Kiniksa Announces Data from U.S. Investigator-Initiated Study of Mavrilimumab in Severe COVID-19 Pneumonia and Hyperinflammation

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- Early signal of efficacy with trends toward lower mortality and shorter duration of mechanical ventilation in patients treated with mavrilimumab –

- Data from the Phase 2 portion of Kiniksa's adaptive design Phase 2/3 clinical trial expected in 1H 2021 -

HAMILTON, Bermuda, Dec. 22, 2020 (GLOBE NEWSWIRE) -- Kiniksa Pharmaceuticals, Ltd. (Nasdaq: KNSA) ("Kiniksa"), a biopharmaceutical company with a pipeline of assets designed to modulate immunological pathways across a spectrum of diseases, today announced data from the investigator-initiated placebo-controlled study of mavrilimumab in patients with severe COVID-19 pneumonia and hyperinflammation. Enrollment in the study was closed early to focus on Kiniksa's registrational development program in the same patient population.

"The data showed encouraging trends of reduced mortality and duration of mechanical ventilation in patients treated with mavrilimumab, especially when considering that many patients in this placebo-controlled study had already been treated with remdesivir and/or corticosteroids," said John F. Paolini, MD, PhD, Chief Medical Officer of Kiniksa. "These data are comparable to the data from the open-label treatment protocol reported in June of 2020. We believe the totality of these two data sets supports continued evaluation of mavrilimumab in severe COVID-19 pneumonia and hyperinflammation."

The investigator-initiated study was a randomized, double-blind, placebo-controlled study across a consortium of U.S. academic sites, including Cleveland Clinic, University of Cincinnati, and Virginia Commonwealth University, designed to evaluate the efficacy and safety of mavrilimumab versus placebo on top of standard of care therapy in patients with severe COVID-19 pneumonia and hyperinflammation. The study enrolled 40 patients with severe COVID-19 pneumonia (all patients presented with pneumonia and hypoxia: all patients required supplemental oxygen, 50% of patients required non-invasive ventilation, none required mechanical ventilation at baseline; median PaO2/FiO2 ratio 137) and hyperinflammation (median C-reactive protein 13.1 mg/dL). Concomitant medications at baseline included corticosteroids (65% of patients) and remdesivir (75% of patients). Patients were randomized 1:1 to a single intravenous (IV) infusion of mavrilimumab 6mg/kg (n=21) or placebo (n=19) and were followed for at least 60 days.

Data showed an early signal of efficacy, with trends toward clinical improvement as well as lower mortality and shorter duration of mechanical ventilation in patients treated with mavrilimumab on top of corticosteroids, including dexamethasone, and/or remdesivir.

- There was a 20.5% relative increase in the primary efficacy endpoint, the proportion of patients alive and off supplemental oxygen at Day 14 (mavrilimumab: 57.1% [n=21]; placebo: 47.4% [n=19]; nominal p=0.536).
- There was a 20.7% relative increase in the secondary efficacy endpoint, the proportion of patients alive and without respiratory failure at Day 28 (mavrilimumab: 95.2%; placebo: 78.9%; nominal p=0.172).
- There was 1 death (4.8%) in the mavrilimumab arm by Day 28, compared to 3 deaths (15.8%) in the placebo arm (nominal p=0.222). By Day 60 there was 1 death (4.8%) in the mavrilimumab arm, compared to 4 deaths (21.1%) in the placebo arm (nominal p=0.108).
- While the percentage of patients who progressed to mechanical ventilation was similar between treatment arms (mavrilimumab: 23.8% [n=5]; placebo: 21.1% [n=4]), the median (interquartile) duration of mechanical ventilation was shorter in the mavrilimumab arm (12 [9.0, 18.0] days) compared to the placebo arm (17 [11.0, 24.5] days). Additionally, 4 of the 5 patients who progressed to mechanical ventilation in the mavrilimumab arm had recovered by Day 28, whereas all patients in the placebo arm who progressed to mechanical ventilation had died by Day 28.
- There was no difference in serious adverse events between the mavrilimumab arm and the placebo arm.

"In the context of the evolving standard of care, the data from this trial in severe COVID-19 pneumonia and hyperinflammation are encouraging," said Sanj K. Patel, Chief Executive Officer and Chairman of the Board of Kiniksa. "While vaccination is expected to be the mainstay of COVID-19 prevention, we believe there will remain an unmet need for effective therapeutics to treat patients who develop severe hyperinflammation. I look forward to the results of the larger Kiniksa-sponsored trial of mavrilimumab in this patient population."

Kiniksa is enrolling the Phase 2 portion of an adaptive design, placebo-controlled Phase 2/3 clinical trial in severe COVID-19 pneumonia and hyperinflammation. The company expects data from the Phase 2 portion of the trial in the first half of 2021.

About the Investigator-Initiated Placebo-Controlled Study of Mavrilimumab in Severe COVID-19 Pneumonia and Hyperinflammation in the U.S.

The investigator-initiated Phase 2 trial was a randomized, double-blind, placebo-controlled study in the U.S. designed to evaluate the efficacy and safety of mavrilimumab versus placebo on top of standard of care therapy in the treatment of severe COVID-19 pneumonia and hyperinflammation. Standard of care therapy included, but was not limited to, anti-viral treatment and/or supportive care. The trial enrolled 40 patients across a consortium of academic sites, including Cleveland Clinic, University of Cincinnati, and Virginia Commonwealth University. Patients were randomized 1:1 to mavrilimumab to a single IV infusion of mavrilimumab 6 mg/kg or placebo. The primary endpoint was the proportion of patients alive and off of supplemental oxygen at Day 14. For more information, refer to ClinicalTrials.gov Identifier: NCT04399980.

