



Company Philosophy

Our philosophy is rooted in the compassion of a Moravian Brethren priest who dedicated decades of service in Africa. Inspired by this legacy, our mission is to reduce suffering caused by microbiome dysbiosis and its cascading medical effects.

We provide our services free of charge to individuals. Using whatever test results they can obtain, we analyze their data and offer evidence-based suggestions. Currently, our system supports several dozen tests. Many of those we help live on disability income or social assistance, the *modern poor*, disadvantaged both in gut health and financial resources.

For microbiome testing companies, we offer services that enhance the guidance and recommendations they provide to their customers. The base rate is 2% of the retail price per processed test (per API call). However, there is no charge if companies allow individuals to transfer their data to our site, where it becomes part of our citizen-science initiative and shared database. Each suggestion we generate includes two supporting references.

Core of Services

To provide the most accurate suggestions, we prefer datasets with sufficient detail. The lack of standardization in microbiome testing makes cross-platform interpretation difficult, so we rely on data directly supplied in a structured format such as JSON, XML, or database connections..

Property	Datatype	
Taxon	Int	NCBI Taxon Number
Percentage in sample	Float	Percentage of the sample
Percentile	Float	This is based on actual percentile from a healthy reference set
Reference Range: High Percentage	Float	Your internal threshold for it being high
Reference Range: Low Percentage	Float	Your internal threshold for it being low
Reference Range: High Percentile	Float	Your internal threshold for it being high
Reference Range: Low Percentile	Float	Your internal threshold for it being low

Your Data and Our Analysis

If a laboratory provides at least 1,000 samples from healthy individuals, we can process this dataset using proprietary algorithms to generate:

- Reference Ranges Determined by Kaltoft-Moldrup Algorithms. We have found it is superior to other common approaches such as mean and standard deviation, box-plot-whiskers.
- R2-associations (see <https://r2.microbiomeprescription.com/> for an illustration).
 - This is particularly effective in suggesting which probiotics are most effective for an individual.
 - This approach bypasses very sparse data on what probiotics influence.

It is your choice to use them, modify them, or ignore them. The cost per data set is \$5000. Since age and gender impacts the microbiome, some firms may wish to do multiple sets of healthy individuals stratified by these and other factors.

Customization of Suggestions

Some suggestions may be inappropriate for your market or for business model.

- Probiotic Mutaflor (E.Coli Nissle 1917) may not be for sale.
- You want to limit the probiotics and supplements to what you sell or via affiliate partnerships.

Customization is free and achieved via a simple API call to mark suggestions as available or unavailable

Cross Validated Suggestions with References

For select medical conditions, we provide *cross-validated* recommendations. Our system identifies interventions likely to improve microbiome imbalance and verifies them against existing clinical studies. Links to all supporting publications are included, often drawing from thousands of references. It is intended primarily for clinicians who require evidence-based, literature-backed guidance.

For an example see <https://citizenscience.microbiomeprescription.com/DepressionExample.html>

This is an add-on adds a simple 1% of the retail price per test for each collection of conditions processed (i.e. per call). The list of references may often exceed 3000 studies.

On Premise

Due to a variety of privacy laws and regulations, we understand that processing may be required to be done in specific jurisdictions and often with complete isolation from the internet. Our database is updated weekly from new studies published and thus a maintenance contract is needed. Our database is proprietary and requires appropriate agreements to be in place.

Our system is based on SQL Server and uses .Net. We can support the above environmental constraints. This is done on a time and expense basis with a base rate of \$200/hr. or portion thereof.

Our usual suggestion to avoid this need is to send the sample data to our internet-based servers with an anonymous identifier so no personal information is exposed.

Additional Analysis Services

On occasion customers have requested us to do independent reviews of data from studies. We have developed skills in the art of microbiome behaviors and often obtain statistically significant results by walking less common statistical tests and methods. Our classic demonstration is our ability to obtain the high R2 associations show on <https://r2.microbiomeprescription.com/> by applying the appropriate monotonic increasing transformation on the data.

Base rate per study assumes 40 hours of analysis at \$200/hr, or \$8,000/study; subject to modification based on how needs evolve.

Accuracy and Commitment

We do not claim perfect accuracy, as microbiome science often involves varying interpretations of the same data. However, third-party checks have found our dataset to be over 99% accurate or reasonable. We promptly correct any errors identified.

Our work is built on *best reasonable efforts* in a field that lacks standardization and often has incomplete data. When explicit evidence is unavailable, we rely on scientifically informed inferences to fill gaps.

Why did we form and how did we develop our methods

The company arose from a need to address family health issues that lacked any effective treatment from conventional medical practices. The founder has advanced degrees in statistics and operations research and fundamental knowledge of biology. Over time, thousands of samples have been uploaded / donated to the project. These samples are often annotated with symptoms and diagnosis. This data has allowed us to develop analysis techniques against real data. This includes accurate prediction of symptoms and the ability to verify if the suggestions are working by the object symptom scores decreasing with subjective reports of improvement.

From a Recent Review

Example of Predictions with check marks being user agreements. Predictions are done on samples from the same labs.

1.	<input checked="" type="checkbox"/> General: Fatigue	Factor:80.87 %
2.	<input checked="" type="checkbox"/> Neurocognitive: Brain Fog	Factor:80.83 %
3.	<input checked="" type="checkbox"/> Sleep: Unrefreshed sleep	Factor:80.5 %
4.	<input checked="" type="checkbox"/> Neurological-Sleep: Inability for deep (delta) sleep	Factor:80.36 %
5.	<input checked="" type="checkbox"/> Age: 30-40	Factor:80.29 %
6.	<input checked="" type="checkbox"/> Neurological: emotional overload	Factor:80.29 %
7.	<input checked="" type="checkbox"/> DePaul University Fatigue Questionnaire : Easily irritated	Factor:80.23 %
8.	<input checked="" type="checkbox"/> Immune Manifestations: medication sensitivities.	Factor:79.96 %
9.	<input checked="" type="checkbox"/> Comorbid: Histamine or Mast Cell issues	Factor:79.25 %
10.	<input checked="" type="checkbox"/> Neuroendocrine: Lost or gained weight without trying	Factor:78.98 %

The subsequent report compared to the original.

Symptom	New Sample	Change	Old Sample
Sleep: Unrefreshed sleep	76.1		80.5
General: Fatigue	76		80.9
Neurocognitive: Brain Fog	76		80.8
Comorbid: Histamine or Mast Cell issues	73.5		79.3
DePaul University Fatigue Questionnaire : Easily irritated	70.9		80.2
Neurological-Sleep: Inability for deep (delta) sleep	69.5		80.4
Neurological: emotional overload	68.5		80.3
Neuroendocrine: Lost or gained weight without trying	66.8		79
Immune Manifestations: medication sensitivities.	61.4		80
Better	9	Worse	0

Microbiome Prescription Overview of Services

We are privately owned with no venture capital

Our primary goal is to do good and not make money.