DAICEL CORPORATION

March 13, 2020

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DAICEL Joins Osaka University and AnGes, Inc. in a Partnership to Develop a DNA Vaccine Against SARS-CoV-2

DAICEL Corporation, the parent company of Arbor Biosciences, is providing their innovative drug delivery device, pyro-drive jet injector Actranza™ lab., for use in a joint partnership to develop a DNA vaccine against SARS-CoV-2, currently being conducted by Osaka University and Japanese company AnGes, Inc.

Overview of the Joint Partnership

- An effort is underway for the development of a prophylactic DNA vaccine for the SARS-CoV-2 virus between Osaka University (Department of Clinical Gene Therapy/Department of Health Development and Medicine), and AnGes. Inc., utilizing AnGes, Inc.'s plasmid DNA platform.

- The DNA vaccine production process is generally established in a shorter period of time than the production of conventional vaccines, and is being performed by Takara Bio Inc., who has the plasmid DNA production technology and facilities.

- DAICEL has developed a gene transfer method using the Actranza™ lab. device, and is conducting research for its clinical application with Osaka University (Department of Device Application for Molecular Therapeutics/Department of Health Development and Medicine). This technology enables efficient delivery of plasmid DNA encoding antigen protein directly into cells via intradermal delivery, in order to initiate antibody production in the body.

About DNA Vaccines

DNA vaccines can be produced in a short period of time without pathogenic components. By inoculating a person with DNA plasmid encoding for a specific viral protein of the pathogen, the antigen protein is produced in the body without effects of the virus, while generating an immune response and thus further immunity against the pathogen.

About the Novel Drug Delivery Device Actranza™ lab.

Actranza™ lab. is a needle-free, jet injector driven by the instantaneous power generated from pyro combustion. The high-speed stream of liquid ejected by the device, such as a DNA vaccine, penetrates the skin and disperses directly into intradermal tissue. Because intradermal tissue contains more immunocompetent cells than muscle tissue, animal studies have shown that higher gene expression can be achieved when DNA vaccines are delivered intradermally when compared to intramuscular delivery with conventional needle injections. View details: https://www.daicel.com/en/research/actranza.html

To learn more about **Actranza™ lab**. contact:
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About Arbor Biosciences

Arbor Biosciences, a subsidiary of Chiral Technologies, Inc. (part of Daicel Corporation), is a development and manufacturing company founded by scientists to serve our peers in molecular biology applications. We are a passionate organization of scientists determined to deliver cost effective, user-friendly products to researchers of genetics and synthetic biology. The team at Arbor Biosciences prides themselves on providing exceptional customer service and timely technical support to new or advanced users on our array of products. We routinely collaborate with our customers and research partners to develop innovative solutions to address their unique applications.