

Bowel condition could hold key to developing health super foods

October 13 2015, by Kim Thomas

Research has begun to understand how certain foods affect functional gut disorders such as irritable bowel syndrome (IBS) as part of a multi-million dollar Government initiative to develop premium foods and drink that improve health and wellbeing.

Understanding how the bowel behaves in illnesses such as IBS will allow leading New Zealand scientists and gastroenterologists to figure out how to improve gut [health](#) in healthy and unhealthy individuals.

Today the High-Value Nutrition National Science Challenge announces \$10.9 million of government funding invested in research. The aim of this challenge is to drive innovation in nutrition research, food science and health; and reposition New Zealand as a world leader in the rapidly increasing and lucrative food-for-health market.

One of the priority research areas of the High-Value Nutrition project is improving gastroenterological health and immunity.

University of Otago, Christchurch, Professor and gastroenterologist Richard Garry is part of the Gastrointestinal Health team.

Professor Garry says the key to understanding the gut in health, is to understand what happens to it in disease. This is especially true when it comes to making a regulatory food [health claims](#) where the study of IBS is needed to define how foods may benefit the gut, he says.

"Despite rapid advances, science has not been able to define what constitutes a healthy gut. The human gut is one of the most complex ecosystems in existence. There are more microbial cells in the human gut than human cells in the body. Each individual has their own ecosystem made of their unique combinations of hundreds of different species. These microbes interact with the body but are also influenced by diet. So diet is a key way that we can influence gut health."

Professor Gearry says if New Zealand producers develop innovative gut foods they need to be able to back their claims with hard science to stand up to the requirements of international regulatory bodies.

"High level dietary health claims need to have clinical studies behind them showing that the novel foods are effective. Researchers also need to be able to show how the foods may have their effect through mechanistic studies of the foods in the context of the [human gut](#)."

Irritable bowel syndrome is the best human condition to study in order to make health claims, he says.

Professor Gearry and the Gastrointestinal Health research team will now recruit 600 patients with and without IBS who will already be undergoing colonoscopy to investigate their symptoms. Study participants will be asked to complete a wide range of questionnaires in addition to giving biological samples and completing diet diaries. This will allow researchers to identify similarities and differences between the groups that can be exploited to develop innovative food solutions.

"We know that if we can achieve this goal that these foods will be sold at a premium around the world."

The Christchurch IBS COMFORT (Cohort to investigate Mechanisms For gut Relief and improved Transit) study is a key element in the

Gastrointestinal Health research program that brings together a multidisciplinary groups of scientists from a range of institutions. Industry players are also consulted throughout the process, Professor Geary says.

"As researchers, we see this as an enormous responsibility to ensure the very best result for [gut](#) health and the New Zealand [food](#) and beverage industry."

The Gastrointestinal Health project team includes scientists from AgResearch, the Malaghan Institute of Medical Research and Plant & Food Research.

The Science Director for the High-Value Nutrition National Science Challenge, Professor David Cameron-Smith, says by "scientifically validating a health benefit, the premium and value to the consumer becomes an important point of difference. It is the new global trend."

A particular area of focus was Asia. "Asia is a region which is becoming wealthier, but not healthier," Professor Cameron-Smith says.

Provided by University of Otago

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