Developing a Probiotic for the Prevention and Treatment of Pouchitis.

This project is based on the development of a probiotic for the treatment of a clinical condition known as Pouchitis. Pouchitis is nonspecific idiopathic inflammation of the ileal pouch-anal anastomosis (IPAA). IPAA’s are constructed for people who have had their large intestine surgically removed usually for ulcerative colitis.

Pouchitis occurs in up to 50% of people who undergo an IPAA surgery for ulcerative colitis. About 10-20% per cent of these people develop chronic Pouchitis (inflammation). It results in symptoms such as bloody diarrhoea, the urgent need to pass stool, incontinence and pain or discomfort while passing stool. The current treatment for Pouchitis is limited to long-term continuous antibiotic therapy which combats the underlying bacterial infection. The Pouchitis project is a clinically led opportunity that is seeking to provide a solution to a clearly defined clinical condition.

Researchers at University of Otago have identified a novel strain of ‘helpful’ bacteria that reside in the pouch of otherwise healthy patients. Initial studies have suggested that by colonising the compromised pouch with these bacteria, a reversion to normal pouch health may occur. As such this novel treatment could be used prophylactically to reduce the incidence of Pouchitis in patients with an IPAA as well as treating patients with existing Pouchitis.

We aim to produce the first probiotic that is a single species of a bacterium believed to reside in healthy pouches. This bacterium will be delivered in sufficient quantities in people with Pouchitis so that reversion to normal healthy pouch may occur.

Proof of concept has been demonstrated that the bacterium can be grown, scaled up and freeze dried to meet our project objectives. Technical challenges were encountered around large scale fermentation, and freeze-drying aspects of our probiotic manufacture that have been overcome and our desired probiotic bacterium preparation has been achieved.

The next step is a preliminary clinical ‘pilot’ study in humans which is currently underway to test the probiotic on 20 people to evaluate its safety, determine a desirable formulation and dosage of bacteria, and patient acceptability.

For Further Information Contact:

Dr Tracey Smith  
Commercialisation Manager  
Otago Innovation Limited  

tracey.smith@otagoinnovation.com