

Functional GI Molecular Stool Analysis by qPCR

PATIENT INFO:

PATIENT: Anonymous COLLECTED: 10/3/2023

DOB: 1/24/1988

PROVIDER INFO:Designs for Health

ACCESSION: 20231006-XXXX RECEIVED: 10/6/2023

RECEIVED: 10/6/2023 COMPLETED: 1/10/2024

Introduction - Gastrointestinal Analysis

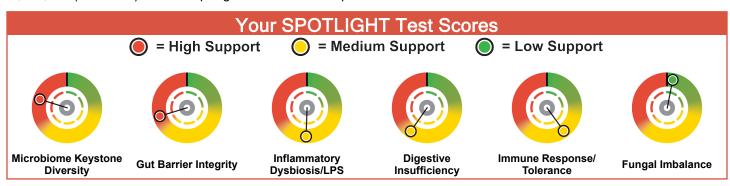
Designs for Health is pleased to present the GI spotlight analysis, providing an in-depth look into the state of GI function and microbiome.

The human gastrointestinal tract contains an ecosystem with over 4 trillion microbes, living in a symbiotic relationship with their host. These microbes, when in a healthy state and balance, are responsible for performing duties essential to your health such as supporting normal digestion, hormonal balance, immune modulation, and neurotransmitter function.

This report contains a unique, in-depth assessment into many of the key microbes essential for human health. The microbes are measured using the most precise molecular analysis known as qPCR (quantitative PCR), useful for assessing absolute values – *versus only relative abundance found using sequencing methods* – and determining the accurate number of microbes, as provided on the report. This report contains many of the most well researched microbes, keystone species, and those with the greatest known correlation to functional categories listed in the report.

This is not a test constructed or intended for medical diagnosis. These results are intended to be used by your healthcare provider to personalize supplementation, diet and lifestyle recommendations based on your unique GI microbiome and functional status.

Note: Microbial results are reported as genome equivalents per gram of stool, which is a standard method for reporting the number of microbes measured per gram of stool, based on qPCR analysis of DNA samples. Results are expressed in standard scientific notation. For example, a reported result of 3.5e7 is equivalent to 3.5 x 10⁷ microbes per gram, which equals 35,000,000 (35 million) microbes per gram of stool. <dl represents results below detectable limit.



Lifestyle and Supplement Recommendations:

The lifestyle and supplement recommendations included in this report are generalized and made for adults. Not all recommendations are appropriate or applicable for every individual. A knowledgeable and qualified healthcare practitioner should review all recommendations and adjust them as needed, based on the individual's age, personal health history, pregnancy or breastfeeding status, potential drug or nutrient interactions, contraindications, current supplement use, diet, lifestyle, and other relevant factors.



SPOTLIGHT 1

KEY: < DL = Results below detection limit.

| Microbiome Keystone Diversity | | | | |
|-------------------------------------|--------------------------------|-----|---|-------------------------|
| Category | Analytes Tested | | Result | Reference Range |
| | Bifidobacterium spp. | | 1.04e9 | > 6.7e7 org/g |
| | Enterococcus spp. | | 1.97e8 | 1.9e5 - 2.0e8 org/g |
| | Escherichia spp. | Low | 8.67e4 | 3.7e6 - 3.8e9 org/g |
| | Lactobacillus spp. | | 2.83e6 | 8.6e5 - 6.2e8 org/g |
| Microbiome Keystone Diversity | Akkermansia muciniphila | Low | <dl< td=""><td>1.0e1 - 8.2e6 org/g</td></dl<> | 1.0e1 - 8.2e6 org/g |
| | Faecalibacterium prausnitzii | Low | <1.00e2 | 1.0e3 - 5.0e8 org/g |
| | Roseburia spp. | Low | 2.35e7 | 5.0e7 - 2.0e10 org/g |
| | Bacteroidetes | Low | 5.65e11 | 8.6e11 - 3.3e12 |
| | Firmicutes | Low | 3.88e10 | 5.7e10 - 3.0e11 |
| | Firmicutes:Bacteroidetes Ratio | | 0.07 | < 1.0 |
| | Secretory IgA | | 763 | 510 - 2010 ug/g |

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Microbiome Keystone Diversity



The use of a broad-spectrum probiotics, prebiotics, and polyphenols, in addition to a whole food diet rich in vegetables and fruits, can promote greater diversity and richness of the GI microbiota.

