



# Whole Body Health

WITH DR. SALEEBY

**FLCCC**  
ALLIANCE

[www.flccc.net/wholebodyhealth](http://www.flccc.net/wholebodyhealth)

# Probiotic S

Dispelling  
some myths

Parts I, II & III



## Not intended as Medical Advice

- This lecture is informational only and not intended to diagnose or suggest treatments to any individual listening to this lecture.
- We advise you to seek medical direction with your licensed primary care provider.

# Learning Objectives:

- What are probiotics
  - Pre- and Post-biotics for that matter
- How to use them properly
- How GI-Mapping can direct your use
- What can happen when not used properly
- How to heal the gut

# Define Probiotics

- Denoting a substance which stimulates the growth of microorganisms, especially those with beneficial properties (such as those of the intestinal flora).
- Microbes in the Human gut that are associated with good health and wellness. “GOOD BACTERIA, VIRUSES and FUNGI”
- Found in health human subjects and a class that is considered good microbes associated with a health microbiome in the gut.

# Define Prebiotics (not to be confused with Probiotics)

A nondigestible food ingredient that promotes the growth of beneficial microorganisms in the intestines.

Examples: Onions, Jerusalem artichoke, Leeks, Asparagus, Apple, Oats, Bananas, Chicory, Wheat bran, Inulin, Cabbage

# What are probiotics?

# Some of the good guys:

- *Lactobacillus*: This is a common probiotic found in fermented foods, such as yogurt and other dairy products.
- *Bifidobacterium*: This probiotic is found in some dairy products and helps with the symptoms of irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD).
- *Saccharomyces boulardii*: This is a type of yeast found in many probiotics. You can find these probiotics and more in supplements and select foods. Keeps *Candida* at bay.



# Some of the good guys:

- Akkermansia
- *There are many others*
- There is much confusion and controversy about probiotics. Some can get you rather sick by selecting the wrong ones.
- Spores: There have been 5-strains of research-backed (at this point 7-published studies) that are “spore-based” native to human gut not soil-based. The end result is DNA tested 100% survivable broad-spectrum probiotic clinically shown to help heal the gut and increase barrier function. They survive the gauntlet of the “stomach acid” better than most live microbes.



Foods that can help increase probiotics and postbiotics:

Yogurt, Sauerkraut, Miso soup, soft Cheeses, Kefir, Sourdough breads, Buttermilk, Pickles, Tempeh, Kimchi and Olives (many fermented foods)

# Some of the not-so-good guys:

- List some bad ones here
- Candida
- *Parasites of all kinds*
  
- Yersinia, found in pork
- Staphylococcus, found in dairy products, meat, and eggs
- Shigella, found in water and often swimming pools
- Salmonella, found in meat, dairy products, and eggs
- Campylobacter, found in meat and poultry
- E. coli, found in ground beef and salads (not all E.coli is bad; bad is: E. coli O157:H7)
- Clostridium difficile (C. diff)
- Clostridium perfringens

## Lost microbes of COVID-19: *Bifidobacterium*, *Faecalibacterium* depletion and decreased microbiome diversity associated with SARS-CoV-2 infection severity

Sabine Hazan,<sup>1</sup> Neil Stollman,<sup>2</sup> Huseyin S Bozkurt,<sup>3</sup> Sonya Dave ,<sup>4,5</sup>  
Andreas J Papoutsis,<sup>1</sup> Jordan Daniels,<sup>1</sup> Brad D Barrows,<sup>1</sup>  
Eamonn MM Quigley ,<sup>6</sup> Thomas J Borody<sup>7</sup>

Article

## Ongoing Treatment with a Spore-Based Probiotic Containing Five Strains of *Bacillus* Improves Outcomes of Mild COVID-19

Adrian Catinean , Anamaria Sida <sup>1,\*</sup>, Celina Silvestru <sup>1</sup> and Gheorghe G. Balan <sup>2</sup>

<sup>1</sup> Department of Internal Medicine, Iuliu Hatieganu University of Medicine and Pharmacy,  
400006 Cluj-Napoca, Romania

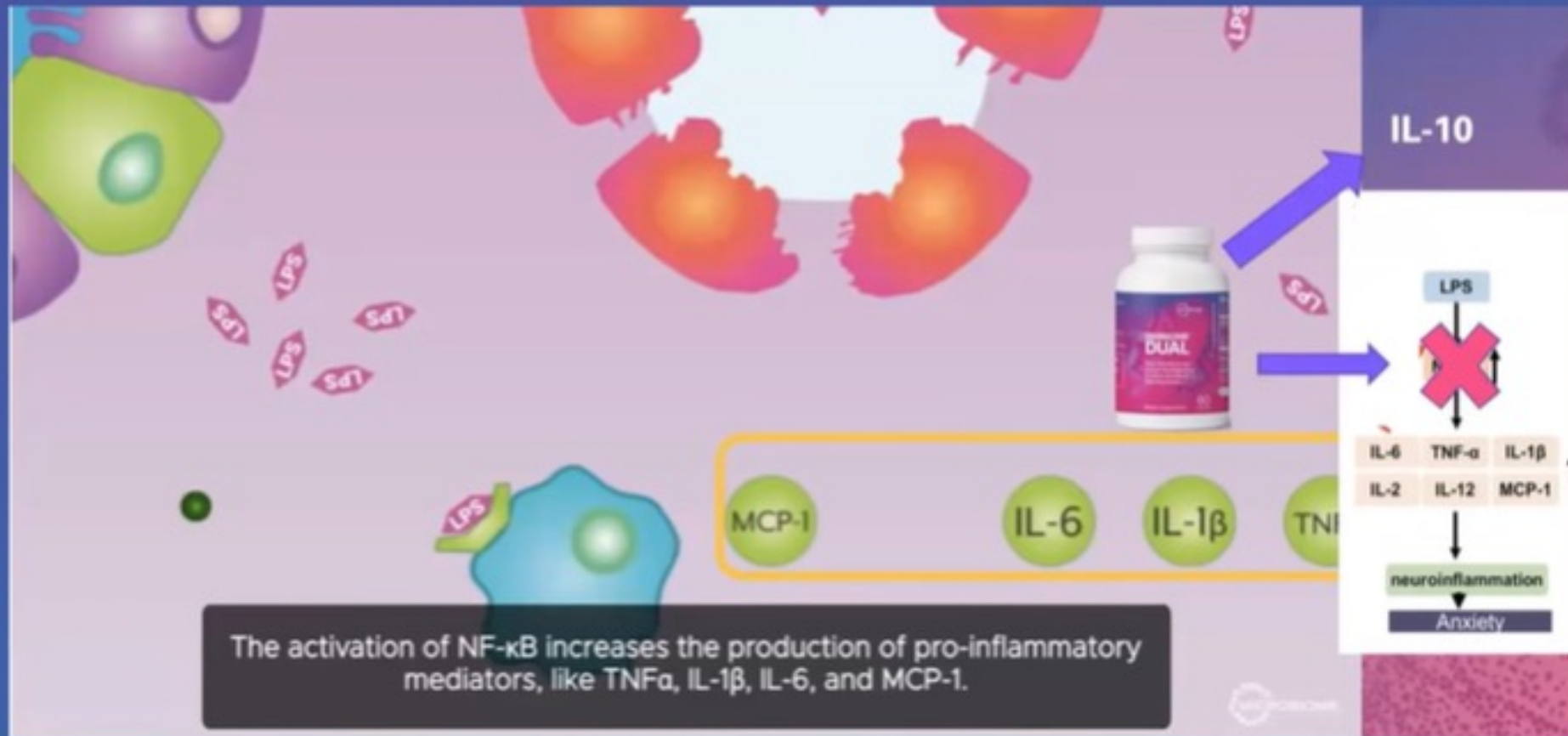
<sup>2</sup> Department of Gastroenterology, Grigore T. Popa University of Medicine and Pharmacy, 700115 Iasi, Romania

