UPDATE – Sorrento Announces Encouraging Results From Two Phase 2 Studies of Abivertinib For Treatment Of Hospitalized Severe COVID-19 Patients

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- Abivertinib is an oral capsule (100 mg QD or two 50-mg capsules a day) that potentially reduces cytokine storm associated with acute respiratory distress syndrome (ARDS) in severe hospitalized COVID-19 patients.
- Preliminary results from two completed Phase 2 studies: US study (N=96) and Brazil study (N=400) have identified an **At-Risk COVID-19 Patient Population** - **Hospitalized COVID patients receiving oxygen support by non-invasive ventilation or high flow oxygen** - which can potentially benefit from Abivertinib treatment.
- The At-Risk COVID-19 Patients show an improvement in the primary endpoint of avoiding death and respiratory failure at one month (20% improvement in the US study [78.3% vs. 58.3%] and 25% in the Brazil study [69.6% vs. 44.4%], respectively for Abivertinib vs. controls).
- The At-Risk Patients in the US study (who were a sicker population than those in the Brazilian study) were discharged on average 2 days sooner from the ICU.
- Abivertinib has the potential to fill the unmet need for the At-Risk COVID-19 Patients and significantly reduce progression to intubation, mechanical ventilation and death.

SAN DIEGO, Oct. 27, 2021 (GLOBE NEWSWIRE) -- Sorrento Therapeutics, Inc. (Nasdaq: SRNE, "Sorrento") announced today positive preliminary results from two Phase 2 studies designed to identify the hospitalized patient population suffering from COVID-19-induced pneumonia and respiratory depression likely to respond to treatment with oral Abivertinib. Abivertinib is a novel small molecule tyrosine kinase inhibitor (TKI) that selectively targets both mutant forms of the epidermal growth factor receptor (EGFR) as well as Bruton's tyrosine kinase (BTK). Abivertinib irreversibly binds to the BTK receptor, preventing the phosphorylation of the receptor. Due to this effect, it has shown potent immunomodulatory activities *in vitro* with potent inhibition of key pro-inflammatory cytokine production, including IL-1 beta, IL-6 and TNF-alpha. These cytokines are associated with acute respiratory distress syndrome (ARDS), and with cytokine release syndrome (CRS) or cytokine storm, and COVID-19 disease progression with poor outcomes in patients.

The US study, entitled “A Phase 2, Double Blinded, Randomized Study of the Efficacy and Safety of STI-5656 (Abivertinib Maleate) With Standard of Care Versus Standard of Care in Subjects Hospitalized With COVID-19” (NCT04440007), recently completed enrollment (N=96 randomized 1:1). The Brazil study, entitled “A Phase 2, Randomized, Double-Blind, Placebo-controlled Study of the Safety and Efficacy of STI-5656 (Abivertinib Maleate) in Subjects Hospitalized Due to COVID-19” also completed enrollment (N=400, randomized 3:1 active vs. placebo). Both studies were designed to assess the potential clinical benefits of Abivertinib’s ability to reduce inflammatory cytokine storm associated with COVID-19-induced respiratory depression. It was also important to identify the potential patient population most likely to respond to treatment based upon severity of COVID-19 respiratory depression at baseline. In both studies the clinical status was assessed using a 9-point (0 to 8) categorical scale, where 3=hospitalized with no oxygen therapy, 4=hospitalized with oxygen by mask or nasal cannulae, 5=non-invasive ventilation or high flow oxygen, 6=intubation and mechanical ventilation, 7=additional organ support such as extracorporeal membrane oxygenation, and 8=death.

Brazilian Protocol Design	U.S. Protocol Design
Mild, Moderate and Severe COVID-19 patients	Severe COVID-19 patients
Any hospitalized patient	ICU non-ventilated
N=400 randomized 3:1 (Abivertinib to placebo); stratified for COVID-19 severity at baseline	**N=96** randomized 1:1 (Abivertinib to placebo)
100 mg QD x **7** days	**100 mg** QD x **14 days or discharge if sooner**
All patients received standard of care treatment for COVID-19	All patients received standard of care treatment for COVID-19
Duration 65 days	Duration 94 days
Primary endpoint: % **alive** and discharged at one month	Primary endpoint: % **alive** and free of respiratory failure at one month
NCT 04528667 ANVISA (Brazilian authority) under Process nº **25351.105670/2020-14**, Reference n° **3380614/20-4**	NCT 04440007

