

# Characterising the microbial immunomodulatory function across the IBD landscape.

## Project Description

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| <b>Project duration:</b>                   | PhD Project 3-4 years  |
| <b>Description:</b>                        | Inflammatory bowel disease is a chronic gastrointestinal condition associated with microbial dysbiosis, but the functional implication of this dysbiosis remain unclear. This project will examine the bacterial metabolites produced by gut bacteria from IBD patients compared to healthy controls and to derive functional implications on host immune pathways using reporter assays and animal models of disease. |
| <b>Expected outcomes and deliverables:</b> | <ul style="list-style-type: none"> <li>• Determine immunomodulatory function of microbiome from non-IBD and IBD patients</li> <li>• Determine mucosal associated microbial immunomodulatory function in vitro and ex vivo</li> <li>• Screen metabolites from a library of bacteria isolated from mucosal associated outgrowth in vitro using reporter cell lines and assess the effects in vivo</li> </ul>             |
| <b>Suitable for:</b>                       | <p>This project would be suitable for a PhD candidate who has completed Honours, has taken lab based courses, and is familiar with basic laboratory techniques.</p> <p>Prior experience with cell culture and microbiology is a plus but not required.</p>   |
| <b>Primary Supervisor:</b>                 | Dr Jakob Begun , Rabina Giri   |
| <b>Further info:</b>                       | e: <a href="mailto:Jakob.begun@mater.uq.edu.au">Jakob.begun@mater.uq.edu.au</a> , <a href="mailto:rabina.giri@mater.uq.edu.au">rabina.giri@mater.uq.edu.au</a>   |