GenBio's Chief Science Officer Professor Lindsay Brown Investigates the Microbiome-Gut-Brain Axis

"All disease begins in the gut."
Hippocrates

GenBio Inc.

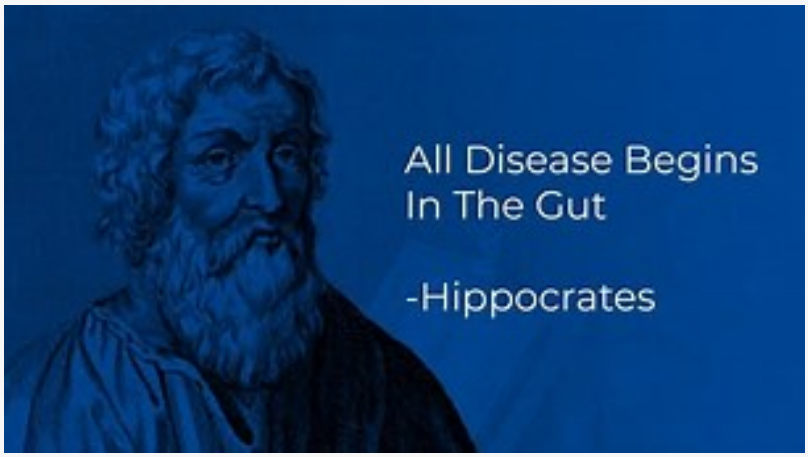
ALISO VIEJO, CA, UNITED STATES, April 30, 2025 /EINPresswire.com/ -- GenBio's Chief Scientific Officer is internationally recognized for investigating the health impact of chronic diseases of Australian functional foods, such as the Queen Garnet and Davidson's plum. Professor Lindsay Brown is an Adjunct Professor at the School of Pharmacy and Medical Sciences, Griffith University, Australia. He holds a BPharm (Hons) (1974) from the University of Queensland and a PhD (1981) from the University of Sydney. He was a Professor of Biomedical Sciences and headed the Functional Foods Research Group at the University of Southern Queensland. His research focus has been on functional foods and their roles, mainly using rat models of chronic human diseases such as metabolic syndrome, IBD, and chronic renal failure.
To Prof. Brown's credit, he has 273 publications and 15,960 Citations.

> "Research is to see what everybody else has seen, and think what nobody has thought." ”
>
> *Albert Szent-Györgyi*

The company has reviewed recent evidence that anthocyanins, the purple pigments in fruits such as plums and berries, could decrease the impact of chronic diseases throughout the body, including the heart and brain. Australian tropical fruits are an underutilized resource of compounds that may improve health. Most medicines are taken orally, absorbed from the gastrointestinal tract into the bloodstream, and then travel to all organs, including the brain. They then act on proteins in the brain to alter the functions of selected cells.

Three major current areas of medical research are firstly, the changes produced on the bacteria resident in the intestine, known as the gut microbiome, the changes in the bidirectional

communication between the gut and the brain using the microbiome-gut-brain axis, and the molecular mechanisms that may be selectively activated or inhibited in the brain to produce or moderate disease.



The human gut microbiome is a complex ecosystem providing essential compounds for the body's function. An estimate is that there are approximately 3.8 x 1013 bacteria in the human gut (38 trillion). The number of bacterial genes is more than 100-fold greater than human genes in the body. The gut microbiome is essential for host defence, nutrition, and immune system development. Changes in the microbiome have been linked to the development of brain diseases by mechanisms including the regulation of neurotransmitters such as dopamine and serotonin, as well as increased inflammation and cell loss in the brain.

Diseases of the brain can be broadly divided into neuropsychiatric conditions, such as schizophrenia, or neurodegenerative conditions, such as Alzheimer's Disease. The gut microbiome and the brain communicate through bacterial products and the nervous, cardiovascular, and immune systems. This communication can change many factors, including diet, stress, and disease. Mechanisms by which anthocyanins could improve brain function include decreased apoptosis, reduced calcium-induced neurotoxicity, reduced oxidant production, reduced cellular stress, and reduced nerve inflammation.

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