

## **Academic Foundation Posts Central Manchester Health Economy**

### **a) Lead for Academic Foundation Training**

Dr Gwilym Morris, Consultant Cardiologist and Electrophysiologist, Manchester Heart Centre, CMFT and British Heart Foundation Intermediate Clinical Research Fellow, Division of Cardiovascular Sciences, School of Medical Sciences, University of Manchester

### **b) Background and Philosophy**

The Central Manchester Health Economy includes CMFT as well as the Central Manchester Primary Care Trust and partners in the Manchester Mental Health Trust. CMFT has close and well-established links with the University of Manchester Faculty of Biology, Medicine and Health, with many Clinical Academics on staff. In addition, the academic departments of primary care and psychiatry are both within our health economy. Our aim is to introduce Foundation doctors to academic medicine in order to inspire and encourage individuals to undertake further academic training, to consider a clinical academic career pathway and introduce them to generic skills that will be transferable in the future.

Key features of the academic programmes include:

1. A named academic educational supervisor/mentor.
2. A regular Academic Foundation tutorial series to run through a 2-year cycle, covering aspects of academic medical career planning and generic research approaches.
3. Support for academic opportunities. Currently we do not have specific education and leadership tracks but will support trainees who have identified appropriate supervisors and projects.
4. All academic trainees will be encouraged to undertake the writing of a review article to be submitted to a peer review journal for publication, and to present at the AFP tutorials.
5. During the four-month period when they are attached to their academic unit, they will also have the opportunity of training in translational clinical research through the NIHR Manchester Clinical Research Facility.

CMFT hosts key research infra-structure including:

- NIHR Manchester Biomedical Research Unit
- NIHR Manchester Clinical Research Facility
- NIHR Manchester Children's Clinical Research Facility
- A Centre for Advanced Discovery and Experimental Therapeutics (CADET) for the development of new drug treatments
- The Maternal and Fetal Health Research Centre, Europe's largest pregnancy research centre
- Nowgen: A Centre for Genetics in Healthcare, aiming to inform and improve the practice of genetic medicine
- The Willink Biochemical Genetics Unit, the main diagnostic laboratory for metabolic diseases in the North of England

### **c) Competencies for Academic Trainees and Clinical Training**

**i. Clinical training/assessment.** Clinical training and assessment will take place in the 2 non-academic placements in F2 as usual and at the end of F2 the trainees will be expected to complete assessments to the same standards as non-academic trainees. Depending on the nature of the research project, opportunities for compulsory assessment such as mini-CEX may be limited. Other competencies have also been identified that map well into core competencies (see below). We propose to use these additional opportunities to assess academic trainees.

#### **ii. Additional Academic competencies.**

The following are key examples of core academic competencies we will assess during their F2 year in particular:

##### Good Clinical Practice (GCP):

All AFPs will undergo formal training in GCP, the principles of which include:

- (a) Knowledge and competence in obtaining informed consent
- (b) Good record keeping with regard to clinical source documents/laboratory note books etc
- (c) Compliance with study protocols
- (d) Medical care of study subjects
- (e) Understanding of the roles and responsibilities of various research regulatory authorities

#### Critical Appraisal and academic writing skills:

As part of Foundation training, trainees are already expected to demonstrate competency in for example performing a literature search and assessing the quality of evidence identified. We would also expect academic trainees to be able to clearly identify gaps in current knowledge and pose further research questions based on their reading. Critical appraisal competences will be extended and formally assessed by:

- Assessment and discussion of a literature review with their supervisor.
- Presentation of such a review to a unit seminar.
- Writing and completing a review article that is of a high enough standard for publication.

#### Team working:

Academic trainees will be expected to display a high level of team working skills and to understand their specific role within the team. In an academic environment, teamwork is of course essential to successful completion of projects within time and budgetary constraints and these skills can be effectively assessed. The educational supervisor will assess particularly their ability to project manage by meeting key deadlines and key diary dates. By undertaking a 360-degree appraisal during the 4-month period various colleagues will contribute to this aim.

#### Teaching and Training:

All academic trainees will be expected to present at a teaching seminar and attend the regular series of teaching events hosted by the NIHR Manchester Clinical Research Facility and delivered by senior clinical academic staff.

