

## **Ther-Biotic<sup>®</sup> Synbiotic**

# A next-generation blend of seven probiotics and a prebiotic for synergistic microbiome support

## Introduction

The human microbiome influences many factors required for health and well-being, including metabolic function, gastrointestinal (GI) barrier health, immunologic activities, and neurobehavioral balance.<sup>1,2</sup> As research surrounding probiotic supplementation continues to develop, there is a growing body of evidence that supports the importance of the supplementation of prebiotics, the non-digestible fibers that provide the essential nourishment needed for healthy flora to survive and successfully colonize the GI tract. By feeding beneficial microbiota, prebiotics contribute to homeodynamic balance within the GI tract and, subsequently, throughout the body.<sup>3</sup> Now, research has demonstrated that the combination of probiotics with a prebiotic may offer a more profound entourage effect on GI ecology.<sup>14</sup> Klaire Labs<sup>®</sup>' Ther-Biotic<sup>®</sup> Synbiotic combines seven strain-specific, targeted probiotics with the prebiotic Sunfiber<sup>®</sup>, a partially hydrolyzed guar gum. This comprehensive, broad-spectrum synbiotic supports GI, immune, and respiratory health.<sup>†</sup>

### **Product Features**

- + Comprehensive microbiome support in one capsule
- + Powerful, broad-spectrum synbiotic with strains identified and CFU declared per strain
- + Hypoallergenic, non-GMO, and shelf stable
- + Includes seven probiotic strains selected for their supportive roles in holistic, GI, respiratory, and immune health<sup>†</sup>
- + Contains *Lactobacillus acidophilus* DDS<sup>®</sup>-1, *Lactobacillus rhamnosus* GG, and *Bifidobacterium lactis* UABla-12<sup>™</sup>, three clinically proven strains that support healthy digestion, GI comfort, and immune function<sup>†</sup>
- + Contains Sunfiber<sup>®</sup> (partially hydrolyzed guar gum), a water-soluble, galactomannan prebiotic (not a starch- or sugar-based fiber) that is Monash University low-FODMAP Certified<sup>™</sup>
- + Utilizes a delayed-release, vegetarian capsule that has been scientifically shown to enhance the survivability of probiotics and to deliver them effectively to the intestines
- + Specialized moisture-resistant and desiccant-lined packaging further enhances the survivability of the strains



<sup>1</sup>These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## **Mechanisms of Action**

Clinically proven strains selected for ultimate patient comfort and powerful results

Supports Microbiome Balance After Antibiotic Therapy<sup>†</sup> L. plantarum UALp-05™

#### Healthy Respiratory Function<sup>†</sup>

L. acidophilus DDS®-1 B. lactis UABla-12™ L. paracasei UALpc-04™ B. bifidum UABb-10™ L. reuteri UALre-16™

#### Healthy Immune Function<sup>†</sup>

L. acidophilus DDS®-1 L. plantarum UALp-05™ B. lactis UABla-12™ L. paracasei UALpc-04™ L. rhamnosus GG B. bifidum UABb-10™

#### Healthy Digestive Function<sup>†</sup>

L. acidophilus DDS®-1 L. plantarum UALp-05™ B. bifidum UABb-10™

#### Digestive Comfort<sup>†</sup>

L. acidophilus DDS®-1 L. plantarum UALp-05™ B. lactis UABla-12™ B. bifidum UABb-10™ L. reuteri UALre-16™

#### Healthy Microbiome Flora<sup>†</sup>

L. acidophilus DDS®-1 L. plantarum UALp-05™ B. lactis UABla-12™ L. paracasei UALpc-04™ L. rhamnosus GG B. bifidum UABb-10™ L. reuteri UALre-16™

May support healthy inflammation modulation, where inflammation is associated with occasional digestive discomfort<sup>†</sup> L. rhamnosus GG

## What is Sunfiber<sup>®</sup>? Medium fermentation for maximum GI comfort

Sunfiber<sup>®</sup> is a galactomannan (not a starch- or sugar-based fiber). As a prebiotic fiber that serves as food for the gut microbiome, it helps to support a healthy gut flora, which supports digestive health and overall wellness. In addition, Sunfiber<sup>®</sup> is a medium-chain carbohydrate that offers medium fermentation, causing no excess GI discomfort even in the most sensitive patients.

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## **Probiotic Strains Explained** *Ther-Biotic® Synbiotic*

#### Lactobacillus acidophilus DDS®-1

A widely recognized probiotic that promotes the healthy functioning of the gut and is highly resistant to gastric acid, bile salts, and proteases.<sup>†</sup> It aids in the digestion of gluten and casein proteins and ferments a variety of carbohydrates that escape digestion in the upper gastrointestinal tract—including fructooligosaccharides (FOS) and galactooligosaccharides (GOS)—thereby releasing short-chain fatty acids that are important for intestinal barrier function.<sup>†</sup> Studies have shown that *L. acidophilus* promotes the absorption of micronutrients such as vitamins and minerals. Studies have also demonstrated that *L. acidophilus* DDS®-1 has immunomodulatory effects and can support the immune system.<sup>†</sup>

#### Lactobacillus plantarum UALp-05™

Generally lacking in the gut microecology of individuals consuming a standard Western diet. *L. plantarum* effectively metabolizes oligofructans, the semi-resistant polysaccharides found in vegetables.<sup>†</sup> A very hardy species, *L. plantarum* is highly resistant to gastric acid, bile, and proteases; it also has a strong ability to assimilate cholesterol under various intestinal conditions. *L. plantarum* induces the expression of genes regulating tight junction formation, thereby augmenting intestinal barrier function.<sup>†</sup> It strongly attaches to human colonocytes, competing with undesirable bacteria and promoting a balanced microbiota.<sup>†</sup> Through multiple mechanisms, such as the modulation of interleukins, natural killer (NK) cells, and cytokines, it supports a healthy immune response.<sup>†</sup>

