

Participant 1. Co-ordinator UNEW- Professor A M Dickinson BSc PhD Head Tyneside Leukaemia Research Laboratories, Co-Director Stem Cell Cryopreservation and Manipulation Unit, School of Clinical and Laboratory Sciences, Haematological Sciences Newcastle upon Tyne, UK .

Co-ordinator EUROBANK and TRANSEUROPE FPV projects. Prof. Dickinson was the first to describe using the human skin explant model, the role of cytokines (TNF α and IFN γ) in the pathogenesis of GvHD, and with Dr Peter Middleton (Lecturer in Molecular Haematology) further developed the concept that patient or donor cytokine gene polymorphisms (which regulate the production of cytokines) may play a role in predicting GvHD. She heads a research team of 4 PhD students and 5 research scientists and 6 technical staff. Prof Dickinson has over 15 years experience in postgraduate teaching and design of teaching modules. She currently runs modules in Transplantation Science as a part of the Master of Research postgraduate course in the School of Clinical and Laboratory Sciences. All members of the network team are also course lecturers/ tutors.

Network Team: – **Professor Dickinson,**—expertise includes student tutor, member postgraduate examiners board, experienced PhD supervisor and undergraduate supervisor in Haematological Sciences.. **Dr X N Wang,** Senior Research Associate, experienced PhD supervisor with 5 years experience on the use of the skin explant assay. Prof. Dickinson employs **1 post doctoral scientist** (to assist with Project Management) and **2 PhD students to work on non-HLA immunogenetics and skin explant assays** and to aid in the development of the database and correlate results with genetic, biological and clinical factors associated with outcome in HSCT. Other members of the team include **Dr Hannah Cullup** - Research Associate and Marie Curie Outgoing Fellow-specialist knowledge of immunogenetics and skin explant model (with Prof Derek Hart, Brisbane Australia);**Dr Matthew Collin** Clinical Research Associate, Leukaemia Research Fund Fellow- expertise in dendritic cell biology in GvHD and **Dr Scott Marshall** Clinical Research Lecturer studying for PhD in mechanism of action of ECP . **Dr Anne Daly,** Senior Lecturer, Pharmacogenomics Group, post graduate tutor for the School of Clinical and Laboratory Sciences and has 25 years experience in the area of biochemical pharmacology and expertise in the detection and characterization of novel polymorphisms affecting responses to drugs and xenobiotics. Currently, polymorphism detection studies on both cytochrome P450 and DNA repair genes using SSCP and denaturing HPLC analysis are in progress. The relationship between known polymorphisms and susceptibility to diseases related to xenobiotic exposure (especially cancer and liver disease) and adverse drug reactions is also being investigated. **Dr Tom Shakespeare,** Director of Outreach and leader of patient involvement from the Policy Ethics and Life Sciences Research Institute (PEALS) will lead the ethical, social and legal aspects of the project. The PEALS team has expertise in medical sociology, legal issues, disability studies, bioethics, nursing, international relations and science communications. The Haematological Sciences section of the School of Clinical and Laboratory Sciences is also the Northern Regional Transplant Centre for Leukaemia and Lymphoma with a population base of 3.0 million. Information on all transplants is centralised and data registered through the BMT team (**Dr G Jackson, Director of the BMT Unit** and Consultant in Haematology). Peptides from the study will be further characterised at the Proteomics Facility at Newcastle University. Peptides will be characterised using MALDI-TOF and Q-TRAP mass spectrometers. The MALDI-TOF (Applied Biosystems Voyager DE-SRT) will be used for initial mass determination and post-source decay (PSD) analysis to determine the amino acid sequence of the peptide. The MS/MS (and MS/MS/MS) capabilities of the Q-TRAP (Applied Biosystems) Mass-spectrometer will complement the work on the MALDI-TOF by providing additional analysis, improved peptide sequencing and identification of any secondary modifications of the peptide. On both mass spectrometers peptide sequencing will be aided by using chemically assisted fragmentation (CAF) of the peptides. **Dr J Gray and Dr NJ Morris (Lecturer, Biochemistry)** will carry out the mass-spectrometry analysis. Dr NJ Morris will provide the bioinformatics support including database searching and the construction of specialised sequence databases.

Aspects of project management and potential commercialisation including intellectual property will be aided by workshops developed within the Faculty of Medical Sciences under the BioNE² t programme, which has links to local industry and which will be open to TRANS-NET early and experienced researchers.(medical.faculty.ncl.ac.uk/bionet/news/IPprog.htm) **Sub-contractor- Prof. Lisbet Sviland** MBBS PhD FRCPATH Consultant Pathologist, Department of Pathology, Haukeland Universitetssykehus, Bergen and Professor II, Centre for International Health, University of Bergen, Norway. Prof Sviland is a consultant pathologist with a special interest in dermatopathology and the pathology of BMT with over 15 years research interest and experience within the pathology of BMT. She developed with Prof Dickinson the skin explant assay when she was a Senior Lecturer at the University of Newcastle upon Tyne. She has been evaluating the histology slides from the skin explant assay since the assay was first developed and in addition been assessing biopsies from patients with GvHD in UNEW and as part of a collaborative study with the BMT Unit, Rikshospitalet, Oslo. She is an active participant on the TRANSEUROPE project where she provides the Central Pathology service for GvHD grading and evaluation using immunohistochemical techniques. Prof Sviland has a special interest in the pathology of inflammatory diseases in particular tuberculosis. She supervises 2 PhD students and 1 post.doc student who are all working on the pathology of tuberculosis with an emphasis on extrapulmonary TB. Prof Sviland is one of 3 members on the National Committee for Audit and Quality Assurance in Diagnostic Pathology. Prof Sviland will provide a Central Pathology Service for teaching and collaboration of results between pathology teams at the different centres using an interactive web site.

References

- 1 Middleton PG, Taylor PRA, Jackson G, Proctor SJ, Dickinson AM. Cytokine Gene polymorphisms associating with severe acute graft-versus-host disease in HLA-identical sibling transplants. **Blood** (1998)

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2 Dickinson AM, Wang XN, Sviland L, Vyth-Dreese FA, Jackson GH, Schumacher TNM, Haanen JBAG, Mutis T, Goulmy E. In situ dissection of the graft-versus-host activities of cytotoxic T cells specific for minor histocompatibility antigens. **Nature Medicine** (2001) 8(4):410-414

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