About Kiniksa's Phase 2/3 Clinical Trial Protocol of Mavrilimumab in Severe COVID-19 Pneumonia and Hyperinflammation

Kiniksa's Phase 2/3 clinical trial protocol is a global, randomized, double-blind, placebo-controlled study encompassing 2 phases of development (Phase 2 and Phase 3). The Phase 2 portion of the trial is expected to enroll approximately 160 patients and is intended to evaluate the efficacy and safety of 2 dose levels of mavrilimumab relative to placebo in patients who have tested positive for COVID-19 and have x-ray/CT evidence of bilateral pneumonia, active or recent fever, and clinical laboratory results indicative of hyperinflammation. The Phase 3 portion is expected to enroll approximately 420 patients and is intended to confirm Phase 2 efficacy and safety findings. In both Phase 2 and Phase 3, patients are expected to be enrolled into 2 cohorts: Cohort 1 will include non-intubated, hospitalized patients who require supplemental oxygen to maintain SpO2 ≥ 92%, (i.e., non-mechanically ventilated patients); and Cohort 2 will include hospitalized patients for whom mechanical ventilation was recently initiated within 48 hours prior to randomization (i.e., ventilated patients). Following screening, enrolled patients in each cohort will be randomized 1:1:1 to receive a single IV infusion of mavrilimumab 6mg/kg or 10 mg/kg or placebo (Day 1). The primary efficacy endpoint for the Phase 2 portion of the trial for Cohort 1 is the proportion of patients alive and without respiratory failure (defined as the need for high flow oxygen, non-invasive ventilation, invasive mechanical ventilation, or extracorporeal membrane oxygenation) at Day 29 and for Cohort 2 is the mortality rate by Day 29. There will be a seamless transition in enrollment of patients in both cohorts between the Phase 2 and Phase 3 portions of the trial. For each cohort, once the last patient in Phase 2 is enrolled, all subsequent patients will be considered Phase 3 patients. Once the last patient in Phase 2 completes Day 29, primary efficacy and safety analyses of the Phase 2 data will be conducted. Following demonstration of efficacy and safety in Phase 2, the Phase 3 portion of the trial will be continued/completed. For more information, refer to ClinicalTrials.gov Identifier: NCT04447469.

About Mavrilimumab

Mavrilimumab is an investigational fully-human monoclonal antibody that targets GM-CSFRα. Mavrilimumab was dosed in over 550 patients with rheumatoid arthritis through Phase 2b clinical studies in Europe and achieved prospectively-defined primary endpoints of efficacy and safety. Kiniksa's lead indication for mavrilimumab is GCA, a rare inflammatory disease of medium-to-large arteries. Kiniksa is also evaluating mavrilimumab in COVID-19 pneumonia and hyperinflammation. The FDA granted Orphan Drug designation to mavrilimumab for the treatment of GCA in 2020.

About Kiniksa

Kiniksa is a biopharmaceutical company focused on discovering, acquiring, developing and commercializing therapeutic medicines for patients suffering from debilitating diseases with significant unmet medical need. Kiniksa's product candidates, rilonacept, mavrilimumab, vixarelimab and KPL-404, are based on strong biologic rationale or validated mechanisms, target underserved conditions and offer the potential for differentiation. These pipeline assets are designed to modulate immunological pathways across a spectrum of diseases. For more information, please visit www.kiniksa.com.

Forward-Looking Statements

The information contained in this press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions, although not all forward-looking statements contain these identifying words. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation, statements regarding: our beliefs about the data from investigator initiated study showing encouraging trends of reduced mortality and duration of mechanical ventilation in patients treated with mavrilimumab as well as an early signal of efficacy; assessment as to the data from the investigator initiated study being comparable to the data from the open-label treatment protocol reported in June; our belief that the totality of the data supporting continued evaluation of mavrilimumab in severe COVID-19 pneumonia and hyperinflammation; the timing of data from the Phase2 portion of our adaptive design, placebo-controlled Phase 2/3 clinical trial of mavrilimumab in severe COVID-19 pneumonia and hyperinflammation; our belief that there will remain an unmet need for effective therapeutics to treat patients who develop severe hyperinflammation even with vaccination expected to be the mainstay of COVID-19 prevention; our Phase 2/3 clinical trial designs, including the seamless transition in enrollment of patients in both cohorts between the Phase 2 and Phase 3 portions of the trial; and the potential for all of our clinical stage product candidates to offer differentiation.

These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including without limitation, the following: the impact of additional data from us, or other companies; the potential inability to replicate in later clinical trials encouraging or positive results from earlier investigator initiated treatment protocols and studies for mavrilimumab in severe COVID-19 pneumonia and hyperinflammation in later clinical trials; the evolving standard of care for the treatment of patients who develop severe COVID-19 pneumonia and hyperinflammation; the potential for undesirable side effects to be caused by mavrilimumab; changes to our clinical trial protocol; case rates of severe COVID-19 pneumonia and hyperinflammation in various geographies; our reliance on third parties to manufacture our product candidates and conduct our clinical trials; meetings with the Food and Drug Administration; the potential impact of the COVID-19 pandemic and measures taken in response to the pandemic; changes in our operating plan and funding requirements; existing or new competition; and our ability to attract and retain qualified personnel.

These and other important factors discussed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission ("SEC") on November 5, 2020 and our other reports subsequently filed with or furnished to the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this press release.

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