process.

Mirataz is the first and only transdermal medication specifically developed, and FDA-approved, for the management of weight loss in cats. Weight loss in cats is a serious and potentially fatal condition that represents a leading cause of visits to the veterinarian for cats. Our research estimates that as many as 9,000,000 cats each year are diagnosed with unintended weight loss caused by varying underlying conditions, such as chronic kidney disease, cancer or diabetes, with approximately 3,000,000 cats being treated for unintended weight loss each year. Mirataz, which is formulated with our proprietary Accusorb™ technology, is applied topically to the cat's inner ear (pinna)

once a day, providing a more attractive application route compared to oral administration. 74% of veterinarians report that ease of administering medication is a primary factor in selecting medication for feline weight loss. The product is classified as a weight gain drug and can be used in cats with various underlying diseases associated with unintended weight loss.

On October 30, 2018, we reported positive topline results from our pilot effectiveness study of KIND-016, a fully caninized, high-affinity monoclonal antibody targeting interleukin-31 ("IL-31"), for the treatment of atopic dermatitis in dogs. The study was a randomized, blinded, placebo-controlled, pilot laboratory study that enrolled 32 dogs to assess the effectiveness of KIND-016 at three doses. A single dose of KIND-016 was administered on day 0 and itching was induced at weeks 1, 2, 3, 4, 6, and 8 with an injection of canine IL-31. Our IL-31 antibody resulted in statistically significant reductions in pruritus ($p<0.0001$ to $p<0.05$) across all dose groups and was sustained for 6 to 8 weeks, with a clear dose response. The reduction in the itching score was as high as 86.1%. Based on a preliminary review of the safety data, the drug appears to be well tolerated. In addition, we announced that the U.S. Patent and Trademark Office has issued a patent (Patent No. 10,093,731) for our anti-IL31 antibody.

We are also currently conducting a pilot field effectiveness study for our IL-31 antibody. We are in the process of initiating pilot effectiveness studies for several other molecules for atopic dermatitis, including a caninized anti-IL17 antibody and canine anti-IL4/IL13 SINK molecule. Atopic dermatitis is an immune-mediated inflammatory skin condition in dogs. An estimated 10-15% of dogs have this condition. It is the leading reason owners take their dog to the veterinarian, and the current market size is over $500 million annually and growing rapidly. We are pursuing a multi-pronged approach toward atopic dermatitis, with a portfolio of promising biologics.

On January 14, 2019, we reported positive topline results from the pilot field effectiveness study of our enhanced version of epoCat™ (long-acting feline recombinant erythropoietin) for the treatment of anemia in cats. In the study, which enrolled 23 cats with anemia secondary to chronic kidney disease, epoCat rapidly increased mean hematocrit, with statistically significant improvement as early as Week 1 ($p<0.0001$). The effect was sustained, with continued statistically significant improvement at Weeks 2, 3, 4, 5, and 6 ($p<0.0001$ at each visit). Compared to baseline, the mean of peak percent improvement in hematocrit by Week 6 was 55.4%.

In addition, 95.5% of the 22 evaluable patients achieved treatment success over the 6-week treatment period, defined prospectively as either a 30% increase in hematocrit value over baseline or the hematocrit value reaching normal range. Furthermore, epoCat resulted in statistically significant improvements over baseline ($p<0.01$ to $p<0.05$) across all three health-related quality of life (QoL) domains, namely Vitality, Comfort, and Emotional Wellbeing, as measured by a validated QoL instrument. Based on a preliminary review of the safety data, the drug appears to be well tolerated. We plan to commence a pivotal study this year and are currently in discussions with the FDA regarding study design. The FDA has agreed to accept hematocrit as the primary endpoint for the pivotal study.

epoCat is a recombinant feline erythropoietin that has been engineered by us to have a prolonged half-life, intended to be administered once-monthly. Erythropoietin is an endogenous protein that regulates and stimulates production of red blood cells.

Anemia is a common condition that is estimated to afflict millions of older cats. It is often associated with chronic kidney disease, because kidneys produce erythropoietin and chronic kidney disease leads to decreased levels of endogenous erythropoietin. Chronic kidney disease affects approximately half of older cats, making it a leading cause of feline mortality. Human erythropoietin, which is a multi-billion dollar product in humans, is immunogenic in cats.

Zimeta is designed as an IV and Oral drug intended for the control of pyrexia (fever) in horses. There are eight to nine million horses in the United States and approximately 690,000 are treated for fever annually. Based on recent research, 95% of veterinarians believe that Zimeta would be a good fit for their practice and 83% would use Zimeta in the first year.

The FDA has approved the safety and effectiveness technical sections for Zimeta™ (dipyrone injection) for the control of pyrexia (fever) in horses. The FDA has indicated it does not have any additional questions or requests

from us regarding the Chemistry, Manufacturing and Controls ("CMC") technical section. The pre-approval inspection at the contract manufacturer of Zimeta IV took place in July 2018, and was successful. The responses to the findings identified during an inspection in April 2018 at the contract manufacturer of the active pharmaceutical ingredient ("API") dipyrone were submitted to the FDA, and the FDA indicated it would conduct a reinspection of the API manufacturer.

