

## Clinical Immunology Service Research



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The University of Birmingham Clinical Immunology Service (CIS) is one of the largest services in the country and provides a unique interface between the University's substantial scientific expertise in immunology and the main clinical areas for application in clinical academia and NHS practice. Academic staff, based in the CIS, undertake a broad range of research work on clinical trials and cutting edge clinical immunology investigations which are contributing to the diagnosis and treatment of disease.

Key research projects include

- The National MRC, NCRI and CRUK / LRF myeloma trials where we have contributed to the design, execution and analysis of MRC myeloma trials (6, 7, 8, 9, 10, 11th) and have provided central laboratory analysis. These trials have helped formulate world opinion on the relative efficacy of different combinations of chemotherapy, the application of intensive therapy with stem cell rescue, interferon, use of new biological therapies thalidomide, bortezomid and lenalidomide and the use of bisphosphonates. The MERIT trial assessed management of renal failure in newly diagnosed myeloma patients and is the first study to establish that high levels of serum free light chains can be quickly lowered achieving improved renal outcome.
- Supportive care trials in myeloma patients including an NIHR HTA study of the benefits of prophylactic antibiotics in myeloma and their affect on health care associated infections like MRSA and clostridium difficile.
- Partnership on the national phase 3 trials in AML and myeloma for minimal residual disease as major collaborators and providers of central laboratory analysis for patients
- Partnership on a Leukaemia Lymphoma Research Programme with colleagues in Biosciences where our laboratory work has led us to trial a drug redeployment approach using combined Bezaifibrate and medroxyProgesterone acetate (BaP) providing evidence of both anti-cancer activity and improved haemopoiesis in acute myeloid leukaemia (AML) ISRCTN50635541 and endemic Burkitt's Lymphoma (ISRCTN34303497).
- Development of new tests to detect and quantitate different components of Immunoglobulin from normal and malignant plasma cells. This includes the development and validation of a test to measure serum free light chain levels with Binding Site. Making a new spin out company (Serascience) which is developing a novel range of immunoglobulin assays based on monoclonal antibody detection systems