## **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**

A Microbiome Analysis Company

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**Our Facebook Discussion Page** 

# **Bacteria being targeted by suggestions.**

These bacteria levels were deemed atypical

| Bacteria Name                       | Rank Shift | Taxonomy<br>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                     | species    | 714            | Caldibacillus thermoamylovorans   | species    | 35841             |
| actinomycetemcomitans               | эрссисэ    | 1 17           | Porphyromonas cangingivalis       | species    | 36874             |
| Pasteurella dagmatis                | species    | 754            | Methylobacterium mesophilicum     | species    | 39956             |
| Rodentibacter pneumotropicus        | species    | 758            | Streptococcus equi subsp.         | subspecies | 40041             |
| Porphyromonas gingivalis            | species    | 837            | 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    | 5 <u>11</u> 01    |
| Nitrobacter hamburgensis            | species    | 912            | Thalassovita gelatinovora         | species    | 53501             |
| Rhodospirillum rubrum               | species    | 1085           | Brevibacillus choshinensis        | species    | 549 <u>11</u>     |
| 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

Lacticaseibacillus 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)

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

{Chitosan} 3 gram/day

syzygium aromaticum (dove)

tea

Theobroma cacao (Cacao) 20 gram/day

Thymus vulgaris (thyme)

Trametes versicolor (Turkey tail)

vogurt

#### **Retail Probiotics**

Over 260 retail probiotics were evaluted with the following deem 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

jarrow 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

klaire labs / target gb-x

Materna® Opti-Lac® Breast Feeding Support

Lab One / N ° 1 SportBiotic

Jetson / FIT

Seeking Health / Probiota HistaminX

regactiv / immune & vitality

Ombre / Ultimate Immunity

Purica Probiotic Intensive GI

optibac / for your cholesterol

ProbioMax® Daily DF

SuperSmart / Lactobacillus Plantarum Postbiotic (Pasturerized)

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) / Rotanelle 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) / 13.1 Good Start® by Gerber® Breastfeeding Comfort Plus Probiotics Thryve L.PCasei Th1, L.PCasei Th2, L.Ferm IBF1, L.acidoph 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} a-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)

Lacticaseibacillus rhamnosus (I. 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[ $\beta$ -D-xylopyranose(1->4)] {Xylan}

Polydextrose {polydextrose}

pseudo-cereals (amaranth,quinoa, taro,buckwheat)

Pulses, Beans red wine

ß-glucan {Beta-Glucan} Ulmus rubra {slippery elm}

vegetarians wheat

### Sample of Literature Used

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