\* Correspondence: ana.sida04@gmail.com

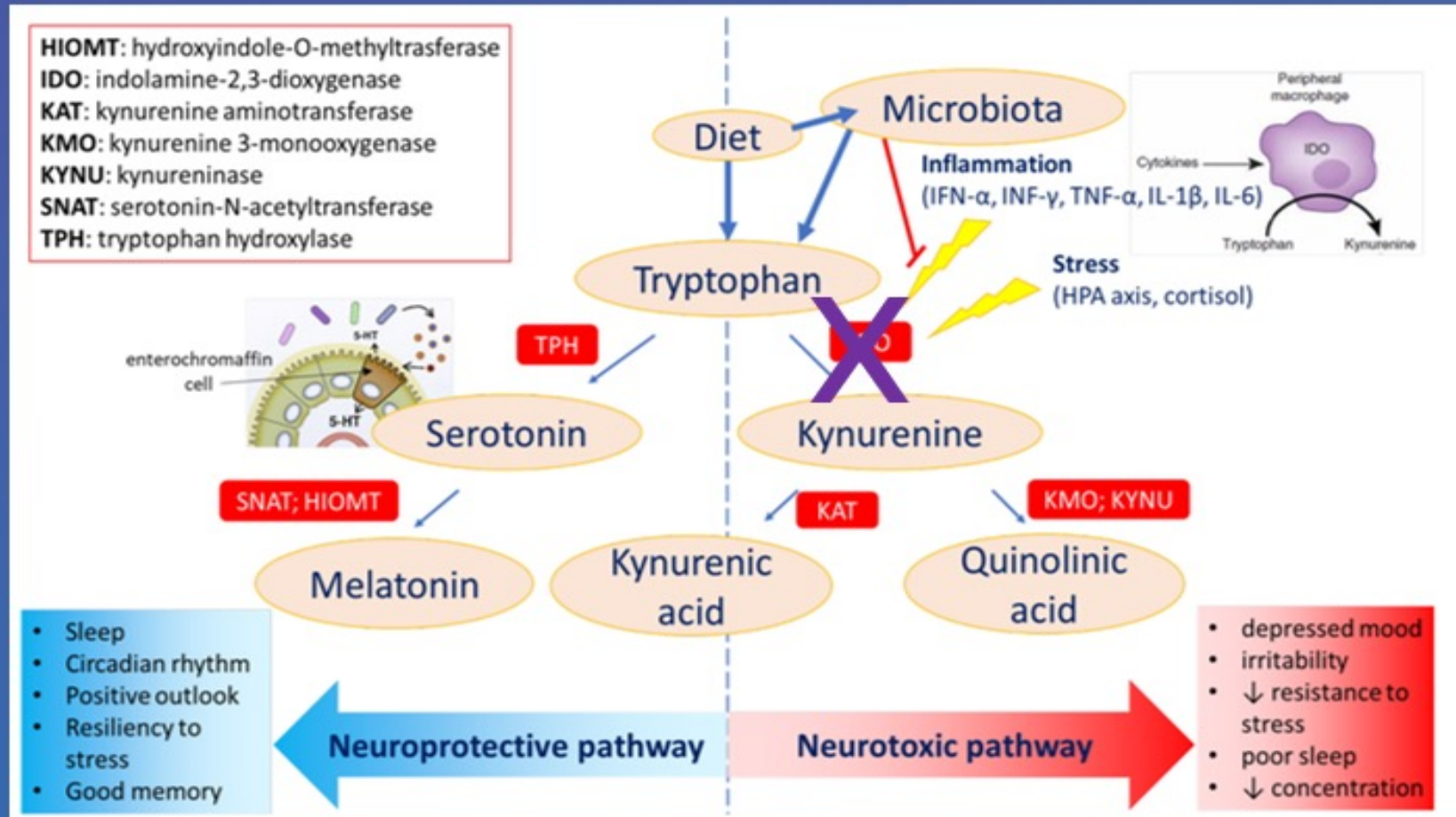
# **Gut Brain Connection**

**Next two slides illustrate the gut microbiome brain/mood/connection**

# Zenbiome Dual blocks NF-κB activation



# Zenbiome Dual blocks tryptophan from breaking down to quinolinic acid, pushing it to serotonin and melatonin.



# Why a GI-map may be helpful



# A typical GI-MAP

Bacterial Pathogens	Result	Range	Units	
Campylobacter.	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
C. difficile, Toxin A	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
C. difficile, Toxin B	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
Enterohemorrhagic E. coli	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
E. coli O157	<dl	< 1.0	x10 <sup>2</sup> CFU/g	
Enteroinvasive E. coli/Shigella	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
Enterotoxigenic E. coli LT/ST	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
Shiga-like Toxin E. coli stx1	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
Shiga-like Toxin E. coli stx2	<dl	< 1.0	x10 <sup>3</sup> CFU/g	
Salmonella.	<dl	< 1.0	x10 <sup>4</sup> CFU/g	
Vibrio cholerae	<dl	< 1.0	x10 <sup>5</sup> CFU/g	
Yersinia enterocolitica.	<dl	< 1.0	x10 <sup>5</sup> CFU/g	
Helicobacter pylori	50.0 *H	< 1.0	x10 <sup>3</sup> CFU/g	

Comment: Helico Pylori virulence factors will be listed below if detected POSITIVE

H.pylori Virulence Factor, babA	Not Detected
H.pylori Virulence Factor, cagA	Not Detected
H.pylori Virulence Factor, dupA	Not Detected
H.pylori Virulence Factor, iceA	POSITIVE
H.pylori Virulence Factor, oipA	POSITIVE
H.pylori Virulence Factor, vacA	Not Detected
H.pylori Virulence Factor, virB	Not Detected
H.pylori Virulence Factor, virD	Not Detected

Viral Pathogens	Result	Range	Units	
Adenovirus 40/41	<dl	< 1.0	x10 <sup>10</sup> CFU/g	
Norovirus GI/II	<dl	< 1.0	x10 <sup>7</sup> CFU/g	

Normal Bacterial GUT Flora	Result	Range	Units	
Bacteroides fragilis	7.5	1.6 - 250.0	x10 <sup>9</sup> CFU/g	
Bifidobacterium species	280.0	> 6.7	x10 <sup>7</sup> CFU/g	
Enterococcus species	0.5 *L	1.9 - 2000.0	x10 <sup>5</sup> CFU/g	
Escherichia species	8.1	3.7 - 38000	x10 <sup>6</sup> CFU/g	
Lactobacillus species	3.6 *L	8.6 - 6200.0	x10 <sup>5</sup> CFU/g	
Clostridium species	331.0	1.2 - 1000.0	x10 <sup>3</sup> CFU/g	
Enterobacter species	0.7 *L	1.0 - 50.0	x10 <sup>6</sup> CFU/g	

# Selecting the proper Probiotics

## Part II

- **Which Probiotics Strains are Best?**

- When it comes to probiotic strains, not all are created equal. And while there are as many as 500 different strains, only a handful have substantial research supporting health benefits.<sup>23</sup> Below are the ones we feel can give you real results.

