

# Kyoto Encyclopedia of Genes and Genomes derived Suggestions

## Review Overview

These suggestions are based on an Expert System (Artificial Intelligence) modelled after the MYCIN Expert System produced at Stanford University School of Medicine in 1972. The system uses almost 2 million facts with backward chaining to sources of information. The typical sources are studies published on the US National Library of Medicine. Note: That many of the bacteria species used are *NOT* reported on many tests.

These are suggestions that are predicted to independently Increasing Butanoic acid | Butanoate Butyrate Butyric acid C4H8O2 by impacting the bacteria listed on [KEGG: Kyoto Encyclopedia of Genes and Genomes](#). Suggestions should *only be done after a review* by a medical professional factoring in patient's conditions, allergies and other issues.

**This report may be freely shared by a patient to their medical professionals**

This is an experimental feature – manual validations is recommended. For background, see this [post](#)

There is a separate report for probiotics. That report use the enzymes in probiotic species.

## Analysis Provided by Microbiome Prescription

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## Bacteria being targeted by suggestions.

These bacteria levels were deemed atypical

Bacteria Name	Rank	Shift	Taxonomy ID	Bacteria Name	Rank	Shift	Taxonomy ID
Methylocystis parvus	species		134	Brevibacillus laterosporus	species		1465
Azospirillum lipoferum	species		193	Peribacillus simplex	species		1478
Bradyrhizobium japonicum	species		375	Rubrivivax gelatinosus	species		28068
Bradyrhizobium sp.	species		376	Porphyromonas asaccharolytica	species		28123
Citrobacter koseri	species		545	Vibrio nigripulchritudo	species		28173
Citrobacter freundii	species		546	Pectobacterium atrosepticum	species		29471
Escherichia fergusonii	species		564	Beijerinckia indica subsp. indica	subspecies		31994
Shigella sonnei	species		624	Phascolarctobacterium faecium	species		33025
Yersinia intermedia	species		631	Leptothrix cholodnii	species		34029
Edwardsiella tarda	species		636	Citrobacter amalonaticus	species		35703
Vibrio harveyi	species		669	Rhodovulum sulfidophilum	species		35806
Aggregatibacter actinomycetemcomitans	species		714	Caldibacillus thermoamylovorans	species		35841
Pasteurella dagmatis	species		754	Porphyromonas cangingivalis	species		36874
Rodentibacter pneumotropicus	species		758	Methylobacterium mesophilicum	species		39956
Porphyromonas gingivalis	species		837	Streptococcus equi subsp. zooepidemicus	subspecies		40041
Fusobacterium gonidiaformans	species		849	Rubrobacter radiotolerans	species		42256
Fusobacterium mortiferum	species		850	Vreelandella venusta	species		44935
Fusobacterium varium	species		856	Streptococcus cristatus	species		45634
Fusobacterium periodonticum	species		860	Bibersteinia trehalosi	species		47735
Fusobacterium ulcerans	species		861	Serratia fonticola	species		47917
Megasphaera elsdenii	species		907	Brevibacillus agri	species		51101
Nitrobacter hamburgensis	species		912	Thalassovita gelatinovora	species		53501
Rhodospirillum rubrum	species		1085	Brevibacillus choshinensis	species		54911
Streptococcus pyogenes	species		1314	Brevibacillus formosus	species		54913
Streptococcus anginosus	species		1328	Pectobacterium wasabiae	species		55208
Streptococcus canis	species		1329	Brenneria nigrifluens	species		55210
Streptococcus uberis	species		1349	Brenneria rubrifaciens	species		55213
Brevibacillus brevis	species		1393	Edwardsiella ictaluri	species		67780
Paenibacillus polymyxa	species		1406	Citrobacter farmeri	species		67824
Peribacillus psychrosaccharolyticus	species		1407	Citrobacter werkmanii	species		67827

## Substance to Consider Adding or Taking

These are the most significant substances that are likely to improve the microbiome dysfunction. Dosages are based on the dosages used in clinical studies. For more information see: <https://microbiomeprescription.com/library/dosages>. These are provided as examples only

Colors indicates the type of substance: i.e. probiotics and prebiotics, herbs and spices, etc. There is no further meaning to them.

The recommended process to obtain a *persistent shift* of the microbiome is:

Generate 4 lists from the suggestions with nothing repeated on another list

Emphasize one list each week

After 8 weeks (2 cycles), retest the microbiome to obtains the next set of *course corrections*

This approach allows the microbiome to stablize towards normal.

Pick only as many suggestions that suits you; there is no need to do all of them. Suggestions are based on your specific bacteria and not marketing concepts such as 'healthy choices'.

