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Bonac Corporation

Interim Progress in the Development of Treatment for COVID-19

Bonac Corporation (HQ: Kurume City, Fukuoka; CEO: Hirotake Hayashi, “Bonac”) with the Fukuoka Institute of Health and Environmental Sciences has been making steady progress in the research for development of therapeutic drug for COVID-19, a project launched on June 1,2020.

To date, the joint team has designed and synthesized 72 candidates for nucleic acid medicines, and tested their effectiveness against COVID-19 in-vitro studies. Ten of these candidates have proven to be effective in significantly reducing the replication of COVID-19. This has demonstrated the effectiveness of the nucleic acid medicines for COVID-19.

Initial plan targeted the narrowing down of the number of candidate agents by March 2021. Research, to date, proceeded smoothly, and the team has been able to reduce from 10 candidates for which has proven to be remarkably effective in preventing the replication of COVID-19, to 3 candidates that are highly stable in the body and can be expected to be effective even in small quantities.

The team is therefore proceeding to the next stage of promptly narrowing down further the agent candidates and to conduct non-clinical trials to confirm safety. Human clinical trials will start in 2021.

As a result of this collaborative study, the efficacy of a nucleic acid medicine for COVID-19 was revealed, indicating that the drug could be developed also for treatment of MERS (Middle East Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome). Both are infectious diseases similar to COVID-19 and still have no treatments.

Decision therefore was made to expand the current project to include development of therapeutic agents for MERS and SARS while focus will remain on gaining further progress in the research and development of COVID-19 treatment. Moreover, both Nagasaki University’s Institute of Tropical Medicine and Tokyo Medical University have agreed to participate in the research at this timing, which will accelerate the pace of progress.

In May 18, 2020, an agreement for joint research brought together Bonac, with its RNA interference technology derived from its proprietary nucleic acid drug platform, and the Fukuoka

Institute of Health and Environmental Sciences, a public health organization experienced in viral research with access to the latest data and knowledge of infectious diseases.

Bonac's technology aims to decompose the genomic RNA of SARS-CoV-2 and exert anti-viral effects in infected patients.

Established in 2010, Bonac has developed through its R&D a proprietary platform technology in nucleic acid medicine. To date, the biotech venture has been working on the development of drugs in the area of idiopathic pulmonary fibrosis and other respiratory diseases. In such endeavors, it focuses on drug delivery technology, specifically the use of inhalers to minimize patient side effects. The company is also working on the development of nucleic acid medicines for viruses such as hepatitis and influenza.

With the support of Fukuoka Prefecture and Kurume City, Bonac is pursuing rapid R&D with the aim of delivering innovative nucleic acid medicines for treatment of viral respiratory infections around the world.