- **1. Lactobacillus Gasseri**

- **Healthy Weight Support:** A review of over a dozen human randomized controlled trials concluded that *L. gasseri* supports healthy weight management. Other studies have shown this strain to support the **reduction of fatty tissue** and **improve metabolism**.<sup>24-27</sup>

- **Bone Density:** Shown to have anti-menopausal effects by **increasing bone mineral density** and **lowering pain** sensitivity.<sup>28</sup>

- **2. Lactobacillus Rhamnosus**

- **Diarrhea:** Helps protect against various causes of diarrhea, including acute watery, **antibiotic-related**, and **traveler-diarrhea**.<sup>29-32</sup>

- **Vaginal Yeast Infections:** Reduces the risk of yeast infections by helping **inhibit the overgrowth** of the harmful bacteria **Candida albicans**, the most common cause of genital yeast infections.<sup>33-36</sup>

- **Mood & Anxiety:** Lowers anxiety, **reduces stress** and **boosts mood** by changing the expression of the chemical messenger, GABA, which communicates with the brain and **produces a calming effect**.<sup>37,38</sup>

- **3. Lactobacillus Reuteri**

- **Leaky Gut:** Helps to strengthen and **repair the intestinal barrier**, which, when damaged, can allow harmful bacteria to enter the body and cause bloating, gas, cramps, and food sensitivities.<sup>39</sup>

- **Urinary Tract Infections:** Provides female support to **combating** and easing the effects of Urinary Tract Infections (UTI's).<sup>40</sup>

- **Dental Health:** As one of the few probiotics found in the mouth, studies have shown it helps **deter** the growth of *Streptococcus mutans*, the bacteria which causes **tooth decay**.<sup>41</sup>

- **H. Pylori Defense:** May help **reduce the presence** of *Helicobacter pylori* (*H. pylori*), a harmful bacteria which researchers have linked to peptic ulcers and other digestive diseases.<sup>42</sup>

- **4. Lactobacillus Acidophilus**

- **Dairy Defense:** Produces lactase, the enzyme needed to **break down** the sugar in **milk** called **lactose**, helping alleviate diarrhea.<sup>43</sup>

- **Mineral Absorption:** Helps to **increase** the absorption of minerals such as **iron, calcium, and magnesium**.<sup>45,45</sup>

- **Vaginal Health:** Produces high lactic acid levels, promoting an acidic environment in the vagina necessary to **keep proper bacterial balance** and helping to **avoid** the harmful condition known as **Bacterial Vaginosis (BV)**.<sup>46</sup>

- **5. Bifidobacterium Bifidum**

- **Constipation:** Fights chronic constipation by increasing production of mucus in the colon supporting **smoother bowel movements**.<sup>47</sup>

- **Allergy Relief:** Reduces allergy symptoms by **discouraging histamine production**, the chemical that triggers an allergic reaction.<sup>48</sup>

- **\*\*\*Stack Tip:** Look for a formula that *pairs L. Acidophilus with B. Bifidum*, as they have been shown to **work well together to fight off the harmful effects of antibiotics**.

- **6. Bifidobacterium Longum**

- **Gluten Defense:** Shown to help reduce gastrointestinal symptoms in those with **Celiac disease (CD)** by reducing intestinal inflammation.<sup>49-51</sup>

- **Liver Health:** Human clinical studies show that *B. longum* paired with the prebiotic FOS plays a beneficial role in **combating fatty liver**.<sup>52,53</sup>

- **Immune Support:** Helps to strengthen the body's natural **defenses against harmful pathogens** and improve resistance to respiratory tract infections.<sup>54,55</sup>



- The term postbiotic appropriately refers to substances derived after the microorganisms are no longer alive.
- A postbiotic bacterial component called muramyl dipeptide, has been shown to relieve glucose intolerance by increasing insulin sensitivity.
- Some may have beneficial properties such as supporting probiotics, controlling inflammation in the gut and diarrhea. Some have antibiotic properties and support the immune system

# Systems to help heal the gut

- Traditionally: Products that contain L-Glutamine, aloe vera, DGL (licorice root extract that is deglycerized) and other herbals are used to “heal” the gut.
- Most of the gut rebuilders on the market have l-glutamine (which may be neuro-toxic for some people making Glutamate), licorice (not good for those with hypertension & can cause electrolyte imbalance if not used properly), and various combinations of herbs some with ASEs.

# Total Gut Restoration™

RECONDITION | REINFORCE | REBUILD

## LEAKY GUT

Leaky gut occurs when cracks or holes develop in the lining of the intestinal tract. These holes allow toxins and unwanted particles to enter into your blood stream and weaken your immune system. If you have leaky gut, it is important to follow an approach that addresses the key layers of a healthy gut. The Total Gut Restoration system can help fix your gut in 3 simple steps.



## STEP ONE: RECONDITION

Reconditioning the gut changes the environment so that it favors your beneficial gut bacteria. MegaSporeBiotic™ can change this environment by changing the acidity in the intestines, limiting the presence of harmful bacteria, and producing metabolites that feed beneficial bacteria.



## STEP TWO: REINFORCE

The gut microbiome is a very dynamic environment so it's important to reinforce the beneficial changes from MegaSporeBiotic™ by feeding friendly keystone bacteria. MegaPre™ contains short-chain carbohydrates, known as oligosaccharides, that have been shown to selectively feed beneficial bacteria and enhance gut restoration.



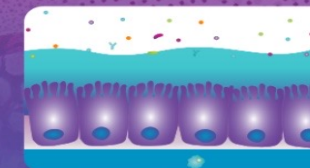
## STEP THREE: REBUILD

In a leaky gut, the protective mucosal layer breaks down and allows toxins to tear through the intestinal lining and into the blood stream. MegaMucosa™ contains key amino acids to help your body naturally rebuild your protective mucus layer and immune cells to help fend off any unwanted toxins during the rebuilding process.



## TOTAL GUT RESTORATION

A healthy gut microbiome is multi-faceted and relies heavily upon 3 fundamental aspects of gut health including the microbial population, physical structures, and immune function. For this reason, therapies that only address one layer are often ineffective. This system was uniquely designed to target all three of these areas to help you achieve Total Gut Restoration.



# MUCIN BUILDING BLOCKS

## *Nutrition and Disease*

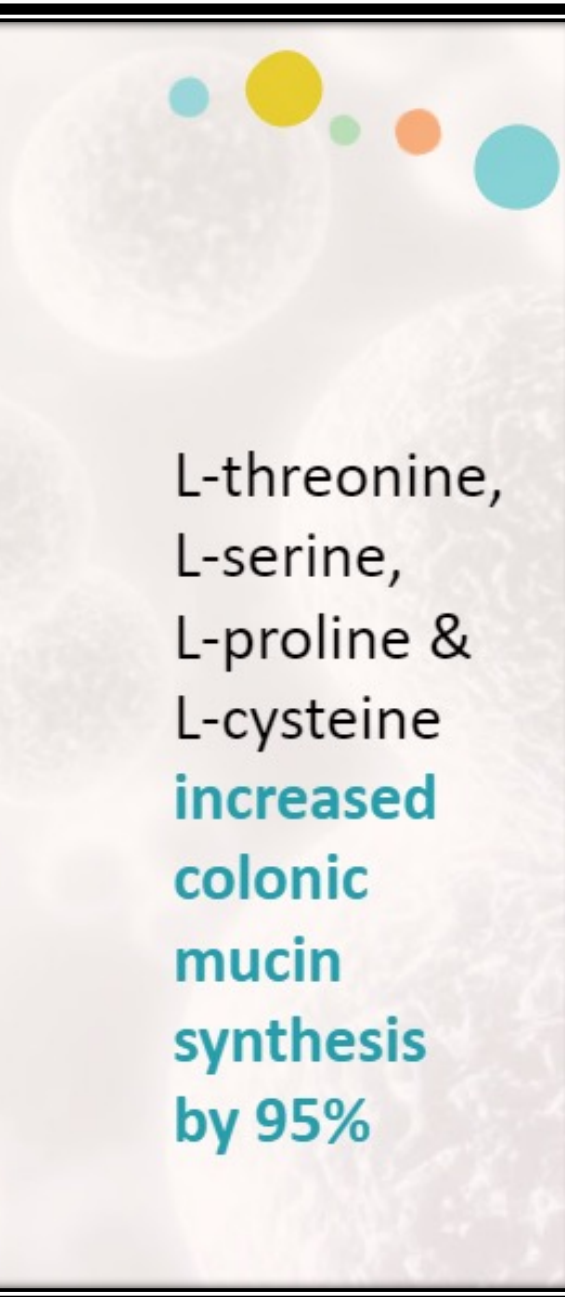
### **Specific Amino Acids Increase Mucin Synthesis and Microbiota in Dextran Sulfate Sodium-Treated Rats**

