TECH OFFER

Proprietary Probiotic Strain Of Bifidobacterium Longum For Infant Health

KEY INFORMATION

TECHNOLOGY CATEGORY:
Foods - Ingredients
Healthcare - Pharmaceuticals & Therapeutics
Personal Care - Nutrition & Health Supplements

TECHNOLOGY READINESS LEVEL (TRL): **TRL9**
COUNTRY: **SINGAPORE**
ID NUMBER: **TO174648**

OVERVIEW

Early life complications and chronic health conditions among children continue to rise over the years. Accumulating evidence shows that microbes residing in the human body play important roles in infant development and immunity system maturation, starting from the first 1000 days and transcendence in later life.

The development of healthy gut microbiota during early life, with a predominance of *Bifidobacterium* spp., offers an extraordinary window of opportunity for neonatal health development and disease prevention. Aberrant bifidobacterial colonization affected by factors including gestational age, delivery modes, and feeding types may lead to gut disorders, allergies, and obesity later in life.

Consumer recognition of the need to maintain healthy gut microbiota during early life for lifelong well-being is getting stronger and they are seeking probiotics to support infant health. Infant nutrition products are increasingly fortified with probiotics,

including bifidobacteria, which are gaining traction worldwide. However, not all bifidobacteria are the same.

A leading Japanese dairy company has developed a premium line of probiotic strains that are highly compatible with the human gut. These strains are natural inhabitants of the human intestines and more superior in physiological functions critical for infant health. Among them, the proprietary strain of *Bifidobacterium longum* is a well-documented probiotics with proven clinical benefits to infant's and children's health.

The company is seeking collaborations with infant nutrition, dietary supplement and functional food manufacturers that are interested in enhancing their product offerings in forms of R&D collaborations or cocreations to develop novel products incorporated with this proprietary *B. logum* strain.

TECHNOLOGY FEATURES & SPECIFICATIONS

Bifidobacteria species have shown to be co-evolved with their respective hosts 15 million years ago. Those species that naturally reside in the human gut can have substantial superiority in various physiological functions that are crucial to infant health.

Through a long research history on bifidobacteria, the leading dairy company from Japan has worked out to understand the difference among bifidobacterial species and has developed its well-established proprietary strain of *Bifidobacterium longum*. This proprietary strain shows high compatibility with human breast milk and plays an important role in infant health.

Backed with over 220 scientific studies to date, the proprietary strain of *B. longum* has been shown to provide a consistent beneficial effect in promoting healthy gut microbiota development, supporting a healthy immune system, and protecting against allergy and infections in infants and children.

POTENTIAL APPLICATIONS

The proprietary probiotic strain of *B. longum* is well-established in safety and clinical trials. They can provide feasible and lasting solutions to the B2B customers including infant formula and dietary supplement manufacturers,

- As a clinically effective baby-friendly probiotic that promotes infant and children's health
- As a functional ingredient in various infant nutrition products such as infant formula, baby food, and nutritional supplements
- As a functional ingredient in food products to confer additional health benefits associated with *B. logum* while augmenting traditional nutritional values

The excellent stability of this probiotic strain allows for various innovative applications, achieving cost-effectiveness.

MARKET TRENDS & OPPORTUNITIES

Parents' high focus areas like immunity, cognitive development and digestive health are inspiring the development of formulations with ingredients like probiotics (e.g. human-residential bifidobacteria strains). Consumers demanding for infant nutrition products that would deliver a specific health benefit for maximum nutrition are on the rise. Besides, natural credentials are placed at the forefront of innovation strategies for baby food products as demand increases.

Moreover, post-pandemic, people are seeking connections with nature and there is a renewed focus on the natural value of probiotics. With continued efforts in consumer education, consumers see natural probiotics differently. Backed with scientific

rigor, most believe that the human-residential probiotic strains are better.

Therefore, brand manufacturers can consider launching infant nutrition products with a focus on human-residential bifidobacteria strains that have strong clinical evidence on infant health, such as this proprietary probiotic strain of *B. longum* and communicating the importance of an early life bifidobacteria-dominant gut microbiome to aid in overall health later in life.

UNIQUE VALUE PROPOSITION

The proprietary probiotic strain of *B.longum* is a strain of human-residential bifidobacteria that has been shown to possess superiority in several physiological functions that are closely related to human health. It is more adapted to and more functional in the human intestinal environment and therefore, it stands out from other probiotics as it can offer a true natural value to the products and to meet the increasing consumer demand.

With the well-consolidated regulatory oversight, quality assurance, and robust profile of safety and clinical efficacies, this proprietary probiotic strain can provide an extraordinary nutritional solution that can provide a good basis for overall health.