



Aperiomics **Xplore-MicroBiome**SM

Access the most scientifically advanced
bioinformatics available.

**Identifying every known bacteria,
virus, fungus and parasite**

aperiomics.com



Aperiomics
Xplore-MicroBiomeSM
can characterize
**every known
microorganism
in any sample.**

EMPOWER YOUR TEAM with our
industry-leading Next Generation
Sequencing (NGS) bioinformatic platform.

The Aperionomics Difference

Deep shotgun metagenomic sequencing allows us to create a genetic fingerprint of every known microorganism in a given sample.

We then run the sequence data through Xplore-IDSM—our industry-leading metagenomic algorithm—and against Xplore-DBSM, one of the largest, most complete microbial databases, which is continually updated with new microbes.

Other testing companies identify just a few microorganisms at a time. But at Aperionomics **we can test for more than 37,000 microorganisms at once, with 97% sensitivity and 99.99% specificity.**

Aperionomics partners with organizations and researcher institutions on clinical trials, genetic monitoring, biosurveillance, pathogen identification, microbiome characterization, quality monitoring programs, and more.

All the Tools You Need

Take advantage of all our services or just select those you need. As part of your team, we can assist in study design and deliver customized data/reporting and journal-ready graphics. We also offer discounts for research authorship collaboration.

**Collection Kits | Extraction and Library Preparation
Metagenomic Sequencing | Data Analysis
Microbe Identification**



MORE DATA, MORE VALUE

We are experts at analyzing complex datasets that lead to **meaningful results.**

Frequently Used Applications

HUMAN HEALTH



Fecal Microbiota Transplant (FMT) Donor and Recipient Before/After Analysis

Targeted Therapeutic Outcome Validation

Microbiome Characterization

Clinical Trial Research

Pathogen Detection

ENVIRONMENTAL



Environmental Microbiome Analysis

Water Monitoring

Biosurveillance

AGRICULTURE



Crop Pathogen Detection and Microbiome Analysis

Animal Health and Wellness

Soil and Environmental Analysis

Veterinary Testing

Food Safety

Don't Sacrifice Data By Using Older Methods

A common form of next-generation sequencing, 16s, examines **only ~0.001% of the DNA in a sample.**

Our deep shotgun metagenomic sequencing allows Xplore-MicroBiomeSM to examine **up to 100% of the DNA in a sample,** providing 100,000 times more information.

	Next-Generation Sequencing	PCR and 16s Sequencing
Identifies the following all at once:		
bacteria	✓	✗
viruses	✓	✗
fungi	✓	✗
parasites	✓	✗
Genome examined	Up to 100%	~0.001%
Microbes identified to species level	37,000+	–
Differentiates species	✓	✗
Cost per microbe tested	\$0.03–0.05	Up to \$300

“Shotgun next generation sequencing metagenomics allows much deeper characterization of the microbiome complexity, allowing identification of a larger number of species for each sample, compared to 16s rDNA amplicon sequencing.”

Laudadio, et al., 2018

About Aperiomics

Aperiomics was founded on the belief that we can shift the paradigm of microbial identification, empowering providers, researchers, and institutions with the tools they need to deliver superior outcomes.

We are a group of experienced clinicians and researchers who are passionate about leveraging the power of technology to advance human health and quality of life.

OUR EXPERT LEADERSHIP TEAM

Crystal R. Icenhour, PhD

CEO and Co-Founder

Dr. Icenhour has a PhD in Pathobiology and Molecular Medicine and is an expert in infectious disease. She holds two patents, and is a respected and prolific researcher, author, and presenter.

C. Alexander Valencia, PhD

Chief Clinical Officer

Dr. Valencia is a clinical molecular geneticist and an expert in next-generation sequencing technologies. He is widely published in peer-reviewed journals and has made significant contributions to the field.

Alvin (Yuan) Chen, PhD

CTO and Co-Founder

Dr. Chen has a PhD in Genetics and Bioinformatics and is an expert in genomics. He developed Aperiomics Xplore-MicroBiomeSM.

Learn more about how we can enhance
your research at aperiomics.com



Learn more about Aperionomics Xplore-MicroBiomeSM today.

If you are interested in collaborating, visit
aperionomics.com/contact or call **703.229.0406**.

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PRIVACY

Aperionomics is HIPAA compliant and takes great measures to ensure that your personal information and genetic material remain private and secure. Your individual information will never be sold, rented or leased to any third party without your express, written consent.

Quantitative Assessment of Shotgun Metagenomics and 16S rDNA Amplicon Sequencing in the Study of Human Gut Microbiome. Laudadio I, Fulci V, Palone F, Stronati L, Cucchiara S, Carissimi C. OMICS. 2018 Apr;22(4):248-254.