Magali Faure,<sup>\*1</sup> Christine Mettraux,<sup>\*</sup> Denis Moennoz,<sup>\*</sup> Jean-Philippe Godin,<sup>\*</sup> Jacques Vuichoud,<sup>\*</sup> Florence Rochat,<sup>\*</sup> Denis Breuillé,<sup>\*</sup> Christiane Obled,<sup>†</sup> and Irène Corthésy-Theulaz<sup>\*</sup>

*<sup>\*</sup>Nestlé Research Center, Nutrition and Health Department, Lausanne, Switzerland and <sup>†</sup>Unité de Nutrition et Métabolisme Protéique, INRA, Theix, France*

**ABSTRACT** During the anabolic response associated with inflammation, mucin synthesis and colonic protection may be compromised by the limited availability of specific amino acids. We therefore determined the effect of dietary amino acid supplementation on the microbiota, mucin status, and mucosal damage in dextran sulfate sodium (DSS)-treated rats. From 8 d before to 28 d after colitis induction, male Sprague-Dawley rats (10 mo old,  $n = 8$ /group) were fed a control diet supplemented or not with 2 different doses of an amino acid cocktail containing L-threonine, L-serine, L-proline, and L-cysteine. All diets were isonitrogenous (adjusted with L-alanine). The higher dose of amino acids increased the number of Muc2-containing goblet cells in the surface epithelium of the ulcerated area, stimulated mucin production in the colon, and restored the mucin amino acid composition and mucosal content to healthy, control values. The colonic mucin synthesis rate was specifically stimulated by 95%, whereas the protein turnover was unchanged. All bacterial populations, markedly altered by the DSS treatment, were promoted. In conclusion, in inflammatory situations, an increase in threonine, serine, proline, and cysteine dietary supply can promote mucin synthesis, reequilibrate the gut microbiota, and thus favor colonic protection and mucosal healing. *J. Nutr.* 136: 1558–1564, 2006.

**KEY WORDS:** • *mucin* • *amino acids* • *protein synthesis* • *intestine* • *rats*



L-threonine,  
L-serine,  
L-proline &  
L-cysteine  
**increased  
colonic  
mucin  
synthesis  
by 95%**



# TOTAL GUT RESTORATION

## RECONDITION - REINFORCE - REBUILD™







## Immunoglobulins

- Bind and neutralize toxins

## Amino acids

- Increase mucin2 production
- Rebuild mucosal barrier

## Citrus polyphenols

- Antioxidant properties
- Increase short-chain fatty acid production
  - Reduce inflammation
  - Increase microbial diversity

Article

# Probiotic *Bacillus* Spores Together with Amino Acids and Immunoglobulins Exert Protective Effects on a Rat Model of Ulcerative Colitis

Adrian Catinean <sup>1</sup>, Maria Adriana Neag <sup>2,\*</sup>, Kiran Krishnan <sup>3</sup>, Dana Maria Muntean <sup>4</sup>,  
Corina Ioana Bocsan <sup>2</sup>, Raluca Maria Pop <sup>2</sup>, Andrei Otto Mitre <sup>5</sup>, Carmen Stanca Melincovici <sup>6</sup>  
and Anca Dana Buzoianu <sup>2</sup>

<sup>1</sup> Department of Internal Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, 400006 Cluj-Napoca, Romania; catinean@gmail.com


<sup>2</sup> Department of Pharmacology, Toxicology and Clinical Pharmacology, Iuliu Hatieganu University of Medicine and Pharmacy, 400337 Cluj-Napoca, Romania; corinabocsan@yahoo.com (C.I.B.); raluca.pop@umfcluj.ro (R.M.P.); abuzoianu@umfcluj.ro (A.D.B.)

<sup>3</sup> Microbiome Labs, 101 E Town Pl, Saint Augustine, FL 92092, USA; kkiran\_00@yahoo.com

<sup>4</sup> Department of Pharmaceutical Technology and Biopharmaceutics, Iuliu Hatieganu University of Medicine and Pharmacy, 400012 Cluj-Napoca, Romania; dana.muntean@umfcluj.ro

<sup>5</sup> Faculty of Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, 400349 Cluj-Napoca, Romania; andrei.mitre97@gmail.com

<sup>6</sup> Histology Department, Iuliu Hatieganu University of Medicine and Pharmacy, 400349 Cluj-Napoca,



"Akkermansia will  
change your life because  
it will change your gut."

**HALLE BERRY**  
Award-winning actor,  
director & producer



## Supplement Facts

Serving size: 1 capsule

Servings per container: 30

Amount per capsule		% DV
<i>Akkermansia</i>	100 million AFU	†
<i>(Akkermansia muciniphila</i> WB-STR-0001)		
Chicory Inulin	276mg	†

† Daily Value (DV) not established.

### Other ingredients:

microcrystalline cellulose,  
hypromellose (vegetarian  
capsule), L-leucine, silica

Adults take 1 capsule daily  
with food.

Refrigerate for optimal quality.

# UltraFlora®

---



# More Alternatives and add ons:

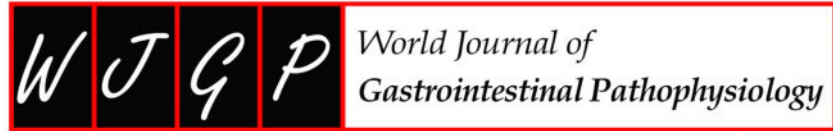


## Seed's DS-01™ vs. OTC Probiotics

FEATURES	DS-01™	OTC PROBIOTICS
Proprietary ViaCap Delivery Technology	●	○
Broad Spectrum formulation with multiple strains from within species (24 strains)	●	Rare
Research-derived potencies (53.6B AFU)	●	Rare
Systemic benefits beyond the gut	●	Rare
Produces specific beneficial SCFA (short-chain fatty acids)	●	Unknown
100% survival through simulated digestions* (stomach acid, bile salts, and digestive enzymes)	●	○
Non-fermenting prebiotics compatible with FODMAPS diet	●	Unknown
No skip-lot testing for over 400 allergens and pesticide residues at 3rd party accredited laboratories	●	Unknown
Active Fluorescent Units (AFU) testing via flow cytometry for precise enumeration of viable cells in multi-strain formula	●	Unknown
Precision release at top of gastrointestinal tract	●	Unknown
Whole-genome testing via shotgun sequencing of microbial DNA	●	Unknown
Oxford nanopore fully assembled closed genome sequencing for strain characterization	●	○
Heat, moisture, and light protected -- no refrigeration required	●	Rare
Heat testing to ensure viability through shipping conditions	●	Rare

\*To evaluate the survival of Seed's DS-01 probiotic, they use a Simulator of the Human Intestinal Microbial Ecosystem -- the closest system developed to model digestion and the gut.