#### Bifidobacterium lactis UABla-12™

Supports normal bowel movement frequency and stool consistency.<sup>†</sup> It has excellent adherence to intestinal mucin, a prerequisite for competition with undesirable bacteria. It produces the endopeptidases that digest proteins rich in proline, such as casein and gliadin.<sup>†</sup> Supplementation with *B. lactis* has been shown to support cellular immunity in elderly individuals by increasing numbers of helper and activated T cells and NK cells and by intensifying the phagocytic activities of monocytes and polymorphonucleocytes.<sup>†</sup> *B. lactis* may support a healthy plasma IgG response to vaccination.<sup>†</sup> Studies have shown that dietary supplementation with *B. lactis* balances bifidobacterial/enterobacteria counts in elderly individuals.<sup>†</sup>

#### Lactobacillus paracasei UALpc-04™

Has excellent acid tolerance and is highly resistant to pepsin and pancreatin. It is able to ferment inulin and phleins (plant-derived hexofructans with  $\beta$ -linked fructosyl residues), releasing the short-chain fatty acids required for intestinal barrier function.<sup>†</sup> It supports immune response through the production of compounds that support immune balance while activating the innate immune system.<sup>†</sup>

#### Lactobacillus rhamnosus GG

Produces more peptidases than any other *Lactobacillus* species, aiding in the digestion of proteins.<sup>†</sup> This species supports healthy immune function by activating antigen-presenting cells (APCs) and immature dendritic cells to promote Th1-type immune response markers, as well as healthy Th1/Th2 balance. *L. rhamnosus* has been shown to promote stronger epithelial barrier function and to reduce the risk of occasional, antibiotic-associated diarrhea.<sup>†</sup>

#### Bifidobacterium bifidum UABb-10™

Aids in the digestion of casein proteins through the production of a variety of  $\beta$ -galactosidases and other enzymes which degrade lactose, as well as substrates such as galactobiose and galactosyllactose.<sup>†</sup> *B. bifidum* has been shown to efficiently degrade mucin, and, due to their proximity to the immune system, mucin-degrading bacteria are in a prime location to influence the epithelial barrier and host response.<sup>†</sup> Studies have shown that *B. bifidum* strengthens intestinal barrier function and promotes a healthy microbiome balance.<sup>†</sup>

#### Lactobacillus reuteri UALre-16™

Found in different body sites, including the gastrointestinal tract, urinary tract, skin, and breast milk. With the production of organic acids, ethanol, and reuterin, it supports a balanced microbiome. It also may benefit the immune system by influencing cytokine production while promoting regulatory T-cell development and function. In addition, by bearing the ability to strengthen the intestinal barrier, the colonization of *L. reuteri* may decrease microbial translocation from the gut lumen to the surrounding tissues, supporting a healthy inflammatory response where inflammation is associated with occasional digestive discomfort.<sup>†</sup>



Ther-Biotic<sup>®</sup> Synbiotic provides powerful, broad-spectrum probiotics with Sunfiber<sup>®</sup>, the prebiotic nutrition that the microbiome requires to maintain healthy, homeodynamic balance, offering a more profound entourage effect on GI ecology.

## **Formula** *Ther-Biotic® Synbiotic*





0 **SKU V777** 30 CAPSULES



SERVING SIZE 1 CAPSULE	AMOUNT PER SERVING
Probiotic Blend (50 billion CFU)	323 mg*
Lactobacillus plantarum UALp-05™‡	15.5 billion CFU*
Bifidobacterium lactis UABla-12™‡	13.3 billion CFU*
Lactobacillus rhamnosus GG	9.2 billion CFU*
Lactobacillus acidophilus DDS®-1‡	5.0 billion CFU*
Lactobacillus paracasei UALpc-04™‡	5.0 billion CFU*
Lactobacillus reuteri UALre-16™‡	1.0 billion CFU*
Bifidobacterium bifidum UABb-10™	1.0 billion CFU*
Sunfiber®♯ (partially hydrolyzed guar gum/PHGG)	200 mg*

\*DAILY VALUE NOT ESTABLISHED

OTHER INGREDIENTS: Delayed release capsule (hydroxypropyl methylcellulose, gellan gum, and water), silica, and ascorbyl palmitate.

<sup>1</sup>DDS<sup>®</sup> and all UA strains are trademarks of UAS Laboratories LLC and used under license. <sup>11</sup>Sunfiber<sup>®</sup>, a water-soluble dietary fiber, is a registered trademark of Taiyo International, Inc.

Monash University Low-FODMAP Certified® is a registered trademark of Monash University, Australia.

#### Suggested Use

Adults: 1 capsule daily or as directed by a healthcare professional. Children: As directed by a healthcare professional.

#### Free of the following common allergens

Milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat, gluten, and soybeans. Contains no artificial colors, flavors, or preservatives.

#### Storage

Store in a cool, dry place (59°F-85°F) away from direct light.

#### Hypoallergenic, Non-GMO, Vegetarian

## References

- 1. Barko P, McMichael M, Swanson KS, Williams D. J Vet Intern Med. 2018 Jan;32(1):9-25.
- 2. Malan-Muller S, et al. OMICS. 2018 Feb;22(2):90-107.
- 3. Holscher H. Gut Microbes. 2017 Mar 4;8(2):172-184.
- 4. Markowiak P, Slizewska K. Nutrients. 2017; 9(1021):1-30.