SPOTLIGHT Score Key:



= Medium Support

= Low Support



SPOTLIGHT 2

KEY: < DL = Results below detection limit.

| Gut Barrier Integrity | | | | |
|--------------------------|------------------------------|------|---|-------------------------|
| Category | Analytes Tested | | Result | Reference Range |
| | Bifidobacterium spp. | | 1.04e9 | > 6.7e7 org/g |
| | Enterococcus spp. | | 1.97e8 | 1.9e5 - 2.0e8 org/g |
| | Escherichia spp. | Low | 8.67e4 | 3.7e6 - 3.8e9 org/g |
| | Lactobacillus spp. | | 2.83e6 | 8.6e5 - 6.2e8 org/g |
| | Enterobacter spp. | | 1.42e6 | 1.0e6 - 5.0e7 |
| Gut Barrier Integrity | Akkermansia muciniphila | Low | <dl< td=""><td>1.0e1 - 8.2e6 org/g</td></dl<> | 1.0e1 - 8.2e6 org/g |
| | Faecalibacterium prausnitzii | Low | <1.00e2 | 1.0e3 - 5.0e8 org/g |
| | Roseburia spp. | Low | 2.35e7 | 5.0e7 - 2.0e10 org/g |
| | Firmicutes | Low | 3.88e10 | 5.7e10 - 3.0e11 |
| | Candida albicans | | <dl< td=""><td>< 5.00e2 org/g</td></dl<> | < 5.00e2 org/g |
| | Anti-gliadin IgA | | 114 | < 175 U/L |
| | Zonulin | High | 337.8 | < 175 ng/g |

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Gut Barrier Integrity



Consume of a wide variety of plant-based foods. Consider a gluten-free diet, and avoid processed foods, refined sugar, and excess alcohol. Engage in appropriate stress-management and sleep hygiene and avoid environmental toxins.

SPOTLIGHT Score Key:

= High Support

= Medium Support

= Low Support



SPOTLIGHT 3

KEY: < DL = Results below detection limit.

| Inflammatory Dysbiosis/LPS | | | | |
|-------------------------------|------------------------|------|---|------------------------|
| Category | Analytes Tested | | Result | Reference Range |
| | Escherichia spp. | Low | 8.67e4 | 3.7e6 - 3.8e9 org/g |
| | Enterobacter spp. | | 1.42e6 | 1.0e6 - 5.0e7 |
| | Morganella spp. | High | 1.01e4 | < 1.00e3 CFU/g |
| | Pseudomonas spp. | | 7.02e2 | < 1.00e4 CFU/g |
| | Pseudomonas aeruginosa | | <dl< td=""><td>< 5.00e2 CFU/g</td></dl<> | < 5.00e2 CFU/g |
| | Citrobacter spp. | | <dl< td=""><td>< 5.00e6</td></dl<> | < 5.00e6 |
| Inflammatory Dysbiosis/LPS | Citrobacter freundii | | <dl< td=""><td>< 5.00e5 CFU/g</td></dl<> | < 5.00e5 CFU/g |
| | Klebsiella spp. | High | 8.01e3 | < 5.00e3 |
| | Klebsiella pneumoniae | | 3.23e3 | < 5.00e4 CFU/g |
| | Proteus spp. | | <dl< td=""><td>< 5.00e4 CFU/g</td></dl<> | < 5.00e4 CFU/g |
| | Proteus mirabilis | | <dl< td=""><td>< 1.00e3 CFU/g</td></dl<> | < 1.00e3 CFU/g |
| | Fusobacterium spp. | | 1.00e5 | < 1.00e8 org/g |
| | Prevotella spp. | | 7.96e5 | < 1.00e8 org/g |

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Inflammatory Dysbiosis/LPS



Consumption of a whole food, anti-inflammatory diet/ elimination diet. Avoid excessive protein intake until more optimal digestive function is restored.

