# 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 Decreasing Hydrogen | H2 H2 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 |
|---|---|---|---|
| Persephonella marina | species | | 309805 |
| Sulfurihydrogenibium azorense | species | | 309806 |
| Desulforapulum autotrophicum | species | | 2296 |
| Streptomyces nodosus | species | | 40318 |
| Desulfurobacterium thermolithotrophum | species | | 64160 |
| Desulfocapsa sulfexigens | species | | 65555 |
| Streptomyces globosus | species | | 68209 |
| Thioalkalivibrio paradoxus | species | | 108010 |
| Caldilinea aerophila | species | | 133453 |
| Thermovibrio ammonificans | species | | 228745 |
| Desulfovibrio ferrophilus | species | | 241368 |
| Adlercreutzia equolifaciens | species | | 446660 |
| Gordonibacter pamelaeae | species | | 471189 |
| Thiohalobacter thiocyanaticus | species | | 585455 |
| Neptunomonas concharum | species | | 1031538 |
| Magnetospira sp. QH-2 | species | | 1288970 |
| Salinivirga cyanobacteriivorans | species | | 1307839 |
| Labilithrix luteola | species | | 1391654 |
| Desulfocurvibacter africanus subsp. africanus | subspecies | | 1511600 |
| Limnochorda pilosa | species | | 1555112 |
| Sulfurifustis variabilis | species | | 1675686 |
| Candidatus Velamenicoccus archaeovorus | species | | 1930593 |
| Thiocapsa sp. | species | | 2024551 |
| Streptomyces tirandamycinicus | species | | 2174846 |
| Labrenzia sp. PHM005 | species | | 2590016 |
| Dictyoglomus thermophilum | species | | 14 |
| Legionella pneumophila | species | | 446 |
| Legionella longbeachae | species | | 450 |
| Legionella micdadei | species | | 451 |
| Legionella spiritensis | species | | 452 |
| Legionella israelensis | species | | 454 |
| Legionella jordanis | species | | 456 |
| Desulfovibrio piger | species | | 901 |
| Hydrogenobacter thermophilus | species | | 940 |
| Allochromatium vinosum | species | | 1049 |
| Prosthecochloris aestuarii | species | | 1102 |
| Mycobacterium kansasii | species | | 1768 |
| Mycolicibacterium smegmatis | species | | 1772 |
| Mycobacterium gordonae | species | | 1778 |
| Mycobacterium marinum | species | | 1781 |
| Mycolicibacterium thermoresistibile | species | | 1797 |
| Mycolicibacterium aichiense | species | | 1799 |
| Mycolicibacterium chubuense | species | | 1800 |
| Mycolicibacterium diernhoferi | species | | 1801 |
| Streptomyces reticuli | species | | 1926 |
| Streptomyces rimosus | species | | 1927 |
| Streptomyces scabiei | species | | 1930 |
| Streptosporangium roseum | species | | 2001 |
| Thermobispora bispora | species | | 2006 |
| Desulfomonile tiedjei | species | | 2358 |
| Legionella cherrii | species | | 28084 |
| Legionella sainthelensi | species | | 28087 |
| Thermodesulfovibrio yellowstonii | species | | 28262 |
| Legionella oakridgensis | species | | 29423 |
| Rhodothermus marinus | species | | 29549 |
| Halothermothrix orenii | species | | 31909 |
| Streptomyces laurentii | species | | 39478 |
| Mycolicibacterium duvalii | species | | 39688 |
| Mycobacterium branderi | species | | 43348 |
| Kutzneria albida | species | | 43357 |

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## 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'.**

**(2->1)-beta-D-fructofuranan {Inulin}** 32 gram/day
**Avena sativa x Hordeum vulgare {barley,oat}**
**fruit**
**fruit/legume fibre**
**grapes**
**Hordeum vulgare {Barley}** 60 gram/day
**pectin {pectin}**
**resistant starch**
**Ulmus rubra {slippery elm}**
**walnuts** 75 gram/day

