

Inflammatory Renal Research Group

Research within the group is geared to better understanding mechanisms of disease and developing strategies for prevention and treatment. Many research projects are "translational" in nature, and combine high quality basic science research on a backbone of accurate disease phenotyping.

Current research activity addresses the following areas:

Immune mediated renal disease

We are looking to define the molecular pathogenesis of vasculitis with a particular emphasis on the role of pathogenic autoantibodies. We also undertake Clinical trials in collaboration with the European Vasculitis Study Group (EUVAS) focusing on optimising the short to medium term use of intensive immunosuppression for acute disease. (Lorraine Harper, Matthew Morgan, Dr Julie Williams)

Chronic Kidney Disease and Dialysis

We have studied the distribution of polyclonal light chains in kidneys of patients with chronic kidney disease. In addition we have further elucidated key signalling pathways activated in tubular epithelial cells by monoclonal light chains. Kidney failure is a frequent complication in patients with multiple myeloma and when severe it is associated with a greatly increased morbidity and mortality. We are investigating the use of FLC to improve diagnosis and investigated their role in disease pathogenesis. (Paul Cockwell, Colin Hutchinson, Koli Basnayake, Stuart)

Transplantation Research

Interests focus on improving the outcomes of renal transplantation through clinical and translational strategies. Many of these studies involve clinical phenotyping of transplanted cohorts, and correlation between risk factors (immunological and non-immunological) and outcomes and identifying novel diagnostic tools to predict longterm outcome. (Richard Borrows, Simon Ball)

Cardiovascular disease and chronic kidney disease

We are looking at how renal inflammation might be an important mediator of increased cardiovascular disease risk. We are particularly focussing on the earlier stages of chronic kidney disease and how the long term use of immunosuppressive treatments may be associated with improved markers of arterial stiffness in chronic kidney disease patients. (Dr Charlie Ferro)