Title: Assessment of the therapeutic benefits of inhibiting lectin pathway functional activity in models of renal transplantation.

Application deadline: Applications accepted all year round

Supervisor/s: Professor Wilhelm Schwaeble and Professor Michael Nicholson  email: ws5@le.ac.uk

Funding: Self-funding only

Summary (max 200 words)

Recent work by the proposed supervisor’s group has shown that the lectin pathway of complement activation, a component of the innate immune response, critically contributes to a post-ischaemic inflammatory condition, called ischaemia/reperfusion injury (IRI), leading to major tissue and organ function loss following renal ischaemia or renal transplantation. The efficacy and functional characteristics of therapeutic lectin pathway inhibitors will be determined in established in vitro assays and tested in models of renal reperfusion injury measured on isolated and reperfused kidneys, a sophisticated technique established in Prof Nicholson’s laboratory. This technique will provide invaluable data to prepare the ground for clinical trials in human renal transplantation. This project will bring together Leicester based research excellence and help to translate leading technology in Biomedical Science into clinical applications. The research aims to assess the therapeutic benefits of a transient inhibition of lectin pathway functional activity in model systems closest to the clinical scenario of human renal transplant surgery. The outcome of this study will prepare the grounds for human clinical trails to introduce a novel therapeutic approach to improve the clinical management and success by reducing morbidity and mortality following renal transplantation.