

21th Series of Unsecured Corporate Bonds (Social Bonds) Funding Allocation and Impact Reporting

Funding Allocation as of December 2022 Amount issued 20.0 billion yen (Fully allocated)

Human Milk Oligosaccharides



Project Name: Capital investment contributing to the production of Human Milk Oligosaccharide

Project Summary: HMOs (Human Milk Oligosaccharides) are oligosaccharides found in breast milk. HMOs are the third most abundant solid component of breast milk after lactose and lipids, and more than 200 HMOs have been found in breast milk. Since HMOs are rarely found in cow's milk or milk of other mammalian origin, and are particularly abundant in human colostrum, they are known to be an important component for infants. In 2000, Kyowa Hakko Bio became the first company in the world to establish an HMOs industrial-scale mass-production system. Based on the expansion into Asia, where consumption is expected to grow, and on the advantages of being able to secure excellent human resources and raw materials necessary for the production of HMOs, Kyowa Hakko Bio has built the Thai Kyowa production facility in November 2022, and start manufacturing approximately 300 metric tons per year from FY 2023.

Amount Allocated: 7.3 billion yen (86.8% Refinanced)
(Cumulative)

Citicoline



Project Name: Capital investment, operation, and procurement of raw materials contributing to the production of Citicoline

Project Summary: Citicoline is a substance that has long been used around the world to treat brain diseases. It is also used in health foods to support improved cognitive function. As the world's population continues to age, demand for this highperformance raw material is rapidly increasing. Kyowa Hakko Bio offers citicoline around the world as a health food additive or active pharmaceutical ingredient in accordance with the regulations in each country. Through this expansion of production capability, Kyowa Hakko Bio will establish a stable global supply network of citicoline to pharmaceutical and health food manufacturers. Manufacturing at the new production facilities is scheduled to start in summer of 2023, and is expected to be able to produce about 2.5 times as much as before.

Amount Allocated: 9.5 billion yen (58.7% Refinanced)
(Cumulative)

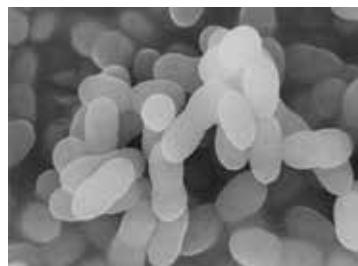
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Joy brings us together



Lc-PLASMA



Lc-PLASMA

Project Name: Capital investment, operation, and procurement of raw materials contributing to the production of raw material powder utilizing Lc-PLASMA, and the research and development of Lc-PLASMA

Project Summary: Lc-PLASMA is a lactic acid bacteria that supports the maintenance of immunity in healthy people. It has been reported in research papers that it is the first in the world* to work on pDC (plasmacytoid dendritic cells), a leader of the immune system. Kirin Holdings, KOIWAI DAIRY PRODUCTS CO., LTD., and KYOWA HAKKO BIO CO., LTD. have jointly conducted research on this product, and with the cooperation of universities and research institutions in Japan and overseas, 31 papers have been published and numerous presentations made at academic conferences. At the 11th Technology Management and Innovation Awards (sponsored by the Association for Science, Technology and Economy), which recognizes outstanding examples of innovation that transform the world, Kirin Holdings received the Minister of Education, Culture, Sports, Science and Technology Award for the discovery, research, and commercialization of Lc-PLASMA. Kirin Holdings will expand manufacturing equipment at the iMUSE Health Science Factory (located in Saitama Prefecture, just north of Tokyo) - a manufacturing center for lactic acid bacteria raw material - in order to meet the increasing demand of Lc-PLASMA. The new manufacturing equipment is scheduled to begin operating in 2023, and will double the annual production capacity of Lc-PLASMA to approximately 28 tons in 2023.

Amount Allocated: 3.2 billion yen (90.0% Refinanced)
(Cumulative)

* Lc-PLASMA was the first lactic acid bacteria reported to work on pDC in humans (based on information published in PubMed and the homepage of the Central Medical Journal).

Impact Reporting

Categories	Projects	Output	Outcome	FY 2022 Commitment Results
Businesses that contribute to the achievement of a society of health and longevity, mainly through infant and toddler health improvement and disease prevention	<input type="checkbox"/> Capital investment, operation, and procurement of raw materials contributing to the production of Human Milk Oligosaccharide (HMO)	<input type="checkbox"/> Increase in HMO manufacturing capacity	<input type="checkbox"/> Increase in the number of users of products containing HMO (infant formula, health foods, etc.) in Japan and overseas. The products containing HMO contribute to the health of a wide range of our customers.	Completion of Production Facility
Businesses that contribute to the achievement of a society of health and longevity, through brain function improvement and brain function decline prevention	<input type="checkbox"/> Capital investment, operation, and procurement of raw materials contributing to the production of Citicoline	<input type="checkbox"/> Increase in Citicoline manufacturing capacity	<input type="checkbox"/> Increase in the number of users of products containing Citicoline (pharmaceuticals, health foods, etc.) in Japan and overseas. The products containing Citicoline contribute to brain function improvement and brain function decline prevention of our customers.	Pharmaceuticals: 1.02 million people Health foods: 0.51 million people
Businesses that contribute to the achievement of a society of health and longevity, through the maintenance of immune function	<input type="checkbox"/> Capital investment, operation, and procurement of raw materials contributing to the production of raw material powder utilizing Lc-PLASMA, and the research and development of Lc-PLASMA	<input type="checkbox"/> Increase in Lc-PLASMA manufacturing capacity <input type="checkbox"/> Number of published papers <input type="checkbox"/> Number of conference presentations <input type="checkbox"/> Partnerships with Academia	<input type="checkbox"/> Increase in the number of people who continue consuming Lc-PLASMA in Japan and overseas. Lc-PLASMA contribute to the maintenance of immune function of our customers.	0.64 million people