Rapid Inflammatory Bowel Disease (IBD) Diagnostic

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Medical technology and devices

> TRL 3-4
> Pre-clinical

Problem
Diagnosing and monitoring Inflammatory Bowel Disease (IBD) often relies on faecal Calprotectin tests in the clinic, necessitating laboratory analysis and resulting in delayed outcomes. Clinicians and patients require timelier ways to measure faecal inflammation to effectively manage IBD. Existing tests are only accessible via the clinic and the management is taken out of the hands of patients. This leads to anxiety in patients who want to know how things are tracking in the comfort of their own home, while keeping their doctors informed of their results via an integrated app.

Solution
Our technology, developed at the University of Sydney, is a sophisticated diagnostic platform that quantifies myeloperoxidase (MPO) activity in faecal samples. Unlike Calprotectin assays, our method is rapid and adaptable for home use with a detection time of only 5 min, as opposed to many days and the inconvenience of multiple trips to the doctor. We remove patient anxiety with rapid data and enable real-time disease monitoring and therapeutic adjustments with integrated care.

Potential Commercial Applications
This platform caters to point-of-care and home-testing markets, providing a swift alternative to Calprotectin assays for IBD management. It offers improved diagnostic precision, particularly in differentiating IBD subtypes and other gastrointestinal conditions. The technology’s convenience and rapidity support personalised treatment plans, with potential extensions into telehealth services and digital health platforms for continuous patient management.

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Intellectual Property Status

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