# Study:



Submit a Manuscript: <http://www.f6publishing.com>

World J Gastrointest Pathophysiol 2017 August 15; 8(3): 117-126

DOI: 10.4291/wjgp.v8.i3.117

ISSN 2150-5330 (online)

ORIGINAL ARTICLE

## Prospective Study

### Oral spore-based probiotic supplementation was associated with reduced incidence of post-prandial dietary endotoxin, triglycerides, and disease risk biomarkers

Brian K McFarlin, Andrea L Henning, Erin M Bowman, Melody A Gary, Kimberly M Carbajal

Brian K McFarlin, Andrea L Henning, Erin M Bowman, Melody A Gary, Applied Physiology Laboratory, University of North Texas, Denton, TX 76203, United States

licenses/by-nc/4.0/

Manuscript source: Invited manuscript

Brian K McFarlin, Andrea L Henning, Kimberly M Carbajal, Department of Biological Sciences, University of North Texas, Denton, TX 76203, United States

Correspondence to: Brian K McFarlin, PhD, FACS, FTOS, Associate Professor, Applied Physiology Laboratory, University of North Texas, 1921 West Chestnut Street, PEB Room 209, Denton, TX 76203, United States. [brian.mcfarlin@unt.edu](mailto:brian.mcfarlin@unt.edu)  
Telephone: +1-940-5653165  
Fax: +1-940-5654904

**Author contributions:** McFarlin BK designed the study, collected data, interrupted findings, and prepared manuscript; Henning AL, Bowman EM, Gary MA and Carbajal KM collected data, interrupted findings, and prepared manuscript.

**Institutional review board statement:** The study was reviewed and approved by the UNT Institutional Review Board for Human Subjects Research.

**Informed consent statement:** Subjects provided written and oral consent to participate using an IRB-approved informed consent form specific to the study in question.

**Conflict-of-interest statement:** The present study was funded in part by a competitive research grant from Microbiome Labs, LLC (Glenview, IL) to the University of North Texas. The UNT team did not receive direct funding associated with the completion of the present study. The funding agency was not involved in the data collection, analysis, interpretation, and manuscript preparation. Double blind procedures and confidentially were used to conduct the present study in a sound and unbiased manner. As such, the authors report no conflict of interest associated with completing the present study.

**Data sharing statement:** None.

**Open-Access:** This article is an open-access article which was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

Received: January 26, 2017

Peer-review started: February 8, 2017

First decision: April 17, 2017

Revised: July 4, 2017

Accepted: July 14, 2017

Article in press: July 17, 2017

Published online: August 15, 2017

## Abstract

### AIM

To determine if 30-d of oral spore-based probiotic supplementation could reduce dietary endotoxemia.

### METHODS

Apparently healthy men and women ( $n = 75$ ) were screened for post-prandial dietary endotoxemia. Subjects whose serum endotoxin concentration increased by at least 5-fold from pre-meal levels at 5-h post-prandial were considered "responders" and were randomized to receive either placebo (rice flour) or a commercial spore-based probiotic supplement [Bacillus indicus (HU36), Bacillus subtilis (HU58), Bacillus coagulans, and Bacillus licheniformis, and Bacillus clausii] for 30-d. The dietary endotoxemia test was repeated at the conclusion of the supplementation period. Dietary endotoxin (LAL) and triglycerides (enzymatic) were measured using

# One spore option

***One study showed a 42% improvement in leaky gut after taking 2 MegaSporeBiotic every day for 30 days.***

## MEGA SporeBiotic™



MegaSporeBiotic™ is one of the most recognized names in the probiotic industry. It is Microbiome Labs' flagship probiotic product—a pioneering and trend-setting all-spore formula designed to support gut microbiome reconditioning. MegaSporeBiotic™ is a 100% spore-based, broad-spectrum probiotic clinically tested to support and maintain gut microbial diversity, healthy levels of commensal gut bacterial species, and intestinal barrier function. This unique blend of spore-based probiotic species is designed to maintain survivability, efficacy, and potency throughout the digestive process. Boasting a 3-year shelf-life, MegaSporeBiotic™ doesn't require refrigeration or a high colony-forming unit (CFU) count to be effective—unlike non-spore-forming strains (*Bifidobacterium* or *Lactobacillus spp.*), which are typically vulnerable to destruction at room temperature and in the digestive tract.\*\*

- Supports gut microbial diversity\*\*
- Supports healthy gut barrier and immune function\*\*
- Maintains levels of key, health-supportive, commensal gut bacteria\*\*
- Maintains healthy gut microbiome function\*\*
- Unique spore-based *Bacillus* probiotic blend supports gut reconditioning\*\*
- Designed to maintain efficacy, potency, and 99.99% survivability throughout the digestive process\*\*
- Supports keystone bacterial species that produce valuable short-chain fatty acid (SCFAs) metabolites, including butyrate\*\*
- Backed by multiple research studies and extensive clinical validation\*\*
- 3-year shelf life\*\*
- Stable at room temperature\*\*





# Three things to avoid:

## 3 Things To **AVOID**

When Buying A Probiotic Supplement

### 1. **LACK OF STRAIN DIVERSITY**

Clinical studies have shown that specific probiotic strains can help with particular health concerns.<sup>19,20</sup> While the human gut contains thousands of different bacterial strains, most probiotics only include a few generic Lactobacillus or Bifidobacterium strains. **Look for a probiotic that has at least 14 unique strains** to support proper microbiome balance.

### 2. **CHEAP GENERIC STRAINS ( Most OTCs )**

Store shelves are filled with brands selling probiotics, listing cheap generic forms of popular strains on their labels. A 2018 study showed that **not all probiotic strains produce the same results**, even if they have the same name.<sup>21</sup> Like most things in life, it all comes down to the details.

A high-quality brand will list the strain and a combination of letters and numbers, such as **L. acidophilus La-14™**, known as a **substrain**. This unique identifier tells you that one or more **clinical studies back the strain** being used. **Avoid probiotics that don't list substrains**, as that could be a warning sign that low-quality, generic, and possibly ineffective strains are used in the formula.

### 3. **PLASTIC BOTTLES**

Moisture vapor transmission rate (MVTR) studies on probiotics packaged in **plastic bottles** have shown that they **can allow too much moisture to enter**, causing **lower strain survival rates** and a **shorter shelf life** overall.<sup>22</sup>

Don't throw away your hard-earned money on probiotics in cheap plastics bottles that can allow harmful elements to enter during storage and shipping, risking your probiotics arriving dead at your doorstep.

# Four Criteria for Quality Probiotics

## Top 4 Essential Criteria For A Quality Probiotic Supplement

Below are the 4 most essential criteria to consider when deciding on which probiotic brand is best for your needs.

### #1 High CFU Counts

• You can have the highest quality strains, but if you don't have them in a potent enough dose, they will not be very effective amongst the trillions of other bacteria in the gut. The quantity aspect of a probiotic is measured in Colony Forming Units (CFUs). Look for a formula that contains a **minimum of 45 Billion CFUs per dose**.

### #2 Clinically Studied Strains

• **Supply chain issues** and **inflationary pricing** has driven many manufacturers to pursue more readily available **cheap generic strains** that have not been proven effective in clinical testing.