SPOTLIGHT Score Key:

= High Support

= Medium Support

= Low Support



SPOTLIGHT 4

KEY: < DL = Results below detection limit.

| Digestive Insufficiency | | | | |
|----------------------------|------------------------------|------|---|------------------------|
| Category | Analytes Tested | | Result | Reference Range |
| | Enterococcus spp. | | 1.97e8 | 1.9e5 - 2.0e8 org/g |
| | Lactobacillus spp. | | 2.83e6 | 8.6e5 - 6.2e8 org/g |
| | Akkermansia muciniphila | Low | <dl< td=""><td>1.0e1 - 8.2e6 org/g</td></dl<> | 1.0e1 - 8.2e6 org/g |
| | Bacteroidetes | Low | 5.65e11 | 8.6e11 - 3.3e12 |
| | Firmicutes | Low | 3.88e10 | 5.7e10 - 3.0e11 |
| | Bacillus spp. | High | 6.12e6 | < 1.76e6 |
| | Enterococcus faecalis | High | 3.96e4 | < 1.00e4 |
| Digestive Insufficiency | Enterococcus faecium | | 4.63e3 | < 1.00e4 |
| | Staphylococcus spp. | | 4.72e1 | < 1.00e4 CFU/g |
| | Staphylococcus aureus | | <dl< td=""><td>< 5.00e2</td></dl<> | < 5.00e2 |
| | Streptococcus spp. | | <dl< td=""><td>< 1.00e3 CFU/g</td></dl<> | < 1.00e3 CFU/g |
| | Methanobacteriaceae (family) | | 2.87e6 | < 3.38e8 org/g |
| | Fusobacterium spp. | | 1.00e5 | < 1.00e8 org/g |
| | Steatocrit | | <dl< td=""><td>< 15 %</td></dl<> | < 15 % |
| | Elastase-1 | | 690 | > 200 ug/g |



SPOTLIGHT 4

Patient: Anonymous Accession: 20231006-XXXX

Digestive Insufficiency

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Digestive Insufficiency



Lifestyle practices to support digestion include adequate chewing, lemon water, and apple cider vinegar with meals. Consume a diversity of plant-based fibers. Engage in sleep hygiene and stress-management practices. Dietary approaches may include low FODMAP, Specific Carbohydrate Diet (SCD), and Gluten-Free (GF).

SPOTLIGHT Score Key:

= High Support



= Medium Support = Low Support



SPOTLIGHT 5

KEY: < DL = Results below detection limit.

| Immune Response/Tolerance | | | | |
|---------------------------|------------------------|------|---|------------------------|
| Category | Analytes Tested | | Result | Reference Range |
| | Morganella spp. | High | 1.01e4 | < 1.00e3 CFU/g |
| | Pseudomonas spp. | | 7.02e2 | < 1.00e4 CFU/g |
| High | Pseudomonas aeruginosa | | <dl< td=""><td>< 5.00e2 CFU/g</td></dl<> | < 5.00e2 CFU/g |
| Histamine/ MAST Cell | Citrobacter freundii | | <dl< td=""><td>< 5.00e5 CFU/g</td></dl<> | < 5.00e5 CFU/g |
| Pattern | Klebsiella spp. | High | 8.01e3 | < 5.00e3 |
| | Klebsiella pneumoniae | | 3.23e3 | < 5.00e4 CFU/g |
| | Proteus spp. | | <dl< td=""><td>< 5.00e4 CFU/g</td></dl<> | < 5.00e4 CFU/g |
| | Lactobacillus spp. | | 2.83e6 | 8.6e5 - 6.2e8 org/g |
| | Pseudomonas aeruginosa | | <dl< td=""><td>< 5.00e2 CFU/g</td></dl<> | < 5.00e2 CFU/g |
| Food Intolerance or | Staphylococcus aureus | | <dl< td=""><td>< 5.00e2</td></dl<> | < 5.00e2 |
| Allergy Suspected | Proteus mirabilis | | <dl< td=""><td>< 1.00e3 CFU/g</td></dl<> | < 1.00e3 CFU/g |
| | Secretory IgA | | 763 | 510 - 2010 ug/g |
| | Anti-gliadin IgA | | 114 | < 175 U/L |

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Immune Response/Tolerance



Lifestyle practices to improve tolerance: consider low histamine diet, histamine degrading DAO enzyme supplementation with meals, and/or gluten free diet. Consider antibody or cellular response testing for food sensitivities or food allergies.

