Spero Therapeutics Announces FDA Acceptance of IND Application for SPR720

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CAMBRIDGE, Mass., Aug. 31, 2020 (GLOBE NEWSWIRE) -- Spero Therapeutics, Inc. (Nasdaq:SPRO), a multi-asset clinical-stage biopharmaceutical company focused on identifying, developing and commercializing treatments in high unmet need areas involving multi-drug resistant (MDR) bacterial infections, today announced the acceptance by the U.S. Food and Drug Administration (FDA) of Spero's Investigational New Drug application (IND) for SPR720, Spero's oral antimicrobial agent in development for the treatment of nontuberculous mycobacterial (NTM) pulmonary disease. With the IND now accepted, Spero plans to initiate enrollment in its planned Phase 2a clinical trial evaluating SPR720 in patients with NTM pulmonary disease by year-end 2020.

"The FDA acceptance of the IND for SPR720 represents another important milestone for this program and we look forward to initiating the Phase 2a clinical trial later this year, our first trial in patients with NTM," said Ankit Mahadevia, M.D., Chief Executive Officer of Spero Therapeutics. "A critical unmet need exists for patients with NTM pulmonary disease and we believe that SPR720, as a novel oral agent under investigation, has the potential to change the treatment paradigm and provide new treatment options for patients."

The planned Phase 2a clinical trial will be a multi-center, partially blinded, placebo-controlled proof-of-concept clinical trial of SPR720 that will enroll approximately 90 treatment inexperienced patients with NTM pulmonary disease due to *Mycobacterium avium* complex (MAC). Patients will be randomized to receive either 500mg or 1,000mg of oral SPR720, placebo or standard of care consisting of a macrolide and ethambutol, plus the option of adding a rifamycin. The objectives of the trial are to evaluate plasma pharmacokinetics, safety, tolerability, and microbiological response of SPR720 compared with placebo and standard of care over 28 days of treatment.

About SPR720
SPR720 represents a novel class of antibacterial agents that target enzymes essential for bacterial DNA replication. SPR720 was acquired from Vertex Pharmaceuticals and is currently under development by Spero as an oral therapy for the treatment of non-tuberculous mycobacterial (NTM) pulmonary disease, a rare chronic orphan disease. NTM are ubiquitous environmental pathogens that can cause progressive lung damage and respiratory failure, particularly in patients with compromised immune systems or underlying pulmonary disorders. Although rare, the incidence of NTM pulmonary disease is increasing worldwide. Treatment of NTM pulmonary disease requires prolonged therapy (continuing for approximately 12 to 24 months) with a combination of drugs approved for other infections and is frequently complicated by tolerability and/or toxicity issues. There are currently no oral antibiotics specifically approved for use to treat NTM pulmonary disease. Thus, if successfully developed, SPR720 has the potential to address an important unmet need as the first oral antibiotic approved for the treatment of this debilitating disease. Under Spero's collaboration with the Bill and Melinda Gates Medical Research Institute, SPR720 will also be developed for the treatment of *Mycobacterium tuberculosis* (Mtb) infections in select economically disadvantaged countries. Tuberculosis is a priority pathogen as defined by the World Health Organization with it being one of the top ten causes of death worldwide, and a situation where resistance is increasing and current treatment approaches are not optimal. Spero believes that its intellectual property portfolio for SPR720 will provide protection globally, including in the United States and Europe, through 2033. SPR720 has been granted Qualified Infectious Disease Product (QIDP) designation by the U.S. Food and Drug Administration (FDA) for the treatment of lung infections caused by non-tuberculous mycobacteria and lung infections caused by *Mycobacterium tuberculosis* (Mtb) and orphan drug designation by the FDA for the treatment of nontuberculous mycobacterial (NTM) infection.

SPR720 Research Support
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About Spero
Spero Therapeutics, Inc. is a multi-asset, clinical-stage biopharmaceutical company focused on identifying, developing and commercializing novel treatments for multidrug-resistant (MDR) bacterial infections and rare diseases.

Spero's lead product candidate, tebipenem HBr (tebipenem pivoxil hydrobromide; formerly SPR994), is designed to be the first oral carbapenem-class antibiotic for use in adults to treat MDR Gram-negative infections.

Spero is also advancing SPR720, its novel oral therapy product candidate designed for the treatment of rare, orphan disease caused by pulmonary non-tuberculous mycobacterial (NTM) infections.

Spero also has an IV-administered next generation polymyxin product candidate, SPR206, developed from its potentiator platform that is being developed to treat MDR Gram-negative infections in the hospital setting.

For more information, visit https://sperotherapeutics.com.

Forward-Looking Statements
This press release may contain forward-looking statements. These statements include, but are not limited to, statements about Spero's expectation that positive results from a single pivotal Phase 3 clinical trial of tebipenem HBr and ancillary supportive studies to be conducted in parallel with the Phase 3 trial will support the approval of tebipenem HBr; the design, initiation, timing, progress and results of Spero's preclinical studies and clinical trials and its research and development programs, including the timing of Spero's NDA submission with the FDA regarding tebipenem HBr, the

commencement of Spero's planned Phase 2a clinical trial of SPR720 and the commencement of Spero's planned Phase 1 bronchoalveolar lavage (BAL) clinical trial assessing the penetration of SPR206 into the pulmonary compartment; management's assessment of the results of such preclinical studies and clinical trials; the timing of clinical data, including final data from the Phase 3 clinical trial of tebipenem HBr, final data presentation of the Phase 1 clinical trial of SPR720 and final data presentation of the Phase 1 clinical trial of SPR206; the direct and indirect impact of the pandemic caused by an outbreak of a new strain of coronavirus on Spero's business and operations, including manufacturing, research and development costs, clinical trials, regulatory processes and employee expenses; and Spero's cash forecast and anticipated expenses, anticipated payments under Spero's agreement with Everest Medicines, potential payments under Spero's agreement with BARDA, the sufficiency of its cash resources and the availability of additional non-dilutive funding from governmental agencies beyond any initially funded awards. In some cases, forward-looking statements can be identified by terms such as "may," "will," "should," "expect," "plan," "aim," "anticipate," "could," "intent," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including whether the FDA will accept a single pivotal study for approval of tebipenem HBr; whether results obtained in preclinical studies and clinical trials will be indicative of results obtained in future clinical trials; whether Spero's product candidates will advance through the preclinical development and clinical trial process on a timely basis, or at all, taking into account the effects of possible regulatory delays, slower than anticipated patient enrollment, manufacturing challenges, clinical trial design and clinical outcomes; whether the results of such trials will warrant submission for approval from the U.S. Food and Drug Administration or equivalent foreign regulatory agencies; whether the FDA will accept a rolling NDA submission with respect to tebipenem HBr; whether Spero will satisfy all of the pre-conditions to receipt of the development milestone payment under its agreement with Everest Medicines; whether BARDA elects to exercise its second option under Spero's agreement with BARDA; whether Spero's cash resources will be sufficient to fund its continuing operations for the periods and/or trials anticipated; whether Spero's clinical and preclinical development programs are delayed or disrupted due to the coronavirus; and other factors discussed in the "Risk Factors" set forth in filings that Spero periodically makes with the U.S. Securities and Exchange Commission. The forward-looking statements included in this press release represent Spero's views as of the date of this press release. Spero anticipates that subsequent events and developments will cause its views to change. However, while Spero may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Spero's views as of any date subsequent to the date of this press release.

Spero Investor and Media Contact:
Sharon Klahre
Senior Director, Investor Relations
857-242-1547
IR@sperotherapeutics.com

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