• Check the supplement facts section of a probiotic label to see if it has the trademark <sup>™</sup> or registered symbol <sup>®</sup> next to each strain's substrain. This symbol is your indication that the strain has undergone clinical testing. Remember, **not all strains perform the same, even if they have the same general name**.

### #3 Prebiotics

• Once probiotics make their way to your gut, they begin to feed off prebiotics, a fiber-based form of food needed to help them survive, grow and populate. We suggest looking for a formula that explicitly includes the prebiotic **NutraFlora<sup>®</sup>** that has twenty years of research and **over 200 studies** proving it helps **stimulate the growth of probiotics**.<sup>56</sup> Don't just take a brand's word that they include a prebiotic. Check the back of their label to make sure NutraFlora<sup>®</sup> and not some generic form is on their list of ingredients.

### #4 Glass Bottle

• Moisture is the number one element that can destroy the stability of probiotics, even if freeze-dried.<sup>57</sup> Studies have shown that glass bottles are the best packaging for probiotics as they allow for nearly zero moisture to enter.<sup>58</sup> For **maximum shelf life and effectiveness**, look for a probiotic that comes in a **dark amber glass bottle**, as only glass can **keep out harmful moisture and light**.

# More Alternatives and add ons:

## **LDN** [how this can heal the gut, IBS and IBD](#)

Low Dose Naltrexone has been shown to have a bi-directional helpful/healing property with the gut

>helps heal gut and benefits by better bioavailability (absorption)

### References:

- [www.ldnresearchtrust.org](http://www.ldnresearchtrust.org)

### References

- Throughout this presentation on slides additional here:
- [www.brightlifeclinic.com/what-are-postbiotics-5-health-benefits/](http://www.brightlifeclinic.com/what-are-postbiotics-5-health-benefits/)
- [www.brands.novozymesonehealth.com/d/FYpLDdoCEC8p/published-studies/show](http://www.brands.novozymesonehealth.com/d/FYpLDdoCEC8p/published-studies/show)
- [www.pendulumlife.com/products/pendulum-Akkermansia](http://www.pendulumlife.com/products/pendulum-Akkermansia)
- [www.metagenics.com/probiotics](http://www.metagenics.com/probiotics)
- [www.trueself.com/seed-2658612146.html](http://www.trueself.com/seed-2658612146.html)
- [www.reviewscout.org/top-5-probiotics/](http://www.reviewscout.org/top-5-probiotics/)

# References

2021. Longdom.Org. <https://www.longdom.org/open-access/probiotics-history-and-evolution-2329-8731.1000107.pdf>.

"Effect Of Probiotics On Body Weight And Body-Mass Index: A Systematic Review And Meta-Analysis Of Randomized, Controlled Trials". 2021. International Journal Of Food Sciences And Nutrition. <https://www.tandfonline.com/doi/abs/10.1080/09637486.2016.1181156>.

Mekkes, M.C., T.C. Weenen, R.J. Brummer, and E. Claassen. 2014. "The Development Of Probiotic Treatment In Obesity: A Review". *Beneficial Microbes* 5 (1): 19-28. doi:10.3920/bm2012.0069.

Orar, Jaclyn M., Yen-Ming Chan, Mitchell L. Jones, Satya Prakash, and Peter J.H. Jones. 2013. "Lactobacillus Fermentum And Lactobacillus Amylovorus As Probiotics Alter Body Adiposity And Gut Microflora In Healthy Persons". *Journal Of Functional Foods* 5 (1): 116-123. doi:10.1016/j.jff.2012.09.001.

Kadooka, Y., M Sato, K Imaizumi, A Ogawa, K Iiyama, Y Akai, M Okano, M Kagoshima, and T Tsuchida. 2010. "Regulation Of Abdominal Adiposity By Probiotics (Lactobacillus Gasserii SBT2055) In Adults With Obese Tendencies In A Randomized Controlled Trial". *European Journal Of Clinical Nutrition* 64 (6): 636-643. doi:10.1038/ejcn.2010.19.

Cheng, Jing, and Arthur C. Ouwehand. 2020. "Gastroesophageal Reflux Disease And Probiotics: A Systematic Review". *Nutrients* 12 (1): 132. doi:10.3390/n12010132.

Allen, Stephen J., Elizabeth G Martinez, Germano V Gregorio, and Leonila F Dains. 2010. "Probiotics For Treating Acute Infectious Diarrhoea". *Cochrane Database Of Systematic Reviews*. doi:10.1002/14651858.cd003048.pub3.

Guandalini, Stefano. 2011. "Probiotics For Prevention And Treatment Of Diarrhea". *Journal Of Clinical Gastroenterology* 45: S149-S153. doi:10.1097/mcg.0b013e3182257e98.

Miller, Larry E., Angela C Zimmermann, and Arthur C Ouwehand. 2016. "Contemporary Meta-Analysis Of Short-Term Probiotic Consumption On Gastrointestinal Transit". *World Journal Of Gastroenterology* 22 (21): 5122. doi:10.3748/wjg.v22i21.5122.

Hungin, A. P. S., C. R. Mitchell, P. Whorwell, C. Mulligan, O. Cole, L. Agréus, and P. Fracasso et al. 2018. "Systematic Review: Probiotics In The Management Of Lower Gastrointestinal Symptoms – An Updated Evidence-Based International Consensus". *Alimentary Pharmacology & Therapeutics* 47 (8): 1054-1070. doi:10.1111/apt.14539.

Lescheid, David W. 2014. "Probiotics As Regulators Of Inflammation: A Review". *Functional Foods In Health And Disease* 4 (7): 299. doi:10.31898/fhfd.v4i7.2.

Ricchie, Marina L., and Tamara N. Romonuk. 2012. "A Meta-Analysis Of Probiotic Efficacy For Gastrointestinal Diseases". *Plos ONE* 7 (4): e34938. doi:10.1371/journal.pone.0034938.

Muhtaisan, Alicia L., and Melissa M. Herbst-Krolowetz. 2016. "Menopause And The Vaginal Microbiome". *Maturitas* 91: 42-50. doi:10.1016/j.maturitas.2016.05.015.

Wang, Huiying, In-Seon Lee, Christoph Braun, and Paul Enck. 2018. "Effect Of Probiotics On Central Nervous System Functions In Animals And Humans: A Systematic Review". *Journal Of Neurogastroenterology And Motility* 22 (4): 589-605. doi:10.5056/jnm16018.

Steenbergen, Laura, Roberta Sellaro, Saskia Van Hermet, Jos A. Bosch, and Lorenzo S. Colzato. 2015. "A Randomized Controlled Trial To Test The Effect Of Multispecies Probiotics On Cognitive Reactivity To Sad Mood". *Brain, Behavior, And Immunity* 48: 258-264. doi:10.1016/j.bbi.2015.04.003.

Amazon Flooded With Millions Of Fake Reviews In 2019 - Reviewmeta Blog - <https://reviewmeta.com/blog/amazon-flooded-with-millions-of-fake-reviews-in-2019/>.

Puccio, Giuseppe, Cinzia Cajozzo, Ferdinando Meli, Florence Rochat, Dominik Grathwohl, and Philippe Steenhout. 2007. "Clinical Evaluation Of A New Starter Formula For Infants Containing Live Bifidobacterium Longum BL999 And Prebiotics". *Nutrition* 23 (1): 1-8. doi:10.1016/j.nut.2006.09.007.

