### Project Title:
Seeking Inflammatory Biomarkers in Colorectal Cancer

### Code:
NCS4

### Host School/ Institute
Northern Clinical School

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### Project Type:
Laboratory Based

### Project Category:
Cancer, Inflammation, Molecular biology

### Project Keywords:
1. Colorectal cancer
2. Inflammation
3. Biomarkers
4. MicroRNA

### Project Description:
Colorectal cancer is one of the most common cancers, both in Australia and worldwide. The personalisation of treatment is a major goal of medical oncologists. One of the challenges in treating patients with advanced colorectal cancer is determining those who would benefit from chemotherapy and those who would develop toxicities, to allow for the early introduction of supportive therapies such as antibiotics and growth factors.

We have been examining markers of systemic inflammation as these have been shown to predict for worse outcome in patients with cancer. Simple blood-based markers that can be easily and cheaply obtained and repeatedly measured are of interest, and we have studied the neutrophil to lymphocyte ratio (NLR), shown to have prognostic value for patients with advanced cancer in a range of tumours.

This project will involve seeking other markers of inflammation such as microRNA as we attempt to develop a prognostic signature for advanced colorectal cancer patients. Laboratory techniques such as tissue culture, qPCR and data analysis methods will be employed as we seek to validate some genetic markers of interest.