

Niche regulation of mucosal T cells in inflammatory bowel disease

Honours Project Description

Project Title	Niche regulation of mucosal T cells in inflammatory bowel disease
Project duration:	1 year
Availability	Semester 2 2022
Description:	<p>Immune activation is the key to combat bacterial and viral infections. However, in some cases, overactivated immune cells are not only killing the bacteria or virus, but also causing damage to our own body. This is believed to be the major cause for a range of inflammatory conditions like inflammatory bowel diseases.</p> <p>Mucosal T cell response is regulated by the microenvironment including nutrient, microbiota, and innate immune cells. In addition to existing niche controllers, we are interested in looking at vasculature adhesion molecules as a novel niche regulator in shaping mucosal T cell response in patients with inflammatory bowel disease.</p>
Expected outcomes and deliverables:	<p>This is a translational project involving research in understanding the basic mechanism of T cells activation via in vitro assays and confirming findings in IBD patient samples. Candidates can expect to gain knowledge in areas of inflammatory bowel disease, T cell immunology, and learn technique in areas including primary cell culture, molecular and immunological assays.</p> <p>We expect to generate novel data with commercial interest and produce high-quality publications.</p>
Suitable for:	Potential Honours candidates with experience in biology, immunology, or biotechnology are welcome to apply.
Primary Supervisor:	Dr Ran Wang, A/Prof Jake Begun
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