Ribeiro, F.C., R.D. Rossoni, P.P. Barros, J.D. Sawant, L.R.O. Fugisaki, M.P.V. Ledo, and J.C. Junqueira. 2019. "Action Mechanisms Of Probiotics On Candida Sp. And Candidiasis Prevention: An Update". *Journal Of Applied Microbiology* 129 (2): 175-185. doi:10.1111/jam.14511.

Chapman, C.M.C., G.R. Gibson, and I. Rowlands. 2012. "In Vitro Evaluation Of Single- And Multi-Strain Probiotics: Inter-Species Inhibition Between Probiotic Strains, And Inhibition Of Pathogens". *Anaerobe* 18 (4): 405-413. Elsevier BV. doi:10.1016/j.anaerobe.2012.05.004.

Chang, Hung-Yang, Jin-Hsi Chen, Jui-Hsing Chang, Hung-Chih Li, Chieh-Yu Lin, and Chun-Chih Peng. 2017. "Multiple Strains Probiotics Appear To Be The Most Effective Probiotics In The Prevention Of Necrotizing Enterocolitis And Mortality: An Updated Meta-Analysis". *PLOS ONE* 12 (2): e0171579. Public Library of Science (PLoS). doi:10.1371/journal.pone.0171579.

McFarland, Lynne V., Charlesnika T. Evans, and Ellie J. Goldstein. 2018. "Strain-Specificity And Disease-Specificity Of Probiotic Efficacy: A Systematic Review And Meta-Analysis". *Frontiers In Medicine* 5. doi:10.3389/fmed.2018.00124.

Fenster, Kurt, Barbara Freeburg, Chris Holland, Connie Wong, Rune Renhove Laursen, and Arthur Ouwehand. 2019. "The Production And Delivery Of Probiotics: A Review Of A Practical Approach". *Microorganisms* 7 (3): 83. doi:10.3390/microorganisms7030083.

"Bacteria In The Intestine, Helpful Residents Or Within? | Infection And Immunity". 2021. <https://journals.asm.org/doi/full/10.1128/ai.00187-08>.

Million, Matthieu, Emmanouil Angelakis, Mical Pauli, Fabrice Armougou, Leonard Leibovici, and Didier Revault. 2012. "Comparative Meta-Analysis Of The Effect Of Lactobacillus Species On Weight Gain In Humans And Animals". *Microbial Pathogenesis* 53 (2): 100-108. doi:10.1016/j.micpath.2012.05.007.

Miyoshi, Masaya, Akihiro Ogawa, Satoshi Higurashi, and Yukio Kadooka. 2013. "Anti-Obesity Effect Of Lactobacillus Gasserii SBT2055 Accompanied By Inhibition Of Pro-Inflammatory Gene Expression In The Visceral Adipose Tissue In Diet-Induced Obese Mice". *European Journal Of Nutrition* 53 (2): 599-606. doi:10.1007/s00394-013-0568-9.

Kadooka, Yukio, Masao Sato, Akihiro Ogawa, Masaya Miyoshi, Hiroshi Uenishi, Hitomi Ogawa, Ken Ikuyma, Masatoyo Kagoshima, and Takashi Tsuchida. 2013. "Effect Of Lactobacillus Gasserii SBT2055 In Fermented Milk On Abdominal Adiposity In Adults In A Randomised Controlled Trial". *British Journal Of Nutrition* 110 (3): 1696-1703. doi:10.1017/s0007114513001037.

Lee, Joohye, Jae Moon Yun, Mi Kyung Kim, Chan Kwon, and Beonyng Cho. 2018. "Lactobacillus Gasserii SBT2055 Supplemental Reduces The Visceral Adiposity Accumulation And Waist Circumference In Obese Adults: A Randomized, Double-Blind, Placebo-Controlled Trial". *Journal Of Medicinal Food* 21 (5): 454-461. doi:10.1089/jmf.2017.3937.

Kim, Sol, Dong Hoon Jung, Miri Park, Seung-Woo Yoon, Sang-Hyuk Jung, Sung-Il Yun, Han-Gh Park, and Wonbeak Kim. 2021. "The Effect Of Lactobacillus Gasserii BNR17 On Postmenopausal Symptoms In Ovariectomized Rats". *Journal Of Microbiology And Biotechnology* 31 (9): 1281-1287. doi:10.4014/jmb.2105.05032.

Goldenberg, Joshua Z., Lyubov Tytyn, Justin Steurich, Patricia Kirkin, Sanjay Mahant, and Bradley C. Johnston. 2015. "Probiotics For The Prevention Of Pediatric Antibiotic-Associated Diarrhea". *Cochrane Database Of Systematic Reviews*. doi:10.1002/14651858.cd004827.pub4.

McFarland, Lynne V. 2007. "Meta-Analysis Of Probiotics For The Prevention Of Traveler's Diarrhea". *Travel Medicine And Infectious Disease* 5 (2): 97-105. doi:10.1016/j.tmaid.2005.10.003.

Basu, Sriparna, Dilip Kumar Ganguly, Miridula Chatterjee, and Prabat Kumar Chandra. 2009. "Efficacy Of High-Dose Lactobacillus Rhamnosus GG In Controlling Acute Watery Diarrhea In Indian Children". *Journal Of Clinical Gastroenterology* 43 (3): 208-213. doi:10.1097/mcg.0b013e31815a5780.

Guarino, Alfredo, Stefano Guandalini, and Andrea Lo Vecchio. 2015. "Probiotics For Prevention And Treatment Of Diarrhea". *Journal Of Clinical Gastroenterology* 49 (Supplement 1): S37-S45. doi:10.1097/mcg.0000000000000349.

"Yeast Infection (Vagina) - Symptoms And Causes". 2021. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/yeast-infection/symptoms-causes-20378999>.

Mallander-Sánchez, Daniela, Christina Braunsdorf, Christian Grunaz, Christoph Müller, Stefan Lorenz, Philip Stevens, and Jeanette Wagener et al. 2017. "Antifungal Defense Of Probiotic Lactobacillus Rhamnosus GG Is Mediated By Blocking Adhesion And Nutrient Depletion". *PLOS ONE* 12 (10): e0184438. doi:10.1371/journal.pone.0184438.

Verdenelli, Maria Cristina, Francesca Ghelfi, Stefania Silvi, Carla Orpiani, Cinzia Cecchini, and Alberto Cresci. 2009. "Probiotic Properties Of Lactobacillus Rhamnosus And Lactobacillus Paracasei Isolated From Human Faeces". *European Journal Of Nutrition* 48 (6): 355-363. doi:10.1007/s00394-009-0021-2.

Allonsius, Camille N., Marianne F. L. Broek, Ilke De Boeck, Sarah Kieles, Tine Dinan, J. Bienenstam, and Kenn Foubert et al. 2017. "Interplay Between Lactobacillus Rhamnosus GG and Candida and The Involvement Of Exopolysaccharides". *Microbial Biotechnology* 10 (6): 1753-1763. doi:10.1111/1751-7915.12799.

Bravo, J. A., P. Forsythe, M. V. Chew, E. Escaravage, H. M. Sivagnan, T. Dinan, J. Bienenstam, and J. F. Cryan. 2011. "Interplay Of Lactobacillus Strain Regulates Emotional Behavior And Central GABA Receptor Expression In A Mouse Via The Vagus Nerve". *Proceedings Of The National Academy Of Sciences* 108 (38): 16050-16055. doi:10.1073/pnas.1102999108.

Slykerman, R.F., F. Hood, K. Wickens, J.M.D. Thompson, C. Barlow, R. Murphy, and J. Kang et al. 2017. "Effect Of Lactobacillus Rhamnosus HN001 In Pregnancy On Postpartum Symptoms Of Depression And Anxiety: A Randomised Double-Blind Placebo-Controlled Trial". *Ebiomedicine* 24: 159-165. doi:10.1016/j.ebiom.2017.09.013.

