Local biotech firm seeks to advance novel exosome isolation-based therapy for COVID-19 into clinical trials

LAWRENCE, Kan. (Mar. 26 2020) — As the global coronavirus (COVID-19) outbreak grows, Clara Biotech is working to gain approval on a first-of-its-kind therapeutic treatment to help prevent disease spread and enhance recovery and improve outcomes for infected patients.

Health and government officials continue to sound the alarm regarding the substantial hospitalization and intensive care unit (ICU) beds needed, which would crush the healthcare system. The U.S. currently only has roughly 64,400 ICU beds available nationwide to treat patients of all needs, not simply for coronavirus. It's anticipated that Clara Biotech's treatment could result in a significant reduction of required hospitalization and ICU beds.

This novel exosome therapy would be appropriate for all individuals both prior to and after COVID-19 infection. Not only would the therapy significantly reduce the number of patients becoming critically ill from lung complications, it would free up precious hospital and ventilator resources for others in need.

“In order to avoid burdening our healthcare system with the potential impacts of the coronavirus pandemic, we must immediately slow the progression and work to flatten the curve. By leveraging our cutting-edge patented technology, Clara Biotech aims to reduce COVID-19 symptom severity and prevent disease progression. Such preventive treatments would be suited to all COVID-19 infected patients who seek medical support to reduce inflammation and repair the lungs, minimizing hospitalization and the need for ventilator support. Currently, we are aware of no comparable products that could provide these critical health benefits,” said James West, CEO of Clara Biotech.
With development being led by West and Chief Science Officer Dr. Mei He, the therapy is moving toward in-vivo validation. With close support from Dr. Ilya Rachman, a physician-scientist and former clinical faculty member at UCLA with more than 15 years of clinical trial experience, including as an investigator in a Phase 3 pulmonary disease clinical trial, Clara Biotech has a pathway to rapidly move into human clinical trials.

“Exosomes are vesicles released from all living cells and faithfully represent the molecular makeup of cells of origin, with anti-inflammatory and regenerative properties. Clara Biotech’s exosome-based therapy creates a novel and extremely intriguing therapeutic option for patients with COVID-19 related pulmonary disease. This treatment can rapidly advance into human clinical trials to demonstrate its potential to stem the disease progression at multiple time points,” said Dr. Ilya Rachman.

Based at the Bioscience and Technology Business Center (BTBC) at the University of Kansas, Clara Biotech was founded by KU assistant professor Dr. Mei He in 2018 after research pointed to a possible platform that isolates highly pure exosome functional subtypes for facilitating cancer treatments more efficiently than other currently accepted ultracentrifugation processes. However, the team has always anticipated being able to utilize exosome isolation as a means to treat other illnesses, including current pandemic COVID-19 infections.

“Our ability to use this technology to pivot and address critical global health challenges as they arise is exciting,” said He. “With the CDC estimating as many as 40 million Americans needing hospitalization as the current pandemic unfolds, with as much as 53 percent of those individuals needing ICU care lasting 20 to 30 days, the time is now to move this research forward and make this therapy available to the masses.”

Clara Biotech has raised approximately $615,000 throughout its startup journey and participated in a number of relevant biotechnology growth programs. West also pitched last fall at Pure Pitch Rally, where he was awarded $8,000 cash and $5,000 in development credits from investors and sponsors.

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**About Clara Biotech**

Clara Biotech enables tomorrow’s medical breakthroughs today through exosomes. The company solves the major roadblock preventing exosome solutions from reaching patients — purification of exosomes from biofluids. Clara Biotech’s solution enables breakthroughs in
diagnostics and therapeutic pathways for a wide variety of conditions including cancer, Alzheimer’s Disease, multiple sclerosis, ischemic stroke and more. For more information, visit clarabio.tech.