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## Retail Probiotics

**Over 260 retail probiotics were evaluted with the following deem beneficial with no known adverse risks.**

**jarrow formulas / bifidus balance® + fos**
**naturopathica (au) / gastrohealth fibrepro**
**nature's way (au) / restore probiotic daily health 90s**
**nature's way (au) / restore probiotic 30 billion 30s**
**blackmores (au) / probiotics + adults daily (90 capsules)**
**blackmores (au) / probiotics+ immune defence**
**blackmore (au) / probiotics+ bowel support**
**blackmore (au) / probiotics+ eczema relief**
**blackmore (au) / probiotics+ daily health**
**Swiss BioEnergetics / Full Spectrum Probiotic Defence**
**Bromatech (IT) / Lautoselle**
**Bromatech (IT) / Serobiome**

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

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## Substance to Consider Reducing or Eliminating

**These are the most signigicant 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.**

**Bovine Milk Products {Dairy}**
**Lacticaseibacillus casei {L. casei}**
**lactobacillus paracasei,lactobacillus acidophilus,bifidobacterium animalis**
**Lactobacillus plantarum {L. plantarum}**
**rosmarinus officinalis {rosemary}**
**ß-(1?4)-linked D-glucosamine and N-acetyl-D-glucosamine {Chitosan}**
**Thymus vulgaris {thyme}**
**yogurt**

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## Sample of Literature Used

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


High-carbohydrate and low-carbohydrate diets enriched in type II resistant starch from high-amylose maize influence cholesterol metabolism via concurrent alterations in fecal Bifidobacterium pseudolongum, bile salt hydrolase and bile acid profiles in mice.
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*Authors Liu W,Tan X,Zheng M,Ma Q,Yang W,Qin W,Lv M,Meng H*

Integrating gut microbiome and serum metabolomes to investigate the hepatoprotective effects of Lactiplantibacillus Plantarum PA01 against deoxynivalenol-induced liver injury in broilers.
**Poultry science , Volume: 105 Issue: 12 2026 Oct 15**
*Authors Wang H,Zhang H,Shi T,Zhang W,Liu Y,Hou Q,Long F,Yang X*

Dissolved Oxygen Removal From Aqueous Phase of Prepared Thyme Essential Oil in Water Nanoemulsions and Assessment of Their Physico-Chemical Properties and Antibacterial Activities.
**Journal of food science , Volume: 91 Issue: 7 2026 Jul**
*Authors Ahmadi O,Jafarizadeh-Malmiri H*

Biological Characterization and Essential Oil Profiles of Eastern European Cultivars of Thymus, Satureja, and Monarda.
**Molecules (Basel, Switzerland) , Volume: 31 Issue: 2 2026 Jan 19**
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Nanogel-encapsulated Rosa roxburghii Tratt fruit polyphenols ameliorated ulcerative colitis by regulating gut microbiota and PI3K/Akt and NF-?B pathways.
**Food research international (Ottawa, Ont.) , Volume: 226 2026 Feb 28**
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*Authors Zöchling A,Séneca J,Pjevac P,Auñon-Lopez A,Zebeli Q,Pignitter M,Duszka K*

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Lactobacillus plantarum and Lactobacillus brevis alleviate enterotoxigenic Escherichia coli-induced intestinal inflammation and stabilize intestinal microorganisms and serum metabolites in piglets.
**Animal nutrition (Zhongguo xu mu shou yi xue hui) , Volume: 22 2025 Sep**
*Authors Han X,Gao R,Ding S,Yao H,Fang J,Liu G*

Mango by-Product-Based High-Fiber Confectionery Attenuates Liver Steatosis and Alters Gut Microbiota in High-Fat Diet-Fed Rats.
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The potential of cell-free supernatants from Lacticaseibacillus 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*

Synergistic Biocidal Effects of Curcumin, Chitosan, and Nickel Titanate-Based Nanohybrids for Enhanced Antibacterial and Anticancer Therapies.
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*Authors Jeyasingh E,Panneerselvam HM,Chandrasekaran K,Moorthy S*

A single-cell transcriptomic atlas of all cell types in the brain of 5xFAD Alzheimer mice in response to dietary inulin


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