The pivotal field effectiveness study for Zimeta™ (dipyrone oral gel) (Zimeta Oral) has been completed with positive results. The target animal safety study is also complete, and Zimeta Oral was found to be well-tolerated. We have transferred the product to the commercial manufacturer and are in discussions with the FDA and EMA regarding the data required to show bioequivalence to the previously manufactured product. Zimeta Oral, which is a proprietary oral gel, is expected to expand use of the drug and build upon the success of Zimeta IV.

The pilot field effectiveness study of KIND-014 for the treatment of gastric ulcers in horses has been completed with positive results. We have selected a formulation for development and anticipate moving into a pivotal field study later in 2019. Equine gastric ulcer syndrome ("EGUS") is a common condition in horses that encompasses primary and secondary erosive and ulcerative diseases of both the squamous and glandular parts of the stomach. It affects approximately half of all horses. Various clinical signs are associated with EGUS, including poor appetite, poor condition, colic, and behavioral issues.

The pilot field effectiveness study of our anti-TNF monoclonal antibody targeting sick or septic foals has been completed with positive results. We are now in discussions with the FDA regarding the pivotal study design. Sepsis in foals can cause up to 50% mortality and is an important unmet medical need. There is currently no FDA-approved therapy. We have optimized an equine anti-TNF monoclonal antibody and intend to continue field studies during the 2020 foaling season, following discussion with the FDA regarding the development plan.

We have initiated a pilot field effectiveness of our anti-TNF monoclonal antibody targeting inflammatory bowel disease in dogs. This study is anticipated to report data in 2019.

Market Opportunities

We estimate that the total U.S. market for veterinary care was approximately $69.4 billion in 2017. In 2017, 68% of households owned a pet, which translates to an estimated 89.7 million dogs and 94.2 million cats currently living in the United States. A recent study found that, on average, U.S. pet owners who have both dogs and cats would spend over $10,000 to save one of their pets from a life-threatening illness or disease. We believe there are many unmet or underserved medical needs and that the pet therapeutics portion of the market can grow significantly as new, safe and effective therapeutics are identified, developed and marketed. We expect continued market growth as new pet therapeutics are developed and owners grow more familiar with the treatment of pets with such therapeutics.

Corporate Information

We were incorporated on September 25, 2012. Our principal executive offices are located at 1555 Bayshore Highway, Suite 200, Burlingame, California 94010, and our telephone number is (650) 701-7901. Our website address is www.kindredbio.com. The information contained on, or accessible through, our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus, and you should not consider it to be a part of this prospectus supplement or the accompanying prospectus. Our website address is included as an inactive textual reference only.

From our initial public offering until December 31, 2018, we were an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). As an emerging growth company, we elected to comply with certain reduced public reporting requirements in our annual reports, quarterly reports, proxy statements and other documents that we filed with the SEC prior to December 31, 2018, including the accompanying prospectus. Effective as of December 31, 2018, we ceased to be an emerging growth company. We are now both an "accelerated

filer" and a "smaller reporting company" as defined in Rule 12b-2 of the Exchange Act. During any

period in which we continue to be a smaller reporting company by reason of having annual revenues of less than $100 million and a "public float" of less than $700 million, we may want to elect to comply in our filings with the SEC with some or all of the reduced public company reporting requirements that are available to a smaller reporting company, such as reduced executive compensation disclosure in proxy statements.

THE OFFERING	
Common stock offered by us	shares
Offering Price	$
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares)
Option to purchase additional shares	We have granted the underwriters an option to purchase up to additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.
Use of Proceeds	We intend to use the net proceeds of this offering for the development of our therapeutic candidates, the expansion of our commercial infrastructure, and for other general corporate and working capital purposes. See “Use of Proceeds” on page S-11 of this prospectus supplement.
Risk Factors	Investing in our common stock involves a high degree of risk. Before investing in our common stock, please read the “Risk Factors” section on page S-9 of this prospectus supplement and the corresponding sections in the accompanying prospectus and in our Annual Report on Form 10-K for the year ended December 31, 2017, as well as our subsequent filings with the SEC, which are incorporated herein by reference.
NASDAQ Symbol	“KIN.”

The number of shares of our common stock to be outstanding after this offering as set forth above is based on 33,815,647 shares of our common stock outstanding as of September 30, 2018, but excludes:

- 5,741,001 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2018, at a weighted average exercise price of $7.25 per share; and
- 3,129,649 shares of common stock reserved for issuance under our 2018 equity incentive plan and our 2014 employee stock purchase plan as of September 30, 2018.

Unless otherwise indicated, this prospectus supplement reflects and assumes the following:

- no exercise of the outstanding options described above and no other stock awards made under our 2016 equity incentive plan, 2018 equity incentive plan or 2014 employee stock purchase plan; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before purchasing any of the common stock that we are offering, you should carefully read in their entirety this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we may authorize for use in this offering. In particular, you should carefully review the risks described below and in the “Risk Factors” sections that are contained in the accompanying prospectus and in our filings with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus, including, without limitation, the “Risk Factors” sections of our most recently filed Annual Report on Form 10-K and Quarterly Report on Form 10-Q and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations, or cash flow could be materially and adversely affected. This could cause the market price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Related to This Offering

We have broad discretion in the use of the net proceeds of this offering and may not use them effectively.

