APERIOMICS™

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Aperiomics Xplore-PATHO℠

Not All Next-Generation Sequencing Is Created Equal

Supported by the National Science Foundation, Aperiomics uses a technology called **deep shotgun metagenomic sequencing**, which creates a genetic fingerprint of every known microorganism in clinical samples. Other testing companies typically use older sequencing techniques that identify just a few pathogens at a time. But **we can test for more than 37,000 microorganisms at once: every bacterium, fungus, parasite and virus known to science.**

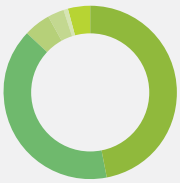
DEEP SHOTGUN METAGENOMIC SEQUENCING vs. 16s SEQUENCING

Our next-generation sequencing captures far more information—and identifies many more pathogens, for greater accuracy. We ran identical urine samples through both processes to demonstrate the difference.

SAMPLE 1

Aperiomics: **Xplore-PATHO℠**

- 47% Lactobacillus gasseri
- 40% Streptococcus sp.
- 5% Streptococcus vestibularis
- ▶ **3% Streptococcus agalactiae**
- 1% Lactobacillus phage phiadh



Provider M: **16s sequencing**

- ▶ **96% Streptococcus agalactiae**
- 3% Candida albicans

SAMPLE 2

Aperiomics: **Xplore-PATHO℠**

- 14% Pseudomonas fulva
- 11% Actinobaculum massiliense
- 8% Pantoea septica
- 7% Staphylococcus simulans
- 5% Alloscardovia omnicolens
- 4% Finegoldia magna
- 2% Escherichia vulneris

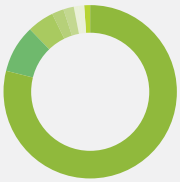
Provider M: **16s sequencing**

- 99.9% Escherichia coli
- 0.01% Prevotela bivia

SAMPLE 3

Aperiomics: **Xplore-PATHO℠**

- 79% Gardnerella vaginalis
- ▶ **9% Escherichia coli**
- 5% Lactobacillus gasseri
- 2% Shigella dysenteriae
- ▶ **2% Lactobacillus delbrueckii**
- 1% Shigella sonnei
- 1% Escherichia sp.



Provider M: **16s sequencing**

- ▶ **93% Escherichia coli**
- ▶ **4% Lactobacillus delbrueckii**

"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."[1]

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

[1] 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.