**allium sativum {garlic}** 4 gram/day

Amorphophallus konjac {Konjaku flour}

**Azadirachta indica {Neem}** 120 mg/day

**Bifidobacterium animalis {B. animalis}**

**bifidobacterium lactis,streptococcus thermophilus probiotic**

Bovine Milk Products {Dairy}

Caffeine

**Cichorium intybus {Chicory}** 1800 mg/day

**Cinnamomum zeylanicum {Ceylon Cinnamon}** 6 gram/day

Coffee

Cola aspartame {Diet Cola}

Eucalyptus {Gum Tree}

**foeniculum vulgare,fennel**

gallic acid {gallate}

green tea

**Lactocaseibacillus casei {L. casei}** 48 BCFU/day

**lactobacillus paracasei,lactobacillus acidophilus,bifidobacterium animalis**

**Lactobacillus plantarum {L. plantarum}** 60 BCFU/day

**lactobacillus rhamnosus gg,bifidobacterium animalis lactis**

**,lactobacillus paracasei {cvs maximum strength probiotic}**

**Limosilactobacillus fermentum {L. fermentum}** 12 BCFU/day

**Menta × piperita {peppermint}**

**rosmarinus officinalis {rosemary}**

**Salvia officinalis {Sage}**

**β-(1?4)-linked D-glucosamine and N-acetyl-D-glucosamine**

**{Chitosan}** 3 gram/day

**syzygium aromaticum {clove}**

tea

**Theobroma cacao {Cacao}** 20 gram/day

**Thymus vulgaris {thyme}**

**Trametes versicolor {Turkey tail}**

yogurt

## Retail Probiotics

Over 260 retail probiotics were evaluated with the following deemed beneficial with no known adverse risks.

douglas laboratories / multi probiotic 40 billion  
 visbiome  
 Physician Choice / 60 Billion Probiotics  
 theramedix / probiotic  
 Winclove Probiotics / Ecologic®825  
 Jetson (US) / Immunity Probiotics  
 spain (es) / vivomixx  
 renew life men's probiotic - ultimate  
 ferring / vsl#3  
 nature's bounty / probioti 10  
 fairvital / microflora basic  
 Invivo / Bio.Me Femme UT  
 jarow formula / ideal bowel support® lp299v®  
 SuperSmart / Probio Forte  
 SuperSmart / Lactoxira  
 organic 3 / gutpro  
 Bromatech (IT) / Milonet  
 PharmExtracta (IT) / INatal Sachets  
 NaturalPharma / Profit Probiotics  
 Bio Schwartz / Advance Strength Probiotics (40 BCFU)  
 UltraFlora® Intensive Care  
 Pädia GmbH (DE)/Mambiotic Kapseln  
 Floradapt Cardio  
 HLH BIOPHARMA(DE) / LACTOBACT ® OMNI FOS  
 spain (es) / lactanza hereditum  
 Purica Probiotic Cardio  
 ecology\_allergycare  
 Genesis Bifidobacterium Complex BB Probiotic  
 Maple Life Science™ / Lactobacillus plantarum  
 HLH BIOPHARMA(DE) / LACTOBACT ® LDL-CONTROL  
 BioGaia / Elactia  
 anabolic laboratories / probiotic complete  
 klair labs / target gb-x  
 Materna® Opti-Lac® Breast Feeding Support  
 Lab One / N ° 1 SportBiotic  
 Jetson / FIT  
 Seeking Health / Probiota HistaminX  
 reg'activ / immune & vitality  
 Ombre / Ultimate Immunity  
 Purica Probiotic Intensive GI  
 optibac / for your cholesterol  
 ProbioMax® Daily DF  
 SuperSmart / Lactobacillus Plantarum Postbiotic (Pasturized)  
 Floradapt Gut Comfort  
 Realdose  
 Nature's Lab Intensive GI  
 Bulk Probiotics / L. Fermentum Probiotic Powder  
 CustomProbiotics.com / L. Casei Probiotic Powder  
 CustomProbiotics.com / S. Thermophilus Probiotic Powder  
 Smidge / Sensitive Probiotic  
 Metabolics / Lactobacillus Plantarum Powder  
 Nature's Lab Cardio  
 Bromatech (IT) / Rotanella plus  
 Metabolics / Streptococcus Thermophilus Powder

Immune Defense Daily Chewable Probiotic  
probiotic pur (de) / realdose nutrition  
VSL Pharmaceuticals / Oxadrop  
up4 / adult  
nature's way (au) / restore probiotic bowel & colon health 30s  
Bulk Probiotics / L. Plantarum Probiotic Powder  
spain (es) / I3.1  
Good Start® by Gerber® Breastfeeding Comfort Plus Probiotics  
Thryve LPCasei Th1, LPCasei Th2,LFerm IBF1, Lacidoph  
goodbelly drink  
Bulk Probiotics / L. Casei Probiotic Powder (Candida Support)  
Maple Life Science™ / Lactobacillus fermentum  
Bromatech (IT) / Citogenex  
ImmuneBiotech Medical Sweden AB / GutMagnific®  
naturopathica (au) / gastrohealth probiotic dairy free 20 bcfu  
HMF Metabolic  
CustomProbiotics.com / L. Plantarum Probiotic Powder  
UltraFlora® Immune Booster  
Bromatech (IT) / Adomelle

**Note:** Some of these are only available regionally – search the web for sources.

## Substance to Consider Reducing or Eliminating

These are the most significant substances have been identified as probably contributing to the microbiome dysfunction.

