

TECH OFFER

Superior Probiotics and Prebiotics for Gut Health and Immune Support



KEY INFORMATION

TECHNOLOGY CATEGORY:

Sustainability - Sustainable Living

Foods - Ingredients

Personal Care - Nutrition & Health Supplements

TECHNOLOGY READINESS LEVEL (TRL): **TRL9**

COUNTRY: **THAILAND**

ID NUMBER: **TO175016**

OVERVIEW

Probiotic bacteria play a pivotal role in stimulating T cell-dependent immune responses, offering protection against bacterial infections, and addressing various gut-related conditions resulting in the healthy gut health. This technology features specially designed formulations using meticulously selected microbial probiotic strains with exceptional attributes and natural bioactive compounds with prebiotic and functional properties to enhance gut health and bolster immune support. In particular, the formulations feature a functional, prebiotic ingredient that promotes beneficial gut bacteria and prepared from mulberry through a patent-pending process.

With a team of specialists capable of customising probiotic functions to specific needs, they are able to select, isolate and culture advanced probiotic strains, as well as conduct pharmacological activities for functional claims. Depending on customers' needs, e.g. facilitating growth of gut beneficial microorganisms, prevent infections, or reduce inflammation in the digestive system, the team can customise the blend of ingredients.

TECHNOLOGY FEATURES & SPECIFICATIONS

- Synbiotic formulations by blending carefully selected probiotic strains with in-house mulberry extract or other prebiotics
- Selected probiotic strains exhibit, through in vitro and in vivo studies, ability to withstand the digestive system and no red blood cell hemolysis, adhere effectively to intestinal mucosa, inhibit gastrointestinal pathogens, reduce inflammation, and promote microbial balance in the gut
- Metagenomic analysis was also conducted, revealing an increase in the diversity of beneficial bacteria population residing in the gut

POTENTIAL APPLICATIONS

- Supplements: Customisable into various forms, including capsules, tablets, and powders, making them a convenient option for individuals seeking targeted gut health support
- Functional Beverages: Probiotics can be added to various beverages like kombucha, smoothies, and fruit juices to provide a convenient way for consumers to incorporate them into their diet
- Yogurt and Fermented Dairy Products
- Pet Food: Probiotics are also used in pet food products to support the digestive health and overall well-being of animals

MARKET TRENDS & OPPORTUNITIES

In 2022, the global prebiotics and probiotics market was estimated to be worth approximately US\$6 billion and US\$58 billion respectively (Research and Markets, 2022). In Thailand, it currently stands at around US\$250 million with potential growth. The advent of the COVID-19 pandemic has heightened global health awareness, prompting people worldwide to seek ways to strengthen their immune systems.

UNIQUE VALUE PROPOSITION

The company possesses the capability to produce the selected probiotic strains and mulberry-based prebiotic, as well as provides the expertise in probiotics and prebiotics product development aimed at enhancing gut health and bolstering immune support. Their core know-how is built on three key pillars:

1. Extensive research to continually advance products in metagenomic study
2. Selected probiotic strains for effectively improving gut health and immune support
3. Functional properties of product such as anti-inflammatory and antioxidant to enhance overall well-being