

Company Profile

URL: www.shorelinebiome.com

Founded: 2015

Location: Farmington, CT

Management Team

Thomas Jarvie, Ph.D. – CEO & Co-founder; Product developer/manager for DNA Sequencing assay and software development at 454/Roche

Mark Driscoll, Ph.D. – CSO & Co-founder; Managed the development of multiple DNA Sequencing systems at 454/Roche

Key Milestones

May 2016 \$500k CT Bioscience Innovation Fund

March 2017 \$100k UConn Innovation Fund

April 2017 \$225k NIH SBIR Grant

May 2018 Manufacturing Ready for Kits for Sales of \$1M/month

Capital Sought

\$4M Series A

Use of Proceeds

25% Manufacturing Scale-up

25% Sales and Marketing

15% Customer Support

35% Product Development for New Markets

Strategic Partners

The Jackson Lab for Genomic Medicine

Yale University School of Medicine

Intellectual Property

3 patents filed

2 provisional patents filed

Contact

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Problem: The human microbiome, the collection of beneficial microbes that live in and on humans, plays a key role in maintaining health by regulating the immune system, helping digest food, and defending against pathogens. Tracking microbial populations in healthy and diseased microbiomes is crucial to advancing our understanding of infectious disease, as well as chronic ailments including allergy, obesity, immune system dysregulation, and mental health. Current microbiome assays are costly, time consuming, difficult to perform, and provide low resolution, nonspecific identification of the organisms present in a microbiome. Additionally, many organisms in the microbiome are difficult to lyse and therefore underrepresented or absent in current microbiome analysis.

Solution: Shoreline Biome has created discovery tools that are advancing the leading edge of understanding how the human microbiome functions across the entire landscape of human health and disease. The initial products from Shoreline Biome, developed in collaboration with George Weinstock at the Jackson Lab for Genomic Medicine, are the first DNA sequencing assays to comprehensively, rapidly, and inexpensively identify all members of the microbiome down to the subspecies or strain level. These results are achieved through our superior cell breaking technology and rational product design. Our companion analysis software enables straightforward identification and quantitation of all of the bacteria in microbiome samples.

Competitors: All competition, commercially available kits and home brew, is up to 40-fold more labor intensive than Shoreline Biome and provides incomplete identification of the microbes in the microbiome.

Development Status: Microbiome Assay Kits and software for the Illumina and PacBio sequencing platforms are currently available in final, pre-market manufacturing validation testing at multiple academic, translational medicine, clinical, and life sciences companies. Development partners include NIH SBIR collaborators Dr. George Weinstock of The Jackson Lab for Genomic Medicine and Dr. David Hafler, Chief of Neurology at Yale School of Medicine. A quality manufacturing system is in place at Shoreline Biome. Full commercial launch is anticipated in Q3, 2018.

Market: The kits will be sold as Research Use Only with a target market of academia, pharma, and biotech. As translational medicine applications are realized, we foresee a near-term future use in CLIA labs with a pathway to regulated diagnostics and have implemented a quality and manufacturing system to accommodate this market potential.

Future Growth Opportunity: The rapidly maturing microbiome market presents many opportunities for growth in research, diagnostics, and therapeutics development. The superior technology and tools from Shoreline Biome, including a prototype instrument for the rapid and inexpensive preparation of high-quality DNA from spores, opens potential markets in the analysis of pathogenic spores for infection control in the healthcare setting and for biodefense.