

Microba Life Sciences study shows Microba Community Profiler outperforms competition

Leaders in precision gut microbiome science, Microba Life Sciences have demonstrated how their proprietary Microba Community Profiler compares to other metagenomic profilers, with the study published in *Frontiers in Microbiology*.

A study undertaken by key scientific and bioinformatic experts at the company demonstrated that the Microba Community Profiler (MCP) outperforms existing profilers for accurate and comprehensive characterisation of the human gut microbiome.

In recent years, the gut microbiome has been linked to diseases such as diabetes, gastrointestinal disorders and even cancer, making the microbiome an emerging opportunity to improve the management, diagnosis and treatment of health conditions. However, to realise these opportunities, accurate measurement of the microbiome is critical.

Microba's Chief Scientific Officer Associate Professor Lutz Krause explained that characterising the complex communities living in the human gut was not an easy task and these species required accurate measurement before opportunities could be explored.

"The sequencing method that we use at Microba – metagenomics – has revolutionised the characterisation of complex microbial communities from environments such as the human gut," he said.

"Leveraging the expertise of our team, which includes pioneers of many of the application and analysis techniques used in metagenomics, we've developed a microbial community profiler that appreciably improves upon existing profilers."

The company's profiler outperformed the other evaluated profilers, demonstrating the highest combined precision and recall, substantially fewer false positive predictions and accurate relative abundance estimates.

Additionally, when comparing the performance of the best performing classifiers on metagenomic data from 33 U.S. faecal samples, the Microba profiler assigned at least 25% more DNA reads than the other classifiers.

Lead author and Senior Bioinformatician, Dr Donovan Parks, said that gut microbiome research provides an exciting opportunity to advance understanding of human health, however high quality, reliable tools for characterising the gut microbiome were needed.

"With this study, we show the Microba profiler is the best performing metagenomic classifier for analysis of the human gut microbiome," he said. This profiler can ultimately be used to identify unique signatures that could diagnose disease or predict treatment response for a range of health conditions."

The study was published in *Frontiers in Microbiology* in April and can be accessed here:

<https://www.frontiersin.org/articles/10.3389/fmicb.2021.643682/full>

About Microba Life Sciences

Microba Life Sciences is a precision microbiome science company empowering life-changing advancements in human health. With leading analysis capabilities to comprehensively measure the microbiome, Microba is unlocking new opportunities to improve health by harnessing the gut microbiome. Combining human data with leading informatic approaches, Microba's discoveries are powering important advancements in medicine. Through global partnerships, Microba is advancing the understanding and application of microbiome science into practical healthcare solutions.

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