Academic Clinical Fellowship

Description of ACF Programme:
Title: Clinical Genetics Duration: 3 years
Lead NHS Hospital/Trust and contact details:
University Hospital Southampton NHS Foundation Trust, Tremona Road, Southampton SO16 6YD Tel: 02380 777222
Research Institution in which training will take place:
University of Southampton, Faculty of Medicine Project-dependent research opportunities exist within the academic schools of Human Development and Health, Cancer Sciences, and Clinical and Experimental Sciences.
Arrangements for protected research time:
9 months of protected research time is available during the ACF programme and this can be utilised flexibly as required (e.g. as distinct extended blocks or otherwise as weekly timetabled sessions) in order to best meet the academic and clinical training needs of the trainee and their research project.
Research Objectives:
1. To gain relevant training and experience in research skills (project design, methods and analysis). 2. To gain exposure to laboratory-based research within the Faculty of Medicine. 3. To identify and carry out a research project in Clinical Genetics (clinical or laboratory-based) with guidance from ACF supervisors. 4. To generate pilot data to support the development of a research training fellowship proposal. 5. To undertake the equivalent of 2 years 3 months full-time training in Clinical Genetics via approved rotations within the Wessex Clinical Genetics Service.
Description of research component of programme (up to 500 words):
As Clinical Genetics is a very broad and diverse subject, which is reflected in the broad range of research projects offered. We actively encourage the trainee to explore these opportunities in year 1. For example, it would be possible to

undertake two or three short "taster" projects with different members of academic staff in the first year to help familiarise the trainee with different research areas within the department. Research interests of academic staff include: RNA splicing and transcriptomics (Prof. Diana Baralle), early onset cancer and translational genetics (Dr Alexander Ross), cancer genomics (Prof. Diana Eccles), immunology genomics (Prof. Tony Williams), Bioinformatics and genetics of bowel disorders (Prof. Sarah Ennis).

Generic research skills training is available via the University of Southampton through its Southampton Clinical Academic Training Scheme (SoCATS). This includes access to a formal taught postgraduate research training programme in statistics, trial design, epidemiology, ethics, research governance and project design. MSc modules in Genomic Medicine are also available for study through the University of Southampton. The ACF trainee will be encouraged to undertake at least some laboratory-based research exposure in the first year, although a final choice of project can be clinical or laboratory-based or indeed a mixture of the two.

In year 2, the ACF will focus on a specific research project in order to generate pilot data to support a research fellowship application. This project will be affiliated to the existing research programme of senior clinical academic staff within the department but should constitute a programme of individual research activity for the ACF, ideally leading to an original research publication based on the generated data. Extensive opportunities exist for academic collaboration within and beyond the Faculty of Medicine, including with academic staff at the University of Southampton Institute for Life Sciences as well as institutions nationally and internationally.

As part of their academic training, the ACF would be expected to actively contribute to the academic life of the department. This would include attending academic meetings and seminars relevant to clinical genetics and present their research project results at internal and external meetings and conferences.

By the end of year 2, pre-doctoral ACFs are expected to be in a position to apply for a research training fellowship from a major funding body such as the MRC or Wellcome Trust, whilst post-doctoral ACFs are expected to be in a position to apply for a clinical lecturer or similar funding opportunities. In recent years a number of academic and clinical trainees from within the Clinical Genetics department have been successfully awarded such fellowships, allowing them to pursue fully-funded clinical academic PhD training and senior awards.

Description of clinical component of programme (up to 500 words):

The Wessex Regional Genetics Service is an integrated clinical and molecular service covering a population of 2.8 million in Hampshire, Dorset, Wiltshire and the Isle of Wight. The clinical arm of the service is the Wessex Clinical Genetics Service coordinated from the Princess Anne Hospital in Southampton, while the laboratory arm of the service is the Wessex Regional Genetics Laboratory, currently based at Salisbury District Hospital. As a Genomic Medicine Centre, the Wessex region has been a major contributor to the 100,000 Genomes Project. Going forward, UK laboratory genetics services are being centralised into a

smaller number of Genomic Laboratory Hubs and the hub laboratory for Wessex, Oxford and Birmingham will be the Birmingham laboratory.

The clinical service currently has 14 consultant clinical geneticists, 4 StR trainees, 14 genetic counsellors and 3 trainee genetic counsellors, with additional nursing and administrative staff involved in development of genomic medicine services, family history coordination and secretarial support. Outpatient clinics offered by the service include general genetics, cancer genetics, cardiac genetics, neurogenetics, eye genetics, prenatal genetics, genomic imprinting, disorders of sexual development and metabolic bone disease. Clinics take place both in Southampton and across Wessex in around 10 different hospitals. Additional scheduled MDT meetings include renal genetics, orthopaedic genetics, metabolic disorders, neurogenetics, cardiac genetics, fetal medicine, endocrine genetics and genomic variant interpretation. Over the course of their training, trainees will be exposed to all aspects of Clinical Genetics available to the department. Where appropriate, there is scope towards the end of specialist training for obtaining additional specialist experience, for example in inherited metabolic disorders, through short attachments at other centres.

