Dr Jeremy Sanderson M/07/4

Title of Project

The difficult problem of oral Crohn's disease: a unique pathological entity in IBD?

Lay Summary

Crohn's disease is well known to affect any part of the gastro-intestinal tract from mouth to anus but typically affects small and/or large intestine. When it involves the mouth (oral CD or oro-facial granulomatosis (OFG) as it is known), the lip swelling and painful oral ulceration causes significant distress which has been matched to that of major facial burns. Whilst significant recent steps forward have been made towards understanding the cause of gut CD, comparatively few studies have addressed the problem of oral CD.
Our group runs a specialist clinic for patients with oral CD and, from this clinic, we have made some important observations suggesting that inflammation seen in oral CD may be rather different to gut CD and that dietary triggers, cinnamon and benzoates (eg from fizzy drinks) in particular, play a major role. We have recently discovered a population of immune cells called dendritic B cells in chronically inflamed lip and mouth, which have only rarely been noted previously. These B cells are in direct contact with T cells (other important immune cells) and it is quite possible that they are processing and presenting dietary antigens to these T cells.
In this application, we are seeking the funding required to investigate these B cells further and explore the possibility that they are involved in immune reactions to dietary benzoates and determine whether this is a phenomenon unique to oral CD or whether they may also provide a brand new insight into the inflammation of gut CD.
Ultimately, the work aims to lead to better treatments for the distressing problem of oral CD, either as specific dietary regimes, new drug treatments or both.