Algal Bio Secures JST A-STEP Grant to Advance Functional Ingredients from Microalgae. ¥330 Million in Support to Explore Novel Sleep-Enhancing Solutions

– Shaping the Future of Sleep Through Microalgae Innovation –

TOKYO (August 1, 2025) — Algal Bio, a biotechnology company at the forefront of microalgae-based innovation, is pleased to announce its selection for the prestigious A-STEP (Adaptable and Seamless Technology Transfer Program through Target-driven R&D) by the Japan Science and Technology Agency (JST).

This recognition highlights Algal Bio's leadership in developing next-generation, high-value functional ingredients derived from microalgae. Under the program, Algal Bio will receive up to ¥330 million in funding over a three-year period, from August 1, 2025 to July 31, 2028.

With this support, Algal Bio will accelerate the development of microalgae-derived ingredients aimed at official registration under Japan's Foods with Function Claims (FFC) system. The company will focus on building a comprehensive body of scientific evidence, including efficacy data and mechanistic insights, while also conducting legal and regulatory assessments to facilitate future global market expansion.

Through this initiative, Algal Bio seeks to unlock new functional value from its proprietary microalgae library and contribute to the advancement of human health and well-being.

Unlocking Innovation: Functional Ingredients from Algal Bio's Microalgae Library

Founded in 2018, Algal Bio has developed a cutting-edge Microalgae Biofoundry Platform, grounded in over two decades of microalgae research at the University of Tokyo. Leveraging a diverse and robust microalgae library—comprising over 1,260 strains across 100 species—Algal Bio has promoted collaborative research with a wide range of industries. In fiscal year 2024 alone, the company engaged in more than 34 joint R&D projects.

Algal Bio's proprietary microalgae library

In 2023, Algal Bio launched its first proprietary product, "Moneru," featuring select strains from its microalgae library. By actively presenting at research meetings and symposiums attended by medical professionals and physicians, the product has gained traction in clinical settings and is now available at 80 clinics nationwide (as of July 31, 2025).

See also: Algae was also the topic of Dr. Tomomi Himeno's lecture! Algae supplement "Moneru" to exhibit at the International Symposium on Nutritional Medicine 2024

In 2025, Japan Bio Science Laboratory began production of high-purity, high-concentration astaxanthin using proprietary strains and cultivation technologies developed by Algal Bio. The result: a 100% domestically produced, premium-grade microalgal ingredient now entering the commercial market.

See also: Astaxanthin Innovation Reaches Commercial Scale ——Algal Bio and Japan Bio Science Laboratory Bring Joint Innovation to Market

Powered by its proprietary Microalgae Biofoundry Platform, Algal Bio continues to pioneer the exploration and development of microalgae-derived functional ingredients aimed at enhancing health and quality of life.

With its recent selection for JST's A-STEP program, the company is set to accelerate the practical implementation of novel ingredients and products. Backed by rigorous scientific evidence, Algal Bio aims to deliver unprecedented functionality and open new possibilities for people across a wide range of sectors.

Outline of the Adaptable and Seamless Technology Transfer Program through Target-driven R&D (A-STEP)

A-STEP (Adaptable and Seamless Technology transfer Program through target-driven R&D) is a Japanese program designed to support the practical application of research results from universities and public research institutions. It aims to facilitate the transfer of technology into society by bridging the gap between basic research and commercialization. Among its various components, the "Support for Implementation (Repayment Type)" program—under which Algal Bio has been selected—provides development loans to start-up companies striving to bring breakthrough technologies to market, fostering the creation of innovative products and services.

Projects are carefully evaluated by an expert committee based on factors such as technological novelty and excellence, innovation potential, R&D objectives and plans, commercialization readiness, and financial viability. This rigorous selection ensures that funded projects contribute to early societal returns of cutting-edge research.

Development Project Overview

Title: "Development of Highly Functional Ingredients Derived from Microalgae
Development Project Overview: In today's hyperconnected, always-on society—driven by the widespread use of smartphones and the internet—sleep quality and duration have become pressing health concerns worldwide. As the distinction between day and night grows increasingly blurred, many people find themselves sleeping less and resting poorly. Japan, in particular, faces a significant challenge in this area: a 2021 survey by the Organization for Economic Cooperation and Development (OECD) revealed that Japan has the shortest average sleep duration among 33 developed nations, highlighting the severity of its sleep-related issues. This trend is not limited to Japan; across the globe, sleep disorders are intensifying, and the market for melatonin and other sleep-inducing products is expanding rapidly.