SPOTLIGHT Score Key:

= High Support

= Medium Support

= Low Support



SPOTLIGHT 6

KEY: < DL = Results below detection limit.

| Fungal Imbalance | | | | |
|---------------------|---------------------|--|---|-------------------|
| Category | Analytes Tested | | Result | Reference Range |
| Fungal Imbalance | Candida spp. | | <dl< td=""><td>< 5.00e3 org/g</td></dl<> | < 5.00e3 org/g |
| | Candida albicans | | <dl< td=""><td>< 5.00e2 org/g</td></dl<> | < 5.00e2 org/g |
| | Geotrichum spp. | | <dl< td=""><td>< 3.00e2</td></dl<> | < 3.00e2 |
| | Microsporidium spp. | | <dl< td=""><td>< 5.00e3</td></dl<> | < 5.00e3 |
| | Rhodotorula spp. | | <dl< td=""><td>< 1.00e3</td></dl<> | < 1.00e3 |

SPOTLIGHT Score

General Support Recommendations

Lifestyle and Supplement Tools for Fungal Imbalance



Lifestyle practices to support fungal balance include limited refined sugars and processed foods, consider a carbohydrate-controlled diet, and avoid alcohol. Dietary approaches may include the Candida Diet or Specific Carbohydrate Diet (SCD).

SPOTLIGHT Score Key:



= High Support = Medium Support

= Low Support



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Summary and Recommendations:

Below are your supplement recommendations, as determined by the algorithmic assessment of your test results. Your healthcare practitioner should review all recommendations and adjust them as needed, based on your age, personal health history, pregnancy or breastfeeding status, potential drug or nutrient interactions, contraindications, current supplement use, diet, lifestyle, and other relevant factors.

| | Designs for Health Product Recommendations |
|----------------------|---|
| Name | How to Take |
| Dysbiosis Protocol | See the last page for protocol instructions |
| Gut Barrier Protocol | See the last page for protocol instructions |
| HistaGest-DAO ™ | 1-2 caps with each meal |
| Histamine Free Diet | See the last page for diet suggestions |
| PaleoFiber ® RS | 1 scoop per day |
| PhytoBiome ™ | 3 caps per day |

This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

The Designs for Health Spotlight tests are not diagnostic and are not eligible for coverage under Medicare, Medicaid, or medical insurance.

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Your SPOTLIGHT Test Scores



= High Support



= Medium Support



= Low Support



Microbiome Keystone Diversity



Gut Barrier Integrity



Inflammatory Dysbiosis/LPS



Digestive Insufficiency



Immune Response/ Tolerance



Fungal Imbalance

| Designs for Health Product Recommendations | | |
|--|---|--|
| Name | How to Take | |
| Dysbiosis Protocol | See the last page for protocol instructions | |
| Gut Barrier Protocol | See the last page for protocol instructions | |
| HistaGest-DAO ™ | 1-2 caps with each meal | |
| Histamine Free Diet | See the last page for diet suggestions | |
| PaleoFiber ® RS | 1 scoop per day | |
| PhytoBiome ™ | 3 caps per day | |

Practitioner Recommendations:

This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease. The Designs for Health Spotlight tests are not diagnostic and

are not eligible for coverage under Medicare, Medicaid, or medical insurance.

The opinions and supplement recommendations in this report have been added by Designs for Health, and do not necessarily reflect the position of Diagnostic Solutions Laboratory. All results should be evaluated by a licensed healthcare professional.



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If you have any of the following in your Designs for Health Product Recommendations:

See below for the description, dosing, and/or dietary protocol information and location

DFH Dysbiosis Protocol:

- GI-Microb-X™: 2 caps three times daily away from food for 3-weeks
- Oil of Oregano: 2 softgels three times daily away from food for 3-weeks
- ProbioMed[™] 50: 1 cap twice daily with food for 6-weeks, minimum
- GI Revive™ Powder: 1 scoop per day for 6-weeks, minimum
- IgGI Shield™: 1 scoop per day for 6-weeks minimum

DFH Gut Barrier Protocol:

- GI Revive™ Powder: 1 scoop per day
- Tri-Butyrin Supreme™: 1 cap per day
- ProbioMed™ 50: 1-2 caps per day

DFH Dietary Protocols and Outlines:

All dietary outlines/protocols for "FODMAPS, Anti-Histamine, AIP, Gluten Free, Specific Carbohydrate, Anti-Candida Diets" can be found in **Teachable Platform** under course titled " **Diet Outlines**."

In your web browser, navigate to: https://spotlight.designsforhealth.com/

Numerical Spotlight Indicator:

While we've transitioned away from a numerical scale for our results, we understand the value some find in having a quantitative indicator.

To accommodate this preference, please consult the graphic below which illustrates how our color-coded results align with a numeric scale for easy reference.

- 0-2 Low Support Needed Optimal Health
- 3-6 Medium Support Needed Progression Towards Compromised Health
- 7-10 High Support Needed Compromised Health

