

KAICO Rises abt. \$2.5million In Funding Development of COVID-19 Vaccine Candidate



We, KAICO Ltd. (Nishi-ku in Fukuoka city, CEO : Kenta Yamato, hereinafter "KAICO") announced that it has completed procurement of 260 million yen as Series A Round in funding led by FFG Venture Business Partners on May 22, 2020. This funding round brings KAICO's total funding to 300 million yen with seed round on Oct. 2018.

A start-up company KAICO, established in Apr. 2018, aims to develop drugs, diagnostics and reagents from non-producible protein by applying to the protein production technology using silkworms by Professor Kusakabe, Faculty of Agriculture, Kyushu University, and the protein hyper function technology by Professor Kamiya, Faculty of Engineering,

■ Social impact by our business

Our silkworm-baculovirus system can supply large amount of medicines and vaccines just by increasing of number of silkworms, because that each silkworm works as a bioreactor. In case if unknown infectious disease occurs, our platform will make possible not only to scale up immediately but also to develop multiple medicines and vaccines in small quantities in parallel.

Regarding COVID-19, the Prof. Kusakabe Laboratory, Kyushu University, which is the originator of our technology, has taken the lead in promoting joint development of recombinant virus antigens and recombinant antiviral antibodies. For the antigen, we succeeded in expressing and purifying SARS-CoV-2 spike glycoprotein as a trimer using our silkworm-baculovirus system, and confirmed the binding with multiple antibodies. We started to develop antibody test kits with our partner companies by supply of both antigens and antibodies. We will develop the system of mass production of antigen SARS-CoV-2 spike glycoprotein as a vaccine candidate and will carry out a joint development with pharmaceutical companies.

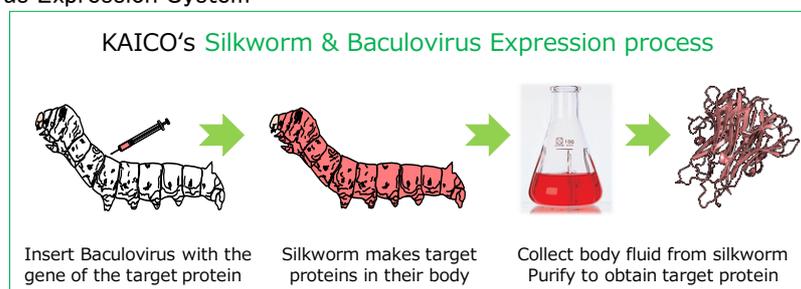
■ Future development with this funding

Funds raised this time will be used to install production equipment in accordance with Good Manufacturing Practice (GMP) rules required for future business, and to increase members of R&D and production.

■ Recombinant protein production using Silkworm in Kyushu University

KAICO commercially constructed a large-scale production platform of non-producible protein that has not been realized low-cost production despite great potential demand for reagents for regeneration medicines, vaccines, and diagnostic drugs. It can be achieved by silkworm-baculovirus expression system* using Kyushu Univ's original silkworm.

* Silkworm-Baculovirus Expression System



Target protein can be expressed through the virus proliferation that caused by inoculating target protein DNA to baculovirus, then inoculating the baculovirus to silkworm. Then collect the expressed target protein from silkworm and purify them. KAICO have a know-how for making baculovirus suitable for large-scale expression and DNA construct for inoculation.