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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): July 29, 2019

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

Delaware	001-36225	46-1160142
(State or other jurisdiction of incorporation or organization)	(Commission File Number)	(I.R.S. Employer Identification No.)

1555 Bayshore Highway, Suite 200, Burlingame, California 94010
(Address of principal executive offices) (Zip Code)

(650) 701-7901
(Registrant's telephone number, include area code)

N/A
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.0001 par value	KIN	The NASDAQ Stock Market LLC
Preferred Stock Purchase Rights	KIN	The NASDAQ Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933(§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01 Other Events.

On July 29, 2019, Kindred Biosciences, Inc. issued a press release announcing positive topline results from its 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. A copy of the press release is attached to this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference.

In the conference call on July 29, 2019, Dr. Richard Chin stated that the CADESI-4 improvement peaked at week 1. In fact, PVAS improvement peaked at day 3.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Kindred Biosciences, Inc. Press Release dated July 29, 2019.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

KINDRED BIOSCIENCES, INC.

Date: July 29, 2019

By: /s/ Richard Chin
Richard Chin
Chief Executive Officer

Exhibit 99.1

Kindred Biosciences Announces Positive Results from Pilot Field Effectiveness Study of its Interleukin-31 Monoclonal Antibody for the Treatment of Atopic Dermatitis in Dogs

- Achieved rapid and dramatic reduction in pruritus (itch) and CADESI score versus placebo.

- Call to discuss study results at 8:30 a.m. Eastern time today.

San Francisco, California (July 29, 2019) - Kindred Biosciences, Inc. (NASDAQ: KIN), a commercial-stage biopharmaceutical company focused on saving and improving the lives of pets, today announced positive topline results from its 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. Atopic dermatitis is the most common reason owners take their dog to the veterinarian, and is estimated to affect 10 - 15% of dogs worldwide.[1] The current market size is over $600 million annually and growing rapidly.

The study was a randomized, blinded, placebo-controlled, pilot field study that enrolled 62 client-owned dogs with atopic dermatitis to assess the effectiveness of KIND-016. A single dose of KIND-016 or placebo was administered on day 0, and the severity of pruritus (Pruritic Visual Analog Scale [PVAS score]) and atopic dermatitis severity (Canine Atopic Dermatitis Extent and Severity Index-4 [CADESI-4 score]) were assessed at day 0 and weeks 1, 2, 3, 4, 6, and 8. Additionally, PVAS scores were assessed at 4 hours and days 1, 2 and 3 post-administration of KIND-016 or placebo. Treatment success for individual dogs at each visit was defined as a 50% or higher reduction from baseline in either the PVAS or CADESI-4 scores. The primary efficacy endpoint was proportion of treatment successes at week 4 in the per-protocol population. The primary effectiveness analysis was the 95% confidence interval (CI) for the treatment effect.

At week 4, 60.7% of the KIND-016 group met treatment success criteria, vs. 33.3% of the placebo group (p=0.0420, 95% CI -0.0033, 0.6539). The reduction in itching, as measured by the PVAS score, peaked rapidly, showing significant efficacy as early as 24 hours with a trend as early as 4 hours. The CADESI response was also very rapid, with treatment success rate reaching 70% as early as week 1 in the KIND-016 group. While the study was not powered to demonstrate efficacy beyond week 4, the majority of dogs who were treatment successes at week 4 maintained response through week 8.

“We are delighted by the positive results of this study. Atopic dermatitis, allergic dermatitis, and other pruritic diseases constitute an enormous market, now at $600 million annually and growing. We believe we have an excellent product candidate which has the potential to be a blockbuster, especially given its rapid onset of action and robust efficacy. According to our market research, there are approximately 14 million dogs and 4.5 million cats that suffer from pruritis each year in the U.S. alone. Our market research also found that more than 70% of veterinarians, and a higher percentage of dermatologists, express a need for a new biological treatment option for pruritic dogs,” stated Richard Chin, CEO of KindredBio. “This is our fifth positive pilot efficacy study in a row, three of which were de novo biologics. Our Kansas biologics plant that has been designed at maximal capacity to meet demand of over a billion

[1] Hillier, A. and C.E. Griffin, *The ACVD task force on canine atopic dermatitis (I): incidence and prevalence.* Vet Immunol Immunopathol, 2001. **81**(3-4): p. 147-51.

[1] Website, N.P.I. *Top 10 Medical Conditions of 2016*. Available from: https://www.prnewswire.com/news-releases/most-common-medical-conditions-for-dogs-and-cats-300418097.html.

dollars of product per year will soon be fully commissioned. We look forward to initiating the pivotal study for KIND-016 this year as we continue to execute on our rapid, capital-efficient business model."

KindredBio will hold a call to discuss and answer questions on the results of the pilot field effectiveness study at 8:30 a.m. Eastern time/5:30 a.m. Pacific time today. Interested parties may access the call by dialing toll-free (855) 433-0927 from the US, or (484) 756-4262 internationally, and using conference ID 9162039. The call will be webcast live here, with a replay available at that link for 30 days.

About Kindred Biosciences

Kindred Biosciences is a commercial-stage biopharmaceutical company focused on saving and improving the lives of pets. Its mission is to bring to pets the same kinds of safe and effective medicines that human family members enjoy. The company's 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 dogs, cats, and horses. KindredBio has a deep pipeline of novel drugs and biologics in development across many therapeutic classes.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including, but not limited to, statements regarding our expectations about the trials, regulatory approval, manufacturing, distribution and commercialization of our current and future product candidates, and statements regarding our anticipated revenues, expenses, margins, profits and use of cash.

These forward-looking statements are based on our current expectations. These statements are not promises or guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results to be materially different from any future results expressed or implied by the forward-looking statements. These risks 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 products and our product candidates for the foreseeable future; the likelihood that our revenue will vary from quarter to quarter; our potential inability to obtain any necessary additional financing; our substantial dependence on the success of our products and 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 products and our product candidates; uncertainties regarding the outcomes of trials regarding 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 and maintain patent protection and other intellectual property protection for our products and 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.

For a further description of these risks and other risks that we face, please see the risk factors described in our filings with the U.S. Securities and Exchange Commission (the SEC), including the risk factors discussed under the caption "Risk Factors" in our Annual Report on Form 10-K and any subsequent updates that may be contained in our Quarterly Reports on Form 10-Q filed with the SEC. As a result of the risks described above and in our filings with the SEC, actual results may differ materially from those indicated by the forward-looking statements made in this press release. Forward-looking statements contained in this press release speak only as of the date of this press release and we undertake no obligation to update or revise these statements, except as may be required by law.

The results stated in this press release have not been reviewed by the United States Department of Agriculture Center for Veterinary Biologics.

Contacts

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