We intend to use the net proceeds of this offering for the development of our therapeutic candidates, the expansion of our commercial infrastructure in anticipation of future product approvals and launches, for expansion of our manufacturing capacity and for other general corporate and working capital purposes. We may also use a portion of the net proceeds of this offering to acquire other products or businesses, although we are not currently a party to an agreement regarding any such acquisition. However, our management will have broad discretion in the application of the net proceeds from this offering and will have the right to use the net proceeds for purposes that differ substantially from our current plans. Management may spend the net proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by management to apply these funds effectively could result in financial losses that could have a material and adverse effect on our business and cause the price of our common stock to decline.

Our quarterly and annual operating results may be volatile and may vary significantly from the estimates and expectations of investors and third parties.

It is our practice not to provide forward-looking sales, revenue or earnings guidance and not to endorse any third party's sales, revenue or earnings estimates, including the estimates of industry or securities analysts. As a result, our actual operating results may be below the expectations of our investors and third parties, including industry or securities analysts. Investors should not rely on any estimates, research or reports published by third parties, including analysts. Further, many factors could cause our revenues and operating results to vary significantly in the future, including, but not limited to, those set out in the section entitled "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2017. Accordingly, we believe that quarter-to-quarter comparisons of our operating results are not necessarily meaningful. Investors should not rely on the results of one quarter as an indication of our future performance.

You will experience immediate and substantial dilution in the net tangible book value of your shares.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our outstanding common stock before giving effect to this offering. Accordingly, if you purchase our common stock in this offering, you will incur immediate substantial dilution of approximately $ per share, representing the difference between the public offering price and our as adjusted net tangible book value as of September 30, 2018. Furthermore, if outstanding options are exercised, you could experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section in this prospectus supplement entitled “Dilution.” To the extent outstanding stock options are exercised, there may be further dilution to new investors.

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

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the

price per share in this offering. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be lower than the price per share paid by investors in this offering.

A substantial number of shares of common stock may be sold in the market following this offering, which may depress the market price for our common stock.

Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock sold in this offering upon issuance will be, freely tradable without restriction or further registration under the Securities Act. Our executive officers and directors have agreed with the underwriters not to dispose of or hedge any shares of our common stock or securities that are convertible into or exchangeable for shares of our common stock during the period from the date of this prospectus supplement continuing through the date 90 days hereafter, except with the prior written consent of the representatives of the underwriters, subject to certain standard exclusions. See “Underwriting - No Sales of Similar Securities.”

USE OF PROCEEDS

We estimate that the net proceeds from this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $, or approximately $ if the underwriters exercise their option to purchase additional shares in full.

We intend to use the net proceeds of this offering for the development of our therapeutic candidates, the expansion of our commercial infrastructure, and for other general corporate and working capital purposes. We may also use a portion of the net proceeds of this offering to acquire other products or businesses, although we are not currently a party to an agreement regarding any such acquisition.

Specifically, the offering proceeds, combined with our current available capital, are expected to be applied in our effort to reach the following development milestones: approval of Zimeta IV in the U.S., approval of Mirataz in Europe, approval of Zimeta Oral in the U.S., approval of Zimeta Oral in Europe, possible approval of an additional product in the U.S., completion of a pivotal study of IL31 antibody in canine atopic dermatitis, completion of a pivotal study of our candidate for equine gastric ulcer, initiation of a pivotal study of epoCat for feline anemia, completion of a pilot field efficacy study of IL31 antibody in canine atopic dermatitis, completion of a pilot field efficacy study of IL13/IL4 SINK in canine atopic dermatitis, completion of a pilot field efficacy study of TNF antibody in canine inflammatory bowel disease, completion of a pilot field efficacy study of an additional two to three undisclosed product candidates, and completion of a laboratory safety study of five to seven undisclosed product candidates.

We have not determined the amounts we plan to spend in any of the areas identified above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds to us from this offering, and investors will be relying on the judgment of our management regarding the application of the proceeds from this offering. We reserve the right to change the use of these proceeds as a result of certain contingencies such as competitive developments, the results of our commercialization efforts, acquisition and investment opportunities and other factors. Pending use of the proceeds as described above, we intend to invest the net proceeds of this offering in short-term, interest-bearing, investment-grade securities or certificates of deposit.

PRICE RANGE OF OUR COMMON STOCK

Since December 12, 2013, our common stock has been traded on The Nasdaq Capital Market under the symbol “KIN.” Prior to December 12, 2013, there was no public trading market for our common stock. The following table sets forth the high and low sale prices for our common stock for the periods indicated as reported on The Nasdaq Capital Market.

	High	Low
Fiscal Year Ending December 31, 2019		
First Quarter (through January 16, 2019)	$12.16	$10.41
Fiscal Year Ended December 31, 2018		
First Quarter	$9.50	$7.55
Second Quarter	$12.00	$8.10
Third Quarter	$15.75	$10.05
Fourth Quarter	$15.11	