In some cases blood work may show low levels of some vitamins, etc. listed below. This may be due to *greedy* bacteria reported at a high level above. Viewing bacteria data on the Kyoto Encyclopedia of Genes and Genomes (<https://www.kegg.jp/>) may provide better insight on the course of action to take.

5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine}  
 2H-1,6,2-benzothiazol-1,1,3-trione {Saccharin}  
 α-Amino-3-indolepropionic acid {Tryptophan}  
 arabinogalactan {arabinogalactan}  
 Avena sativa x Hordeum vulgare {barley,oat}  
 Ferrum {Iron Supplements}  
 fruit  
 fruit/legume fibre  
 grapes  
 high red meat  
 Hordeum vulgare {Barley}  
 Hydrastis canadensis {Goldenseal}  
 Lactobacillus rhamnosus {L. rhamnosus}  
 lactobacillus rhamnosus gg

Linum usitatissimum {Flaxseed}  
 Mixture of Vitamin B? {B Vitamins}  
 oligosaccharides {oligosaccharides}  
 Outer Layers of Triticum aestivum {Wheat Bran}  
 Panax ... {Ginseng}  
 pectin {pectin}  
 Poly[β-D-xylopyranose(1→4)] {Xylan}  
 Polydextrose {polydextrose}  
 pseudo-cereals {amaranth,quinoa, taro,buckwheat}  
 Pulses, Beans  
 red wine  
 β-glucan {Beta-Glucan}  
 Ulmus rubra {slippery elm}  
 vegetarians  
 wheat

## Sample of Literature Used

The following are some of the studies used to generate these suggestions.

Four Dairy Products Mitigates Sarcopenia in Mice by Modulating Muscle Inflammation, Autophagy, and Protein Degradation.

**Food science & nutrition** , Volume: 13 Issue: 7 2025 Jul

Authors Sun M,Wu T,Wang R,Ma Y,Han Y,Hou Y,Zhang Z

The potential of cell-free supernatants from *Lactocaseibacillus paracasei* B1 and *Lactiplantibacillus plantarum* O24 as antioxidant and antimicrobial agents.

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Authors Keska P,Zielinska D,Karbowiak M,Kruk M,Lisiecka U,Stadnik J

Incorporation of *Azadirachta indica* kernel in the diet of guinea pigs: effects on digestibility and caecal health.

**Tropical animal health and production** , Volume: 57 Issue: 6 2025 Jun 21

Authors Djournessi Tobou GF,Kenfack LBM,Miégué E,Fokom DW,Kuitche HM,Kesnel ZDD,Tendonkeng F,Clerge T,Hornick JL

Impact of the Probiotic on the Modulation of Vaginal Bacterial and Fungal Microbiota in HPV-Positive Women.

**Molecular nutrition & food research** , 2025 Jun 11

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Impact of Iron Deficiency on the Growth and Bioelectrical Profile of Different Gut Bacteria.

**MicrobiologyOpen** , Volume: 14 Issue: 3 2025 Jun

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Synergistic Biocidal Effects of Curcumin, Chitosan, and Nickel Titanate-Based Nanohybrids for Enhanced Antibacterial and Anticancer Therapies.

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Thyme oil-loaded chitosan microparticles: an antibacterial approach against pathogenic bacteria.

**3 Biotech** , Volume: 15 Issue: 5 2025 May

Authors Thakur A,Sharma K

Selenium-enriched green tea extracts: chemical constituents and effects on antioxidant and anti-inflammatory factors and four major intestinal flora in mice with intestinal disorders.

**Journal of the science of food and agriculture** , 2025 Apr 15

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Electrostatically assembled maghemite nanoparticles-*Lactobacillus plantarum*: A novel hybrid for enhanced antioxidant, antimicrobial, and antibiofilm efficacy.

**Bioresource technology** , 2025 Apr 12

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GC/MS and LC Composition Analysis of Essential Oil and Extracts From Wild Rosemary: Evaluation of Their Antioxidant, Antimicrobial, and Anti-Inflammatory Activities.

**Biomedical chromatography : BMC** , Volume: 39 Issue: 5 2025 May

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The Development and Comparative Evaluation of Rosemary Hydroalcoholic Macerate-Based Dermatocosmetic Preparations: A Study on Antioxidant, Antimicrobial, and Anti-Inflammatory Properties.

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The efficacy and underlying mechanisms of berberine in the treatment of recurrent *Clostridioides difficile* infection.

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Authors Sfaki A,Tavaszi-Sárosi S,Flórián K,Patonay K,Radácsi P,Juhász Á

The Molecular Weight of Enzymatically Modified Pectic Oligosaccharides from Apple Pomace as a Determinant for Biological and Prebiotic Activity.

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Authors Wilkowska A,Nowak A,Motyl I,Oracz J

Oat Beta-Glucans Modulate the Gut Microbiome, Barrier Function, and Immune Responses in an In Vivo Model of Early-Stage

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