ACF Haematology Programme Details in conjunction with the University of Liverpool
Recruitment to posts starting in August 2019

Post availability

There is up to 1 post in Haematology with a research theme of Platform Science (“omics”) and Bioinformatics

You can apply at CMT/ST1, CMT/ST2 or ST3 level in this round of recruitment.

Please note if you are appointed at ST1 or ST2 level, you will be placed in an appropriate Core Medical Training track until you reach ST3 level.

Overview

You can find generic information about Academic Clinical Fellowships in the North West plus links to the National Institute for Health Research’s guidance via https://www.nwpgmd.nhs.uk/nihr-academic-clinical-fellowships-glance

You will join the Mersey Specialty Training Programme in Haematology, with 25% of your time allocated to research. You will receive clinical training across the full spectrum of haematology including haemato-oncology, stem-cell transplantation, blood transfusion, haemostasis and thrombosis, haemoglobinopathy and general haematology. The research component of the post will be in haemato-oncology. It will provide both generic and specific research skills with the aim of preparing for a Clinical PhD Fellowship.

Academic Training

This ACF post is focused on platform science and bioinformatics. Consequently, emphasis will be placed on scientific training in high-throughput DNA and RNA sequencing together with proteomics, metabolomics, kinome profiling and mass cytometry. Emphasis will also be placed on the management and analysis of Big Data and the application of computational biology to link together multi-omics datasets. In addition, you will be taught a broad range of generic skills including how to critically review scientific literature, construct scientific hypotheses, design experiments, use statistics for sample size calculations and data analysis, present research findings (orally and in writing) and prepare ethics and funding applications. You will also learn basic laboratory techniques such as cell culture, gel electrophoresis, polymerase chain reaction (PCR), Western blotting and flow cytometry. To provide perspective and context for your research project, you will be encouraged to attend meetings of the Haemato-Oncology Genomics England Clinical Interpretation Partnership (GECIP) and network with ACFs elsewhere
who are working on related projects. You will also have the opportunity of learning more about clinical research and biobanking by attending oversight committee meetings for Liverpool-led trials and sample collections.

**Research Areas / Research Environment**

Haemato-oncology in Liverpool comprises 3 main elements, all of which have research at their core: (1) the clinical service which is part of Clatterbridge Cancer Centre (CCC), (2) the regional Haematological Oncology Diagnostic Service (HODS) which is part of Liverpool Clinical Laboratories (LCL), and (3) the academic haemat-oncology group which is part of the University of Liverpool (UoL). The complementary infrastructure, physical adjacency and functional integration of these 3 elements of haemat-oncology ensures that the full spectrum of translational research is supported, from discovery science to pharmacology, clinical trials, biobanking, sample characterisation and discovery science. The group’s research activities are further strengthened by numerous local, national and international collaborations involving NHS, academic and industry partners. Of particular relevance to this ACF post is the group’s collaboration with the UoL Computational Biology Facility, as well as the UoL Departments of Pharmacology (hosts the MRC Centre for Drug Safety Science) and Biostatistics (provides expertise in Health Informatics).

The academic haemat-oncology group in Liverpool is leading a large programme of clinical and translational research in CLL, lymphoma, CML and AML. The group’s research centres on the question of why some patients respond to, or tolerate, treatment better than others. By addressing this question, the group hopes to generate an improved understanding of therapy resistance and intolerance and, in doing so, elucidate new drug targets and biomarkers that will allow a more tailored approach to therapy. The group’s operational strategy has 4 components that cover the spectrum of translational research: (1) generation of large, high-quality sample collections linked to clinical trials; (2) analysis of patient samples for biological variables that correlate with therapy resistance or intolerance; (3) elucidation and preclinical validation of potential drug targets and biomarkers; and (4) clinical evaluation of validated drug targets and biomarkers. In addition to leading research, Liverpool contributes to research led from elsewhere through collaboration. For example, the local clinical teams maintain a comprehensive portfolio of NIHR and industry-sponsored clinical trials across all disease areas that allow local patients to access cutting-edge treatments. In addition, Liverpool biobanks are supporting a range of translational research projects both within and outside the UK.

As an ACF with the academic haemat-oncology group, you engage with all of the group’s activities. However, your primary focus will be to prepare a PhD Fellowship application. There will be some flexibility regarding the exact nature of your project, but it is anticipated that it will involve the application of omics technologies to CLL trial samples and the analysis of multi-omics datasets,
building on our previous work in this area and linking in with the Genomics England Ltd (GEL) 100K Genomes Project CLL Pilot. The latter has hitherto focussed on two clinical trials involving predominantly younger patients with standard risk disease. However, WGS data is also available for cohorts of older patients and those with early-stage or high-risk CLL. An opportunity therefore exists to generate functional genomic data and link it to WGS data to elucidate disease pathogenesis and drug resistance mechanisms in these important patient cohorts.

Research Facilities

The group’s research is supported by a wide range of locally available enabling technologies including high-throughput DNA and RNA sequencing, proteomics, metabolomics, kinome profiling and mass cytometry, many of which are provided via the UoL Technology Directorate. Other supporting infrastructure includes the regional Haematological Oncology Diagnostic Service (HODS), the CR-UK Liverpool Cancer Trials Unit (LCTU), the Liverpool Good Clinical Laboratory Practice (GCLP) Facility, the Liverpool CR-UK/NIHR Experimental Cancer Medicine Centre (ECMC), the UoL Computational Biology Facility (CBF), the MRC Centre for Drug Safety Science (CDSS) and the Liverpool early-phase Clinical Research Unit (CRU).

Clinical Training

You can find out more about the clinical training programmes in the North West via the following link - https://www.nwpgmd.nhs.uk/specialty-schools

Clinical person specifications can be found via the following link - https://specialtytraining.hee.nhs.uk/Recruitment/Person-specifications.

Useful Links
https://www.oriel.nhs.uk/Web/Vacancies
https://www.nwpgmd.nhs.uk/nihr-academic-clinical-fellowships-glance
https://specialtytraining.hee.nhs.uk/Recruitment/Person-specifications
https://www.nwpgmd.nhs.uk/specialty-schools
https://www.nwpgmd.nhs.uk/Specialty_Schools/Medicine/Haematology

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