The ACF will join the service at ST3 specialty registrar level and will commence clinical rotations attached to timetabled outpatient clinics with specific consultants and genetic counsellors. Registrars also attend ad hoc inpatient ward referrals from the neonatal unit or other paediatric units, generally with consultant supervision. Progression through stages of training is competency-based in line with standard clinical training posts and is dependent upon adequate completion of workplace-based clinical assessments and satisfactory review of progress at ARCP.

Weekly departmental teaching in is provided at the Wessex Clinical Genetics Service and regional training for registrars across the South West of Britain (SWOB) genetics centres (Wessex, Exeter, Oxford, Wales, Bristol, Birmingham) is organised and provided on a twice-yearly basis. Additional national training courses are available on a 1-2 yearly basis covering topics such as cancer genetics, prenatal genetics, dysmorphology, skeletal dysplasias, genetic counselling, etc. and trainees will be encouraged to enrol in a formal training programme leading to a PGCert or MSc in Genomic Medicine or similar.

Specific support provided to trainee

Appraisals are provided by an educational supervisor at induction, three and six monthly with the trainee to form an educational agreement and ensure the trainee is meeting their learning objectives. Particular research support and opportunities will be provided, depending upon the interests and training needs of the ACF.

Milestones and timing of achievement of academic and clinical competencies

Year 1	
1	Initial training in General Genetics and Cancer Genetics

2	Attendance at autumn introductory course provided by University of Southampton's Faculty of Medicine
3	Identification of topic/s of interest for research project and initial literature review
4	Identification of research questions to be addressed in pilot study through an iterative process of discussion and planning with the academic supervisors
5	Identification of specific learning needs for the project and appropriate courses
Year 2	
1	Continuing clinical training in General and Cancer genetics with additional attachments in sub-specialist areas
2	Obtaining ethical committee and NHS Research & Development approval for exploratory project as appropriate
3	Attendance at relevant internal and external training courses and attendance at annual national/international conferences of relevance to the project
4	Initial data collection for pilot study
Year 3	
1	Completion of data collection and writing up of pilot research project and presentation at national/international conference(s)
2	Submission of clinical research fellowship application to external funding agencies
3	Continuation of training in sub-specialist areas of genetics
4	Completion of interview(s) for research training fellowship

How post links in to the NIHR approved Research Training Programme at your locality:

A successful fellowship application will lead to a further three years in full- time clinical research and then the opportunity to apply for a Clinical Lecturer position within the Faculty of Medicine or similar research funding.

Trainee centredness:

The training will be centred on the trainees' own needs, identified early during the first year, and by dedicated supervision and mentorship during the post. The academic clinical fellowship will be tailored towards achievement of successful external PhD funding.

Quality assurance of the programme:
The research methods training will be provided through the established Doctoral College at the University of Southampton's Faculty of Medicine. Academic supervisors have completed the postgraduate research supervision training provided by the University.
Mentoring Arrangements:
Mentorship will be provided by the academic and clinical supervisors to the fellow. This will be co-ordinated by Professor Elaine Dennison (University of Southampton lead for academic clinical training). Further mentorship and supervision can be undertaken through the normal governance arrangements for postgraduate research at the University of Southampton Faculty of Medicine. This will include mentorship through supervision of the emerging PhD programme and senior authorship of research fellowship applications to major funding agencies. In addition, the Faculty of Medicine has a mentoring scheme that allows staff to select a mentor from a web-based list according to the criteria they fell would best address their mentoring needs.
Academic Lead (University) for the IAT Programme:
Professor Elaine Dennison Professor of Musculoskeletal Epidemiology & Honorary Consultant Rheumatologist MRC Lifecourse Epidemiology Unit Southampton University SO16 6YD Tel 023 8077 7222 emd@mrc.soton.ac.uk
Academic Supervisor (University) Details:
There are several potential academic supervisors in Clinical Genetics: **Dr Alexander Ross** Senior Clinical Lecturer in Medical Genetics and Genomics – contact A.Ross@soton.ac.uk Current projects include Investigating Early Onset Breast Cancer in West Africa and applying organoid technology to investigate human development and disease **Professor Diana Baralle**, Professor of Genomic Medicine (special interest RNA splicing and transcriptomics)
Education Supervisor (Trust) Details:
The educational supervisor and clinical supervisor will be dependent on the clinical rotation to which the ACF is allocated.

Clinical Supervisor(s) Details:
The educational supervisor and clinical supervisor will be dependent on the clinical rotation to which the ACF is allocated.
Deanery Programme Training Director Details:
Dr Kimberley Bradbury Consultant in Clinical Genetics Wessex Clinical Genetics Service Level G, Mailpoint 627 Princess Anne Hospital Coxford Road Southampton SO16 5YA kimberley.bradbury@uhs.nhs.uk Tel: 023 8120 6170
Deanery Programme Manager Details:
James Pillinger Education Programme Manager Email: england.medicine.wx@nhs.net
Confirmation that ACF posts attract an NTN(a):
This post will attract a NTN(A)