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ASIA EDITION

Cytiva, Takara Bio to scale up COVID-19 vaccine candidate

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Cytiva to provide instruments and consumables to support Takara Bio's effort to support development of DNA vaccine with Osaka University and AnGes, Inc. group

Cytiva (formerly part of GE Healthcare Life Sciences), a global provider of technologies and services that advance and accelerate the development and manufacture of therapeutics, is teaming up with Japan based Takara Bio to manufacture a DNA vaccine candidate for COVID-19.

In collaboration with Osaka University (Professor Ryuichi Morishita) and AnGes, Inc. group, Takara Bio is working on an innovative plasmid vaccine. The DNA vaccine would generate the SARS-CoV2 protein which would become an antigen, and help people develop immunity against the virus.

This plasmid DNA vaccine against COVID-19 is pioneering. Ryuichi Morishita, Professor at Osaka University, who designed the plasmid DNA, explains: "Beyond the potential clinical benefit of the vaccine, plasmid DNA allows faster response in case of outbreak of an infectious disease." Plasmid DNA can be bio-manufactured in large quantities relatively quickly, allowing nimble ramp up of production.

Koichi Nakao, Takara Bio President and CEO, says: "Speed will make the difference in saving lives. With the right process design, prioritization of equipment and consumables, we can ramp up clinical production and accelerate the results of a clinical trial. As a CMO company, we are proud to be contributing to fast delivery of the vaccines and therefore helping defeat the COVID-19 pandemic as early as possible."

Emmanuel Ligner, President and CEO of Cytiva, says: "For Japan and for the world, this is important to move quickly to tackle COVID-19 from diagnostics to therapies, like this potential vaccine. Cytiva's entire organization is moving swiftly and decisively to respond to such a unique challenge. This work with Takara Bio, Osaka University and Anges is a great example of working together to improve access to life-changing therapies."

DNA vaccines are said to be safely manufactured in a short period of time without using any dangerous pathogens. By injecting circular DNA (plasmid DNA) that encodes the protein of the target pathogen, the pathogen protein is produced in the

body and immunity to the pathogen is generated. Unlike attenuated vaccines, it has no pathogenicity.