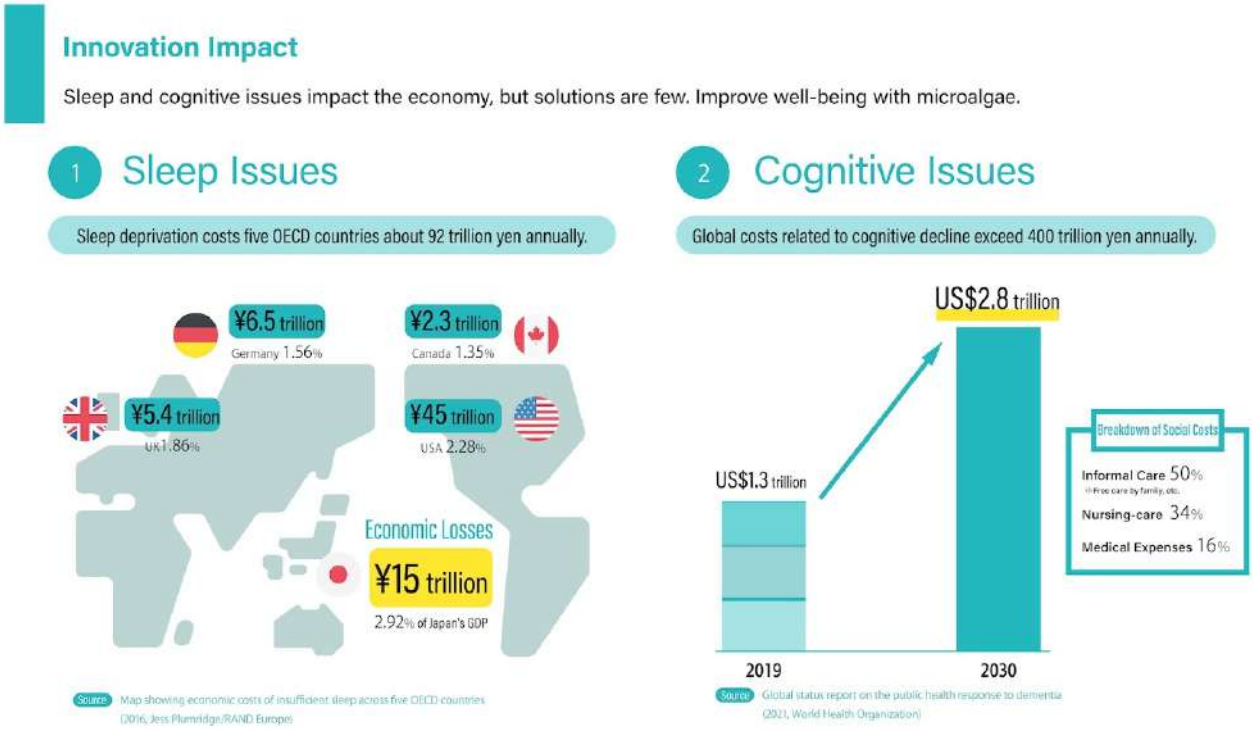
However, conventional approaches to addressing sleep problems—such as insomnia medications and dietary supplements—often come with limitations. While these solutions may induce sleep, they frequently lead to undesirable side effects such as next-day drowsiness or rebound insomnia, where discontinuation results in difficulty falling asleep again. Even newer medications designed to minimize such side effects continue to leave many users with lingering grogginess upon waking. These shortcomings underscore the growing need for innovative, effective, and side-effect-free alternatives.

Against this backdrop, Algal Bio is pioneering a new approach rooted in over two decades of microalgae research conducted at the University of Tokyo. Since its founding, the company has built an extensive proprietary microalgae library encompassing more than 1,260 strains across 100 species. Among these, Algal Bio has identified a unique strain that has shown promise in preclinical studies for its potential to reduce

inflammatory markers in the brain following oral ingestion. Leveraging this discovery, the company is now spearheading the development of novel microalgae-derived solutions aimed at improving sleep quality and supporting cognitive function.

With support from the JST A-STEP program, Algal Bio will further advance this initiative by acquiring the necessary safety data for notification under Japan's Foods with Function Claims (FFC) system. In parallel, the company will conduct efficacy studies to generate robust scientific evidence and work to elucidate the underlying mechanisms of action that drive the functional benefits of the selected microalgae strain. Furthermore, to ensure scalability and global reach, Algal Bio will carry out comprehensive legal and regulatory research to prepare for overseas market expansion.

Through this multifaceted effort, the company aims to accelerate the practical implementation and commercialization of high-value, microalgae-derived functional ingredients and products. By addressing sleep-related challenges with evidence-based, natural solutions, Algal Bio seeks to offer meaningful new options to improve well-being and quality of life for people around the world.



Innovative Breakthroughs Powered by Microalgae-Derived Functional Ingredients

About Algal Bio

Algal Bio is a R&D-oriented startup company, dedicated to unleashing the potential of microalgae with the mission of "Cultivating Algae's Potential for a Better Future". We are building the most advanced microalgae bio-foundry platform in the world. Our platform is based on the results of more than 20 years of microalgae research at the University of Tokyo. It consists of a proprietary microalgae library that accumulates culture

data on 1,260 strains of 100 species, as well as breeding and selection technologies for each microalgae, know-how for optimizing culture conditions, and a pilot plant for scale-up studies. Our platform will provide the clients with the best possible microalgae for their needs in the shortest possible time. By leveraging our algae bio-foundry platform, we collaborate with a diverse range of companies to bring new algae-derived products and solutions to market. These innovations address critical global challenges, including human health, sustainable food supply, and climate change.
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