

Microba partners with UQ to tackle Parkinson's Disease by mining the gut microbiome

Brisbane-based biotech Microba have partnered with researchers from The University of Queensland's (UQ) Faculty of Medicine to develop new treatments and biomarkers for Parkinson's disease by investigating changes in the gut bacteria of those with the disease.

Parkinson's disease is the second-most prevalent neurodegenerative disease worldwide, with more than 10 million suffering from the disease at varying degrees. The disease is characterised by the loss of brain cells that produce dopamine. There are currently no early diagnostics, and treatments only assist to manage some symptoms. Research is increasingly pointing towards the gut microbiome as playing a role in the development of Parkinson's, with evidence showing that changes in gut function often come many years before the onset of symptoms such as tremors.

Microba's expertise in analysing the gut microbiome with leading sequencing technology called metagenomics will be used by UQ researchers to study changes in the microbiome with the aim of identifying biomarkers for earlier diagnosis and developing new therapeutic interventions. The partnership will involve a combination of human studies in Parkinson's disease patients and work in animal models.

The partnership's first clinical trial, funded by the Queensland Government's Advance Queensland Program, is set to commence in 2021 at multiple sites in Queensland. It will determine if a new treatment can restore beneficial gut microbiome species and improve symptoms such as constipation in Parkinson's disease patients.

Microba Co-founder Professor Gene Tyson said this project would take an important step towards advancing research on the gut microbiome in neurodegenerative diseases.

"We believe that this partnership will uncover disease-related signals in the microbiome that have not been seen before. We are excited to apply Microba's leading measurement and analysis tools to enable discovery in this debilitating disease"

Research Lead and Group Leader in Clinical Neuroscience at the Translational Neuroscience Research Group, Dr Richard Gordon, said that the team were excited to work with Microba for this important research program.

"The microbiome represents a new frontier in our understanding of Parkinson's. With Microba's expertise we hope to gain unprecedented insights into the functional role of the microbiome in the disease process to guide our quest for new treatments and biomarkers for early diagnosis," he said.

Microba continues to work on developing diagnostics and therapeutics derived from the gut microbiome in the areas of Inflammatory Bowel Disease (IBD) and Immuno-Oncology.

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