Sorrento Therapeutics Logo

SORRENTO AND SMARTPHARM TO COLLABORATE TO DEVELOP NOVEL GENE-ENCODED ANTIBODY VACCINE INTENDED TO PROTECT AGAINST COVID-19

March 23, 2020

Collaboration to leverage synergies between Monoclonal Antibody and Non-Viral Gene Delivery Platforms

SAN DIEGO and BOSTON, March 23, 2020 (GLOBE NEWSWIRE) -- In response to the government call for rapidly deployable countermeasures, Sorrento Therapeutics, Inc. (Nasdaq: SRNE, Sorrento) and SmartPharm Therapeutics Inc. (SmartPharm) today announced a research and development collaboration to develop a next-generation, gene-encoded antibody vaccine for COVID-19. The collaboration will utilize monoclonal antibodies against SARS-CoV-2 virus discovered and/or generated by Sorrento that will be encoded into a gene for delivery utilizing SmartPharm's non-viral nanoparticle platform.

"Over the past 10+ years, Sorrento has extensively utilized the G-MABTM Library, one of the largest and most diverse fully human antibody libraries in the biopharma space, for discovering potent immuno-oncology and anti-infective antibodies against over 100 drug targets. In the effort to more quickly resolve the global COVID-19 crisis, our company has initiated a rapidly accelerated program for the identification of potent neutralizing antibodies against SARS-CoV-2 coronavirus antigens that may be used for either treatment or prophylaxis," said Henry Ji, CEO of Sorrento Therapeutics. "We expect our platform to produce many candidate neutralizing antibodies for SmartPharm to incorporate into its powerful gene delivery platform. We look forward to our partnership with SmartPharm as part of our goal to make a meaningful impact in this truly global effort."

"As a company founded by infectious disease physicians, including myself, we are passionate about applying our novel gene delivery platform to this national and global health crisis," said Jose Trevejo CEO of SmartPharm Therapeutics. "Given the disproportionate mortality in elderly and immune-compromised, it is critical that we develop novel technologies that will better protect our populations that are particularly vulnerable to severe coronavirus infection."

Unlike classical antigen-based vaccines, which rely on a patient's immune system to establish efficacy, SmartPharm's gene-encoded antibody platform is designed to directly neutralize the coronavirus by producing the protective antibody directly in the muscle of the individual. This gene-encoded monoclonal antibody delivery platform or Gene MAb™ bypasses the in vitro antigen production process and potential for vaccine-induced side-effects in immunized individuals. This is especially important in susceptible populations like the elderly, where antigen-based vaccines are significantly less effective for the prevention of respiratory infections such as influenza or coronavirus. The companies expect that this novel approach will enable faster progression to clinic, pending agreement with the FDA.

As part of the collaboration, Sorrento and SmartPharm expect to develop a gene-encoded antibody or antibodies that can be administered as a prophylaxis against SARS-CoV-2 infection. Plans for the collaboration may include candidate development as well as filing of an IND application in the next few months.

About SmartPharm Therapeutics

SmartPharm Therapeutics Inc. is a privately held, pharmaceutical company focused on developing next-generation, non-viral gene therapies for the treatment of serious or rare diseases with the vision of creating "Biologics from Within." SmartPharm is currently developing a novel pipeline of non-viral, gene-encoded proteins for the treatment of conditions that require biologic therapy such enzyme replacement and tissue restoration. SmartPharm commenced operations in 2018 and is headquartered in Cambridge, MA, USA. For more information, please visit www.smartpharmtx.com.

About Sorrento Therapeutics, Inc.

Sorrento is a clinical stage, antibody-centric, biopharmaceutical company developing new therapies to turn malignant cancers into manageable and possibly curable diseases. Sorrento's multimodal multipronged approach to fighting cancer is made possible by its' extensive immuno-oncology platforms, including key assets such as fully human antibodies ("G-MAB™ library"), clinical stage immuno-cellular therapies ("CAR-T", "DAR-T"), intracellular targeting antibodies ("iTAbs"), antibody-drug conjugates ("ADC"), and clinical stage oncolytic virus ("Seprehvir ®").

Sorrento's commitment to life-enhancing therapies for patients is also demonstrated by our effort to advance a first-in-class (TRPV1 agonist) non-opioid pain management small molecule, resiniferatoxin ("RTX"), and ZTlido ® (lidocaine topical system) 1.8% for the treatment of post-herpetic neuralgia. Resiniferatoxin is completing a phase IB trial for intractable pain associated with cancer and a phase 1B trial in osteoarthritis patients. ZTlido® was approved by the FDA on February 28, 2018. For more information visit www.sorrentotherapeutics.com

Forward-Looking Statements

This press release and any statements made for and during any presentation or meeting contain forward-looking statements related to Sorrento Therapeutics, Inc., under the safe harbor provisions of Section 21E of the Private Securities Litigation Reform Act of 1995 and subject to risks and uncertainties that could cause actual results to differ materially from those projected. Forward-looking statements include statements regarding the collaboration and expected scope, terms and timing thereof and plans related thereto; the expected timing for the initiation and completion of ongoing studies for coronavirus using antibodies and data read-outs related thereto; the number of antibodies expected to be identified; the expected timing for commencing and completing registrational studies, including any potential for faster progression to the clinic, and for submitting an IND application for antibody technology for the treatment and/or prevention for coronavirus; the potency of any antibodies and ability to provide efficacy; any potential market for antibody therapy for the treatment and prevention of coronavirus and Sorrento's potential position in the anti-viral immunity industry. Risks and uncertainties that could cause our actual results to differ materially and adversely from those expressed in our forward-looking statements, include, but are not limited to: risks related to Sorrento's and its subsidiaries', affiliates' and partners' technologies and prospects and collaborations with partners, including, but not limited to, the collaboration with SmartPharm, using gene-encoded antibodies for the treatment and prevention of coronavirus infections; risks related to seeking regulatory approvals and conducting and results of clinical trials; the clinical and commercial success of the treatment and prevention of coronavirus infections using gene-encoded antibodies; the viability and success of using gene-encoded antibodies for treatments in anti-viral therapeutic areas, including coronavirus; clinical development risks, including risks in the progress, timing, cost, and results of

clinical trials and product development programs; risk of difficulties or delays in obtaining regulatory approvals; risks that clinical study results may not meet any or all endpoints of a clinical study and that any data generated from such studies may not support a regulatory submission or approval; risks related to seeking regulatory approvals and conducting clinical trials; risks of supplying drug product; risks related to leveraging the expertise of its employees, subsidiaries, affiliates and partners to assist the company in the execution of its strategies; risks related to Sorrento's debt obligations; risks related to the global impact of COVID-19 and other risks that are described in Sorrento's most recent periodic reports filed with the Securities and Exchange Commission, including Sorrento's Annual Report on Form 10-K for the year ended December 31, 2019, and subsequent Quarterly Reports on Form 10-Q filed with the Securities and Exchange Commission, including the risk factors set forth in those filings. Investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this release and we undertake no obligation to update any forward-looking statement in this press release except as required by law.

Media and Investor Relations

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