

March 14th, 2022

Participation in the Innovative Next Generation of Oligonucleotide Therapeutics Project conducted by AMED

NIPPON SHOKUBAI CO., LTD. (Headquarters: Osaka, Japan, President: Yujiro Goto, hereinafter "Nippon Shokubai"), announces that it has concluded a subcontract agreement for research and development with Tokyo Medical and Dental University, the principal investigator of "INGOT—Innovative Next-Generation of Oligonucleotide Therapeutics" to conduct research and development under the "Project Focused on Developing Key Technology for Discovering and Manufacturing Drugs for Next-Generation Treatment and Diagnosis (Development of RNA-targeted drug discovery technologies)" of AMED(*1)

This project aims to develop innovative next-generation oligonucleotide drugs with superior in vivo stability, efficacy and reduction of side effects compared to conventional ones, for the purpose of providing high-performance, safe oligonucleotide drugs (*2) to patients.

Nippon Shokubai and its group company Rena Therapeutics Inc., will develop chemical synthesis technology for boranophosphate (PB) nucleic acid (*3) and establish a manufacturing method for mass production of it to replace conventional phosphorothioate (PS) nucleic acid (*4) in collaboration with Tokyo Medical and Dental University and Tokyo University of Science.

Nippon Shokubai owns the GMP facility for the manufacture of middle-molecular APIs, such as peptides and oligonucleotides. We will support health and wellness of people and contribute to the continuous development of society by promoting the supply of various kinds of middle-molecular APIs.

*1 AMED: Japan Agency for Medical Research and Development

*2 Oligonucleotide drug: Chemically synthesized drug consisting of DNA and RNA derivatives :

*3 Boranophosphate (PB) nucleic acid: Nucleic acid containing a boron atom attached in a nonbridging position to the phosphorus atom

*4 Phosphorothioate (PS) nucleic acid: Nucleic acid containing a sulfur atom attached in a nonbridging position to the phosphorus atom

About NIPPON SHOKUBAI Co., Ltd.: Since 1941, Nippon Shokubai has grown up its business with unique catalyst technology. Nippon Shokubai has supplied, for example, ethylene oxide, acrylic acid, automobile catalysts, process catalysts and so on. Among all, our global market share of superabsorbent polymers is the largest in the world now (according to Nippon Shokubai research). Nippon Shokubai is a global chemical company operating under its corporate mission "TechnoAmenity-Providing affluence and comfort to people and society with our unique

technology."

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