



Project Title: Immune cell biomarkers for bowel cancer		Code: NCS6
Host School / Institute: Northern Clinical School / Kolling Institute		Address: Kolling Institute, Royal North Shore Hospital, St. Leonards
Certificates & Clearances required: Yes *Police clearance <i>Information on how to obtain certificates, where necessary, will be given to successful applicants.</i>		
Primary Supervisor: Prof Mark Molloy		
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Co-Supervisor/team: Dr Pascal Steffen - Cancer Institute NSW Early Career Fellow		
Project Type: Data Analysis; Laboratory based		
Project Category: Cancer; Immunology & Infection		
Skills / Attributes of a successful student: Ability to concentrate and focus to review images on computer. Basic knowledge of cell molecular biology.		
Project Keywords: bowel cancer; immune response; mass spectrometry; image analysis		
Project Description: The immune cells associated with colorectal cancers are poorly understood, but are thought to partly regulate the growth and development tumours. Our laboratory is using mass spectrometry imaging of rectal cancer sections to map the presence of 40 immune cell markers. The expression of these cell markers can be used to subtype infiltrating immune cells and provide unparalleled new knowledge of specific subtypes in rectal cancer. An important part of this study where the student is to be involved is the use of computer imaging to accurately count and measure the density of immune cells. The data generated from this study is important pilot data supporting future larger studies and publications.		