Mu, Qinghui, Vincent J. Tavelia, and Xin M. Luo. 2018. "Role Of Lactobacillus Reuteri In Human Health And Diseases". *Frontiers In Microbiology* 9. doi:10.3389/fmicb.2018.00757.

Falagas, Matthew E., Gregoria I Betsi, Theodoros Tokas, and Stavros Athanasiou. 2008. "Probiotics For The Prevention Of Recurrent Urinary Tract Infections In Women". *Drug* 66 (9): 1253-1261. doi:10.2165/00003495-200666090-00007.

Nikawa, H., S. Makiura, H. Fukushima, H. Nishimura, Y. Ozaki, K. Ishida, and S. Darmawan et al. 2004. "Lactobacillus Reuteri In Bovine Milk Fermented Decreases The Oral Carriage Of Mutans Streptococci". *International Journal Of Food Microbiology* 95 (2): 219-223. doi:10.1016/j.ijfoodmicro.2004.03.006.

Pop Muresan, Lulia Antonia, Lucian Liviu Pop, and Dan L Dumitrascu. 2019. "Lactobacillus Reuteri Versus Triple Therapy For The Eradication Of Helicobacter Pylori In Functional Dyspepsia". *Medicine And Pharmacy Reports*. doi:10.15386/mpr-1375.

Maria Remes-Troche, José, Enrique Cosso-Adame, Manuel Ángel Valdovinos-Díaz, Octavio Gómez-Escudero, María Eugenia Icaza-Chávez, José Antonio Chávez-Barrera, and Flora Zárate-Mondragón et al. 2020. "Lactobacillus Acidophilus LB: A Useful Pharmabiotic For The Treatment Of Digestive Disorders". *Therapeutic Advances In Gastroenterology* 13: 1756284820971201. doi:10.1177/1756284820971201.

Silva, Márcia R., Glaucio Dias, Célia L.F. Ferreira, Sílvia C.C. Franceschini, and Neuza M.B. Costa. 2008. "Growth Of Preschool Children Was Improved When Fed An Iron-Fortified Fermented Milk Beverage Supplemented With Lactobacillus Acidophilus". *Nutrition Research* 28 (4): 226-232. doi:10.1016/j.nutres.2008.02.002.

Europeancrreview.Org. <https://www.europeancrreview.org/wp/wp-content/uploads/8645-8657.pdf>.

Tachedjian, Gilda, Muriel Aldunate, Catronia S. Bradshaw, and Richard A. Cone. 2017. "The Role Of Lactic Acid Production By Probiotic Lactobacillus Species In Vaginal Health". *Research In Microbiology* 168 (9-10): 782-792. doi:10.1016/j.resmic.2017.04.001.

Bekkali, Noor-L-Houda, Marloes E.J Bongers, Maartje Van den Berg, Olivia Liem, and Marc A Benninga. 2007. "The Role Of A Probiotics Mixture In The Treatment Of Childhood Constipation: A Pilot Study". *Nutrition Journal* 6 (1). doi:10.1186/1475-2891-6-17.

Toh, Zheng Quan, Anzela Anzela, Mimi J. K. Tang, and Paul V. Liccardi. 2012. "Probiotic Therapy As A Novel Approach For Allergic Diseases". *Frontiers In Pharmacology* 3. doi:10.3389/fphar.2012.00171.

Cristofori, Fernanda, Flavia Andra, Vito Minello, Maria De Angelis, and Ruggiero Francavilla. 2018. "Probiotics In Celiac Disease". *Nutrients* 10 (12): 1824. doi:10.3390/n10121824.

Loparra, José Miguels, Marta Olivares, Onofrio Gallina, and Yolanda Sanz. 2012. "Bifidobacterium Longum CECT 7347 Modulates Immune Responses In A Gliadin-Induced Enteropathy Animal Model". *Plos ONE* 7 (2): e30744. doi:10.1371/journal.pone.0030744.

Olivares, Marta, Gemma Castillejo, Vicente Varea, and Yolanda Sanz. 2014. "Double-Blind, Randomised, Placebo-Controlled Intervention Trial To Evaluate The Effects Of Bifidobacterium Longum CECT 7347 In Children With Newly Diagnosed Coeliac Disease". *British Journal Of Nutrition* 112 (1): 30-40. doi:10.1017/s0007114514000609.

Ma, Yaguang, Yan. 2013. "Effects Of Probiotics On Nonalcoholic Fatty Liver Disease: A Meta-Analysis". *World Journal Of Gastroenterology* 19 (40): 6911. doi:10.3748/wjg.v19.i40.6911.

Malaguarnera, Michele, Marco Vacante, Tijana Antic, Maria Giordano, Giuseppe Chisari, Rosaria Acquaviva, and Silvana Mastroianni et al. 2011. "Bifidobacterium Longum With Fructo-Oligosaccharides In Patients With Non Alcoholic Steatohepatitis". *Digestive Diseases And Sciences* 57 (2): 545-553. doi:10.1007/s10620-011-1887-4.

Akatsu, Hiroyoshi, Noriyuki Iwabuchi, Jin-zhong Xiao, Zenjiro Matsuyama, Rina Kurihara, Kenji Okuda, Takayuki Yamamoto, and Mitsuo Maruyama. 2012. "Clinical Effects Of Probiotic Bifidobacterium Longum BB536 On Immune Function And Intestinal Microbiota In Elderly Patients Receiving Enteral Tube Feeding". *Journal Of Parenteral And Enteral Nutrition* 37 (5): 631-640. doi:10.1177/0145791212457919.

Puccio, Giuseppe, Cinzia Cajozzo, Ferdinando Meli, Florence Rochat, Dominik Grathwohl, and Philippe Steenhout. 2007. "Clinical Evaluation Of A New Starter Formula For Infants Containing Live Bifidobacterium Longum BL999 And Prebiotics". *Nutrition* 23 (1): 1-8. doi:10.1016/j.nut.2006.09.007.c

"NUTRAFLORA® Prebiotic Fiber". <https://www.ingredion.com/na/en-us/ingredients/ingredient-product-families/nutraflora-prebiotic-fiber.html>.

ABE, FUMIAKI, HIROFUMI MIYAUCHI, AYAKO UCHIYAMA, TOMOKO YAESHIMA, and KEIJI IWATSUKI. 2009. "Effects Storage Temperature And Water Activity On The Survival Of Bifidobacteria In Powder Form". *International Journal Of Dairy Technology* 62 (2): 234-239. doi:10.1111/j.1471-0307.2009.00464.x.

Fenster, Kurt, Barbara Freeburg, Chris Holland, Connie Wong, Rune Renhove Laursen, and Arthur Ouwehand. 2019. "The Production And Delivery Of Probiotics: A Review Of A Practical Approach". *Microorganisms* 7 (3): 83. doi:10.3390/microorganisms7030083.

"EUR-Lex - 32022R0063 - EN - EUR-Lex". 2022. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022R0063>.

The logo for FLCCC Alliance features the letters 'FLCCC' in a large, bold, sans-serif font. The 'F' and the second 'C' are dark blue, while the 'L' and the first 'C' are red. Below this, the word 'ALLIANCE' is written in a smaller, red, spaced-out sans-serif font. The background is a light blue-to-white gradient with a pattern of faint, overlapping hexagons and lines.

# FLCCC

ALLIANCE

[www.flccc.net/wholebodyhealth](http://www.flccc.net/wholebodyhealth)