#### Maintains Own Health and Demonstrates Appropriate Self Care:

In the case of trainees working in a laboratory setting the laboratory supervisor will be asked to assess the trainee with regard to awareness of COSHH and other health and safety considerations.

### **iii. Outline of Research Training**

A regular tutorial/seminar programme will be delivered by clinical academics and local researchers. The seminar programme will also encourage each trainee to present his or her own research project. The main aim of this tutorial programme will be to address core knowledge and academic competencies, examples include:

- Generic research skills – study design, protocol development, biostatistics, academic writing skills, presentation skills
- Good Clinical Practice and ethical framework of research – senior researchers are invited to use current studies to demonstrate application of GCP principles to their research projects, enabling foundation doctors better understand regulation of research in UK.
- Research and career planning – project planning, academic career structure, fellowship and grant application

The second aim would be to introduce trainees to the diversity of medical and clinical research and scientific techniques available in Central Manchester such as:

- Systems biology
- Molecular genetics
- The philosophy of science
- Proteomic and metabolomic techniques
- New imaging technologies
- Population studies
- Randomised controlled trials
- Education research
- Health economics and health care research.
- Improvement Science

#### **d) Academic Departments Offering Academic Training.**

Each of these academic departments can offer a 4-month academic programme embedded in F2 as part of a 'menu' system. For students who choose a particular Department, the academic F2 lead (see below) will, early in the F1 year, discuss the clinical areas of interest as well as what type of research they wish to undertake, they will then meet with the relevant project supervisor. In this way preparation can begin well ahead, in order that optimal use of the 4-month attachment is made. All departments outlined have active research/educational programmes that include clinical and non-clinical research staff. They also have proven track records in peer review and other publications.

If applicants have a particular area of academic interest not represented in the list below we have a track record of facilitating placements with other CMFT-based supervisors, such as renal medicine and transplant surgery.

**Primary Care** (Prof A Esmail)

The academic Department of General Practice has a long and well established programme of primary care research that includes health service research, health economics as well as a teaching and educational research programme.

**Mental Health and Neuropsychiatry** (Profs W Deakin, E Guthrie)

The Department of Psychiatry has interests in epidemiology, health care research, clinical trials and neuroimaging.

**Rheumatology** (Professor I N Bruce, Dr B Parker)

The Department of Rheumatology has strong links with the Arthritis Research UK Epidemiology Unit and the recently awarded NIHR Musculoskeletal Biomedical Research Unit. There are major strengths in population studies and clinical trials. Genetic and genomic research is also internationally leading and there are a number of experimental medicine studies underway in the NIHR Manchester CRF. Key disease areas include systemic lupus, rheumatoid arthritis, psoriatic arthritis, osteoarthritis and pain.

**Fetal and Maternal Medicine / Gynaecological Oncology** (Profs H Kitchener, C Sibley, Dr E Johnstone)

This department has expertise in molecular medicine, clinical trials and clinical outcome studies of gynaecological cancers. They also have ongoing funded programmes on placental development and biology including pre-eclampsia and still-birth research.

**Cardiovascular Medicine** (Profs A M Hegarty, B Keaveny, Dr G M Morris)

This department has a range of research programmes which include: vascular function in obesity, hypertension and diabetes; cardiac arrhythmia and heart failure; and cardiovascular genomic medicine. Approaches used include high-throughput 'omics platforms, in vivo modelling, and human studies including advanced cardiac magnetic resonance imaging and high-resolution arrhythmia mapping.

**Surgery** (Professor A Siriwardena)

This Department has specific expertise in epidemiology of GI cancers, cellular mechanisms of colorectal tumours and surgical interventions for upper GI malignancy.

**Emergency and Critical Care Medicine** (Profs K Mackway-Jones, S Carley, Dr R Body)

The department of Emergency Medicine has a strong interest in teaching and critical appraisal including the Best Bets programme. They are also involved in research evaluating health care delivery and have an active clinical trial programme.

**Genetic Medicine** (Profs G Black, J Clayton-Smith)

A wide range of opportunities to study a range of inherited disorders including eye diseases, neurodevelopmental disorders and storage diseases.

**Endocrine Sciences** (Profs S Ball, P Clayton)

A wide range of research programmes across the age spectrum including childhood growth and development, pituitary disease and circadian biology including how steroid hormones modulate inflammation.