

## Colitis Confirm: A method of determining the probability of inflammatory bowel disease in a subject being ulcerative colitis or Crohn's disease

### Overview

Inflammatory bowel diseases (IBD) are chronic, relapsing immunologically-mediated inflammatory conditions. They include Crohn's disease (CD) and ulcerative colitis (UC), and the incidence rate is increasing globally, including in the developing world. Despite advances in imaging technology, it can be difficult to differentiate CD from UC. This occurs in 10-15% of cases. Differentiation between UC and CD relies on a compilation of clinical, radiologic, endoscopic, and histopathologic interpretations; a compilation that is not always accurate.

### Technology

Our test is a cytokine profile that can accurately distinguish between ulcerative colitis (UC) and Crohn's disease (CD) in a subject having or having symptoms of, inflammatory bowel disease (IBD). The cytokine profile can also be used to monitor a therapeutic regime for effectiveness.

The cytokine profile can be detected at a protein or genomic level and is generally determined from a peripheral blood sample (i.e. a blood fraction such as serum, plasma, or blood cells such as peripheral blood mononuclear cells).

### Benefits

Many markers identified to date recognise intestine inflammation rather than differentiate between CD and UC. Thus, no accurate test to differentiate these conditions exist.

We have developed a peripheral blood test to differentiate and monitor the subsequent treatment of ulcerative colitis and Crohn's disease.

### Applications

Distinguishing between UC and CD in a subject with IBD allows a clinician to prescribe a suitable therapeutic regime for the subject using a non-invasive blood test, and avoiding the need for scoping or tissue biopsy, which is undesirable for the subject.

### Commercial Opportunity

The University of Limerick is seeking partners to exploit the commercial potential of these technologies by entering into licensing agreements or co-development.

Target Market for Innovation: Diagnostic companies

- Development partner
- Commercial partner
- Licensing
- University spin-out
- Seeking investment

Patent Title: Colitis Confirm: cytokine-based differentiation of Crohn's Disease colitis versus Ulcerative colitis

Type: Parent Provisional

Country: EPO

Status: Filed

Priority Date: 02-May-2019

Application number: EP19172409

Patent Title: A method of determining the probability of inflammatory bowel disease in a subject being ulcerative colitis or Crohn's disease

Type: PCT

Country: EPO

Status: Filed

Priority Date: 04-May-2020

Application number: PCT/EP2020/062354

Link:

<https://worldwide.espacenet.com/patent/search/family/066397061/publication/EP3963334A1?q=PCT%2FEP2020%2F062354>

Journal of Crohn's and Colitis, 2020, 118–129, DOI:10.1093/ecco-jcc/jjz117, <https://academic.oup.com/ecco-jcc/article/14/1/118/5523600>

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Figures

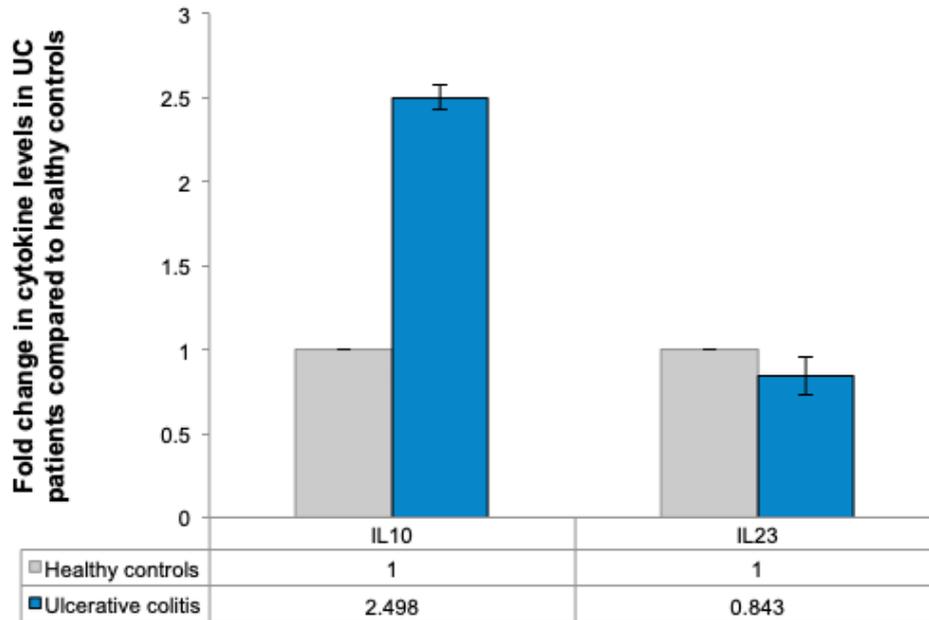


Figure 1: Fold change in cytokines levels for patients with ulcerative colitis versus healthy subjects.

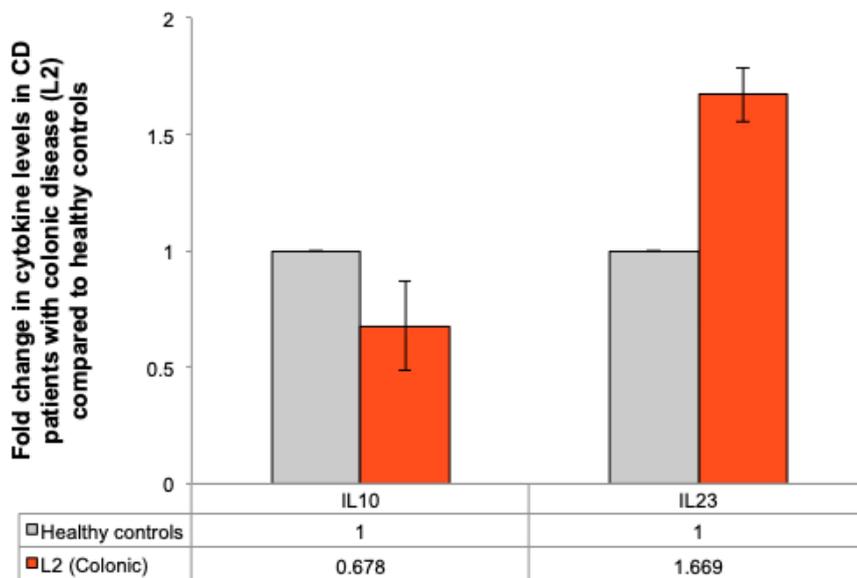


Figure 2: Fold change in cytokines levels for patients with Crohn's disease colitis versus healthy subjects