

Scientists identify bacteria likely to cause bowel cancer

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New Zealand scientists have identified a toxic bacteria they believe may cause bowel cancer and could lead to a life-saving vaccine or early detection test for the too-often deadly disease.

The University of Otago, Christchurch, researchers found a toxic form of a bacteria called *Bacteroides fragilis* in the gut of almost 80 per cent of people with a pre-cancerous lesion – a precursor to the [disease](#).

Bacteroides fragilis is a common bacteria in the gut, and for the most part, helps with digestion and the general health of the colon. However in some people the bacteria produces a toxin that disrupts the cells that line the gut and starts the process of [cancer](#) in the bowel.

More than 1,300 New Zealanders die of [bowel cancer](#) every year. The disease is becoming increasingly common in people under the age of 50, which could be due to changes in our diet. Diet has a direct influence on our gut health, and the microorganisms living there.

In a world-first, the researchers tracked the progress of 150 people who had undergone a colonoscopy. They genetically analysed the DNA of samples of bowel taken during the colonoscopies to see if *Bacteroides fragilis* was present. Between 12 and 15 years after their initial colonoscopy, 79 per cent of patients with the toxic *Bacteroides fragilis* in their gut had developed low grade dysplasia, which is a type of pre-cancer.

Professor Frank Frizelle, head of the University of Otago, Christchurch, research team and a [bowel](#) cancer surgeon describes the study findings as a 'game-changer'.

"It gives us a clue as to what is actually driving the cancer, and in doing so, it gives us a possible means of being able to manage it."

With further time and money, the discovery could be used to screen for people with the bacteria, and it could be used to develop a lifesaving vaccine.

"The earlier you can catch a disease, the better the prognosis. We want study this [bacteria](#) and its impact further with a view to using it as a way to identify people who are at the highest risk of developing the disease, before it takes hold. As a surgeon you can treat one person at a time, if we can prevent the cancer from beginning or treating people as early as possible, that's the goal."

Provided by University of Otago

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