Daiichi Sankyo Announces Support from the Japan Agency for Medical Research and Development’s CiCLE Program for Its Genetic Vaccine Platform, and Commencement of an Industry-Government-Academia Research & Development Collaboration for Development Vaccines Using the Platform

Tokyo, Japan, (October 12, 2017) – Daiichi Sankyo, Company Limited (hereafter Daiichi Sankyo) announced today that its development of the genetic vaccine platform utilizing in-house developed new nucleic acid delivery technology (hereafter novel nucleic acid delivering vaccines) has been adopted for support under the Cyclic Innovation for Clinical Empowerment (hereafter CiCLE)*1 program of the Japan Agency for Medical Research and Development (hereafter AMED). The company also announced that an industry-government-academia R&D collaboration for developing this vaccine technology commenced on October 12, 2017.

The novel drug delivery technology for nucleic acids encoding protective antigens confers in vivo expression of corresponding proteins in target tissues, facilitating antigen presentation required for the induction of optimal quantitative and qualitative levels of antigen-specific cytotoxic T lymphocytes (CTL)*2. In addition to prophylactic effects, therapeutic effects on infections and cancer are expected.

The novel nucleic acid delivery technology discovered by Daiichi Sankyo, which utilizes multiple lipid components imparting the stable nanoparticle structure, enables nucleic acid delivery into secondary lymphoid organs. It is expected to have low toxicity due to low levels of intracellular accumulation after delivery was completed. In the future, with support of the CiCLE program, through industry-government-academia coordination among AMED, National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN) and Daiichi Sankyo, there will be greater commitment to R&D for the early development of vaccines targeting viral diseases discovered in joint research with NIBIOHN.
1 Cyclic Innovation for Clinical Empowerment (CiCLE)

The purpose of CiCLE, which AMED inaugurated in fiscal 2017, is through industry-academia-government collaboration, bring together Japanese expertise in order to accelerate the practical application of medications, medical devices and medical technologies that accurately meet the needs of the clinical setting as well as promote the creation of an environment strongly conducive to nurturing open innovation and ventures in the medical field. This new program caters to a wide variety of projects ranging from those at the basic research stage to those at the development stage with a view to practical application, which includes clinical studies. Projects are not limited to specific areas.

2 Antigen-specific cytotoxic T lymphocytes (CTL)

CTL are T cells that have been differentiated and activated through the recognition of antigens presented by antigen presenting cells. They can directly recognize host cells latently or chronically infected with intracellular parasite pathogens as well as cancer cells and eliminate them.