

Ulcerative Colitis

Ulcerative colitis (UC) is a human Inflammatory Bowel Disease associated with chronic inflammation of the gastrointestinal tract with long term destruction eventually leading to removal of the large intestine. Although UC is associated with a Type 2 (T_H2) immune response, current treatment strategies are broad anti-inflammatory drugs and not specific for UC. The T_H2 cytokine, interleukin-13 has been highlighted as the main inducer of disease in a mouse model of colitis, however many aspects of the mechanisms involving IL-4 and IL-13 remain undefined. Mice genetically deficient in IL-4 and IL-13 or the receptor by which they signal ($IL-4R\alpha$) provide a valuable tool for further dissecting the immune processes in UC. Oxazolone colitis was induced in male BALB/c mice and disease severity measured by weight loss and animal behaviour. Other disease parameters including; granulocyte activation, cytokine production and histological symptoms were assessed. A better understanding of the immune mechanisms involved in ulcerative colitis could provide an exciting new approach to treatment strategies.

