A treatment for Crohn's Disease

A targeted treatment for the recurrence of Crohn’s Disease

The opportunity
Crohn's disease is an inflammatory bowel disease (IBD) that causes inflammation in the lining of the digestive tract. This inflammation causes abdominal pain, severe diarrhea, fatigue, weight loss and can lead to life-threatening complications such as intestinal blockages, ulcers in the intestine, and malabsorption of nutrients. The prevalence of Crohn’s in the US is 199 cases per 100,000 persons.1

There are many treatment options available to manage Crohn’s disease, however, even with these options, approximately 50% of Crohn’s disease patients undergo an intestinal resection within 10 years of diagnosis and after five years after initial resection surgery, approximately 50% of patients will be symptomatic again.

The total economic burden of CD in the USA and Europe is estimated at annual total costs of €30 billion2. Accordingly, there remains a need for more effective methods of treatment for Crohn’s disease.

Along with collaborators, researchers at MCRI have identified a species-specific change to the microbiome that provides an opportunity to better screen for relapse of disease after surgery and identifies a more targeted and effective treatment strategy.

The technology
Researchers have identified that the presence of the Proteus genera, even in low abundance is strongly associated with an increase in disease recurrence after surgical resection. Importantly:

- The presence of Proteus was not found in healthy or surgical controls; and
- When detected at 6 months post –operatively Proteus was associated with a 13-fold increase in the risk of disease recurrence.

Applications
The current data supports the development of a targeted treatment against the Proteus phylum, which will provide a more efficacious treatment by treating the causative microbial agent for relapse after surgical resection in Crohn’s patients.

Other applications could include the development of a screening test for relapse of Crohn’s after resection.

Opportunity for partnership
The Murdoch Children’s Research Institute is seeking a partner to develop a targeted treatment against the Proteus phylum, for use in Crohn’s disease.

Intellectual Property
This technology is the subject of an International (PCT) Patent Application No. PCT/AU2016/050512 in the name of Murdoch Children’s Research Institute and St Vincent’s Hospital Melbourne. The application relates to methods of diagnosing and treating Crohn’s disease.

Key publications

Contact:
Dr Joanne Boag
Head of IP & Licensing – Biotech & Medtech
P +613 8341 6445
joanne.boag@mcri.edu.au

Lishia Singh
Business Development Officer – Biotech & Medtech
P +613 8341 6459
lishia.singh@mcri.edu.au

---
