April 7, 2023

Received the Award for Science and Technology (Development Category) of the 2023 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology

"Development of Manufacturing Technology for Viable Bifidobacteria Powder and Applied Products"

TOKYO (Apr. 2023): Morinaga Milk Industry Co., Ltd. announced three employees of Morinaga Milk Industry have been awarded the Award for Science and Technology (Development Category) of the 2023 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology for the "development of manufacturing technology for viable bifidobacteria powder and applied products."
This is the eighth time that our employees have received the commendation (including the former Director-General of the Science and Technology Agency Award).

About the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology

The Ministry of Education, Culture, Sports, Science and Technology recognizes individuals who have achieved remarkable results in research and development related to science and technology, as well as in promoting understanding, through the "Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology." The purpose of this award is to motivate those involved in science and technology and contribute to the improvement of Japan's level of science and technology.

Award Recipients and Award-winning Technology

Award for Science and Technology (Development Category)
This category is for individuals who have conducted groundbreaking research and development or inventions that are actually being utilized and contribute to the improvement and advancement of the social economy, as well as the livelihood of the citizens.

◆ Award Recipients

Fumiaki Abe (Executive Corporate Officer, and Director of R&D Division)
Hirofumi Miyauchi (Section Head of Probiotics Production Technology Research Section, Food Ingredients & Technology Institute, R&D Division)
Noriyuki Iwabuchi (Section Head of Probiotics Research Section, Innovative Research Institute, R&D Division)

◆ Title

Development of manufacturing technology for viable bifidobacteria powder and applied products

◆ Overview

In addition to conducting research focusing on the different intestinal bifidobacteria in breast-fed and formula-fed infants, research has also started on the application of bifidobacteria to various products. Until now, applications of bifidobacteria

have been limited to products such as yogurt and beverages, so there has been a demand for viable bifidobacteria powder technology that can be widely applied to powdered products such as infant formula and supplements. It was also necessary to obtain and accumulate scientific evidence demonstrating the utility of the developed bifidobacteria powder.
This development established a microbial powder manufacturing technology that produces a bifidobacteria powder with a high concentration of live bacteria and stabilizes it for a long period of time at room temperature, and a technology for applying the developed live bacteria powder to various products. In addition to clarifying the utility of this bacterial powder in low-birth-weight infants, it was also demonstrated to have an antiallergic effect.
These results will enable bifidobacteria to be used in various products such as infant formula and supplements with a long shelf life, contributing not only to the health of more people both in Japan and overseas, but also to support the healthy growth of low-birth-weight infants.

◆ Significance of technological development

1. Utilization in NICUs

   The development of this technology makes it possible to supply viable bifidobacteria powders to more than 150 neonatal intensive care unit (NICU) facilities in Japan and overseas, contributing to the healthy growth of many low-birth-weight infants.

2. Provision throughout the world

   The development of this technology has enabled bifidobacteria powder to be used to deliver health to many people in more than 30 countries around the world.

Director-General of the Science and Technology Agency Awards and Commendations for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology Received by Employees

1966: Development of easily soluble cream powder manufacturing technology
1976: Development of spray drying equipment
1979: Research on manufacturing method for aseptic tofu in containers
1984: Research on the use of bifidobacteria in dairy products
1993: Development of manufacturing method for lactulose
2003: Development of an industrial manufacturing technique for lactoferrin
2010: Development of manufacturing process of a more palatable protein hydrolysate with low antigenicity
2023: Development of manufacturing technology for viable bifidobacteria powder and applied products

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