In the US Abivertinib study, most patients (57%) were sicker at baseline (category 5 clinical status) with patients in the Abivertinib group skewed to sicker or worse severity by clinical status (Abivertinib Group: 29/48: 60% vs. Control Placebo Group: 26/48: 38% for category 5, respectively) and by oxygenation status (P/F ratio 211 vs. 253, respectively). In the Brazil Abivertinib study, only 8% were in category 5, demonstrating a far less severely compromised population having been enrolled. In the US study, patients in category 5 showed a 20% improvement (78.3% survival vs. 58.3%) in the primary endpoint of avoiding death and respiratory failure at one month, and in the Brazil study, a 25% improvement (69.6% vs. 44.4%), respectively for Abivertinib vs. controls. In the US study, patients in category 5 treated with Abivertinib were discharged from the hospital 2 days sooner than those in the Control Group (8.6 vs. 10.6 days). Overall, in both studies patients who were in category 5, but not in category < 4, showed improvement with Abivertinib treatment. Based upon these preliminary results, a pivotal multi-country, multi-center pivotal Phase 3 study is being planned in 400 patients (randomized 1:1) on the At-Risk Hospitalized COVID-19 Patients requiring oxygen support via non-invasive ventilation or high flow oxygen at baseline

(category 5 patients).

“Patients on non-invasive ventilation or high flow oxygen supplementation due to COVID-19-induced respiratory failure represent a sicker and at-risk population with few available treatment options,” stated Dr. Mike Royal, Chief Medical Officer of Sorrento Therapeutics. “Abivertinib has the potential to fill this unmet need and significantly reduce progression to intubation, mechanical ventilation and death.”

About Sorrento Therapeutics, Inc.

Sorrento is a clinical and commercial stage biopharmaceutical company developing new therapies to treat cancer, pain (non-opioid treatments), autoimmune disease and COVID-19. 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”), immuno-cellular therapies (“DAR-T™”), antibody-drug conjugates (“ADCs”), and oncolytic virus (“Seprehvec™”). Sorrento is also developing potential antiviral therapies and vaccines against coronaviruses, including Abivertinib, COVIGUARD™, COVI-AMG™, COVISHIELD™, COVI-MSC™ and COVIDROPS™; and diagnostic test solutions, inclu COVITRACK™, COVISTIX™ and COVITRACE™

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 SP-102 (10 mg, dexamethasone sodium phosphate viscous gel) (SEMDEXA™), a novel, viscous gel formulation of a widely used corticosteroid for epidural injections to treat lumbosacral radicular pain, or sciatica, and to commercialize ZTlido® (lidocaine topical system) 1.8% for the treatment of post-herpetic neuralgia. RTX has completed a Phase IB trial for intractable pain associated with cancer and a Phase 1B trial in osteoarthritis patients. SEMDEXA is in a pivotal Phase 3 trial for the treatment of lumbosacral radicular pain, or sciatica. 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 Abivertinib, including the potential safety and clinical benefits thereof; the safety and efficacy of Abivertinib in patients with COVID-19 and in acute respiratory distress; the potential for treatment with Abivertinib to reduce cytokine storm associated with acute respiratory distress syndrome (ARDS) in severe hospitalized COVID-19 patients; the identification of an at-risk COVID-19 patient population based on likelihood of response to treatment; the potential for Abivertinib to reduce progression to intubation, mechanical ventilation and death in at-risk COVID-19 patients; the preliminary results of the two Phase 2 trials conducted in the US and Brazil to date; the continued enrollment and potential commencement of any future clinical trials for Abivertinib; the potential for preliminary data results to be replicated or continue to show improved clinical safety or efficacy; and our potential position in the antiviral 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 technologies and prospects, including, but not limited to risks related to seeking regulatory approval for Abivertinib; 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 that prior test, study and trial results may not be replicated in future studies and trials; the possibility of unfavorable new preclinical or clinical trial data and further analyses of existing preclinical or clinical trial data; risks associated with preliminary data; the risk that clinical trial data are subject to differing interpretations and assessments, including during the peer review/publication process, in the scientific community generally, and by regulatory authorities; risks of manufacturing and supplying drug product; risks related to leveraging the expertise of its employees, subsidiaries, affiliates and partners to assist Sorrento in the execution of its therapeutic antibody product candidate strategies; 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, 2020, 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.

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