

News Release

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aceRNA Technologies Co., Ltd, President, Teruo Susumu

Nitto and aceRNA Entered into an Agreement to Jointly Develop Switch mRNA Therapy

Nitto Denko Corporation (Headquarters: Osaka; President, CEO & COO: Hideo Takasaki; "Nitto", hereafter) and aceRNA Technologies Co., Ltd. (Headquarters: Kyoto; President, Teruo Susumu; "aceRNA", hereafter) announced today that they have entered into an agreement to jointly develop Switch mRNA therapy, with Nitto investing an undisclosed sum in aceRNA.

AceRNA is a Biotech-startup that develops technologies related to gene therapy. The company has the right to use the RNA Switch, which was developed by Professor Hirohide Saito from the Center for iPS Cell Research and Application at Kyoto University. The RNA Switch is integrated into messenger RNA (mRNA) to control mRNA functions, depending on the active status of microRNA (miRNA) in cells. aceRNA has developed its own screening technology to acquire miRNA from the approximately 2,600 different types of miRNA in humans, beneficial to the treatment of target diseases. By combining this technology with the RNA Switch, aceRNA is developing mRNA therapy that enables more precise control of treatment than ever before.



Figure 1 RNA Switch Overview

Nitto, a manufacturer of high-performance materials providing a wide range of products to various industries, is focusing on three business domains: Information Interface, Next-generation Mobility, and Human Life. In the field of Oligonucleotide Therapeutics, which is part of the Human life domain, Nitto has conducted clinical trials for drugs of intractable diseases, such as liver cirrhosis, idiopathic pulmonary fibrosis, and KRAS mutant cancers. For these drugs, Nitto utilizes siRNA (*1) drug discovery technology and DDS (*2) technology with which siRNA is delivered to target

organs. Nitto aims to develop new businesses which utilize DDS technology for mRNA therapy, to contribute to creating a safe and healthy society.

As Nitto and aceRNA form a capital alliance, they will promote the development of mRNA therapy, that enables more stable and refined controlled treatment in living bodies, through the combined use of Nitto's DDS technology and aceRNA's RNA Switch. They will proceed to verify their concept by the end of September 2023 and aim to license mRNA therapy to pharmaceutical companies in the future.



Figure 2 Image of delivering mRNA with DDS to Target Cells

*1: siRNA (small interference RNA) consists of short double-stranded RNA of 21 to 23 residues and suppresses gene expression by cleaving a significant part of the transcript of a target gene. *2: DDS (Drug Delivery System) is a technology which enhances the effectiveness of drugs and reduces side effects. It controls the drug distribution to the body as well as delivers them specifically to the tissues and cells targeted.

About Nitto Denko Corporation

Nitto is a Japanese manufacturer of high-performance materials. Since its founding in 1918, Nitto provides a wide range of products based on four core technologies: adhesion, coating, polymer function control, and polymer analysis & evaluation. A few examples are polarizing film, indispensable for displays of smartphones and TVs, industrial adhesive tape, automobile parts and medical supplies. Remaining faithful to the brand slogan, "Innovation for Customers," Nitto continues to contribute to a better society and environment through its innovative products and services and delivers technologies that shapes the future. For further information, please visit Nitto's official website(<u>https://www.nitto.com/jp/en/</u>).

About aceRNA Technologies Co., Ltd.

aceRNA Technologies Co., Ltd. is a biotech startup established in 2018 based on RNA design technology developed in synthetic RNA biology research by Prof. Hirohide Saito at Kyoto University. We are developing "smart gene therapy" (mRNA-based and virus-base) that enables control of therapeutic transgene expression in cell-type and -state specific manner. By that, we are committed to develop new therapeutic approach, such as in vivo cell programming. For more information about aceRNA Technologies, please visit <u>https://acernatec.com/en/</u>.

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