

Licensing Opportunity

Nutritional Healthcare: IBD/Crohn's

Novel product for the alleviation of symptom 'flare-up' in chronic intestinal disease

The goals of Inflammatory Bowel Disease (IBD) therapy are to eliminate symptoms and prevent flare-ups through medical interventions. Our proposed new locally acting product could contribute to management of symptom flare up, episodes with few, if any, undesirable side-effects.

We have identified a strain of *Streptococcus thermophilus* (NCIMB 41856) which is anti-inflammatory, acting on both human intestinal leukocytes and human intestinal epithelial cell lines (Caco-2 and T84). It reduces epithelial cell death as well as NF- κ B signalling and IL-8 production triggered by pathogens. It abrogates binding of pathogens to epithelial cells and crosses the epithelial cell barrier with *E. coli* where it downregulates Th1 and Th17 responses in intestinal leukocytes. Its mode of action is local to the treated area, avoiding the immunosuppression seen with systemic medication.

Early toxicity data shows no harmful metabolites (e.g. ammonia, indole, phenols and D-lactate); no transmissible antibiotic resistance and no toxicity to human cells (Caco-2 and T84) have been detected.

Key Benefits

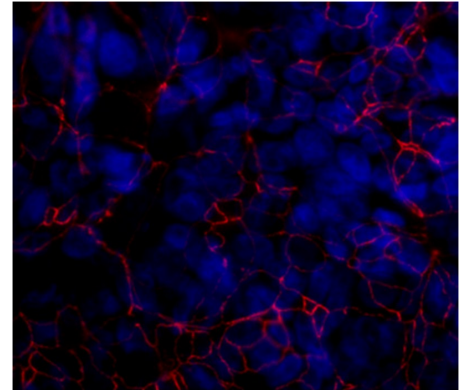
- Acts on the site of injury (not systemic)
- Responds to disease and stress conditions by increasing activity
- *In vitro* results show effective anti-inflammatory response in high iron, low pH (gut) environment
- Where medical treatments suppress the immune response, leaving the patient susceptible to infection, this product would locally downregulate inflammatory responses and promote regulatory responses to the normal gut flora

Application

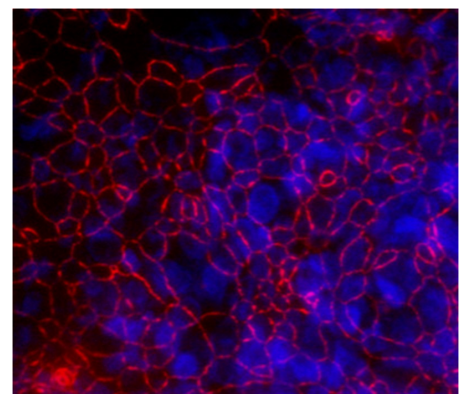
Oral symptom/flare-up management in IBD particularly Ulcerative Colitis and Crohn's disease.

IP Status

Patent application published at PCT (WO 2013/011320 A2)



E. coli



E. coli & *S. thermophilus*

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