Academic Clinical Fellowship

Description of ACF Programme:
Title: Neurosurgery Duration: 3 years
Lead NHS Hospital/Trust and contact details:
Southampton University Hospitals Foundation Trust Diederik Bulters Consultant Neurosurgeon and Honorary Senior Clinical Lecturer Wessex Neurological Centre University Hospital Southampton 02381205282 d.bulters@soton.ac.uk
Research Institution in which training will take place:
Department of Clinical and Experimental Sciences University Of Southampton And Wessex Neurological Centre University Hospitals Southampton Southampton
Arrangements for protected research time:
The post will cover two years and three months of clinical training and nine months of protected research time will be used to learn research methodology and prepare for a Clinical Research Fellowship (Doctoral Training) application for a higher degree. Clinical duties will be back-filled. The job description will ensure protected research time for the ACF. The exact arrangement for protected research time, that is whether this will be in blocks or as a weekly split, and its timing, will be arranged between the trainee, Programme Director and the Academic Supervisor, and will depend on the following variables: clinical experience of the trainee, service needs, trainee needs, timing and full/part-time equivalent of clinical cover.

Research Objectives:
The objectives of the training programme are for the trainee, over three years: 1. To undertake the equivalent of 27 months of full-time specialist training in neurosurgery and a total of nine months within Clinical Neurosciences in the University of Southampton Faculty of Medicine over a three year period. 2. To undertake generic research methods training through a programme run by the Faculty of Medicine's NIHR Postgraduate School. 3. To obtain relevant training in research design, methods and systematic review. 4. To gather preliminary data and develop a research proposal for an externally funded Clinical Research Fellowship (Doctoral Training). 5. To submit such an application for a Clinical Research Fellowship (Doctoral Training) in national competition such as Medical Research Council, Wellcome Trust, National Institute of Health Research, Stroke Association. 6. To present preliminary data in national / international conferences and publish such data in high impact journals.
Description of research component of programme (up to 500 words):
The post-holder will join the Southampton Clinical and Experimental Neurology Team and Wessex Neurological Centre neurovascular research programme studying subarachnoid haemorrhage and related disorders. Neurovascular research is lead by Professor Diederik Bulters Consultant Neurosurgeon, and Professor Ian Galea Honorary Consultant Neurologist. They have a long successful track record of research collaboration and joint supervision of clinical academic trainees. In particular, NIHR trainees have been part instrumental to successes such as the development the first clinical outcome scale specific for subarachnoid haemorrhage, the identification of neurofilament-light chain as the best predictor of clinical outcome after the World Federation of Neurosurgical Societies grade, the first randomised controlled trial of nrf-2 activation in SAH and the demonstration of haptoglobin as an effective treatment in preclinical models. The neurosurgical clinical research team has also won the NIHR Wessex CRN Outstanding Achievement award. This local excellence builds on Southampton's heritage as a leader in subarachnoid haemorrhage, with the only current pharmacological treatment - nimodipine - stemming from Southampton led research.

Translational research is conducted in close collaboration with neuropathologists, neuroradiologists, medical physicists, chemists, biologists, engineers and psychologists across the University and Trust, and institutions worldwide. Research is funded by Research Councils, NIHR, charities and pharma, with a current portfolio of >£5 million, which guarantees sustainability. The group publishes multiple four-star manuscripts annually in high impact journals. Research benefits from a wet laboratory with biochemical, molecular and histochemical capability, image-processing workstations, and access to high-performance supercomputing, a research-dedicated MRI scanner, and other facilities.

The post-holder will identify their own project and work under close supervision of Diederik Bulters and Ian Galea, and benefit from a cross-disciplinary team of clinicians and scientists across the University and Trust. Opportunities to develop project ideas will hugely benefit from access to the two leading global resources for research into unruptured aneurysms and subarachnoid haemorrhage. The team's Risk Of Aneurysm Rupture (ROAR) study is the largest cohort of unruptured aneurysms in the world. There are opportunities to develop skills AI and image analysis with supervision from Rahman Attar, or develop skills in big data and complex data linkage linking to primary care and other national records with supervision from Nazrul Islam. The Haemoglobin After inTraCranial Haemorrhage (HATCH) Consortium, an international network of investigators led from Southampton, which maintains the largest genetic and CSF collections from SAH patients in the world. This provides opportunities for genome-wide association studies of clinical outcome after subarachnoid haemorrhage in collaboration with Dr William Tapper, Professor in Genomic Informatics, or conduct a proteomic study of cerebrospinal fluid after subarachnoid haemorrhage in collaboration with Paul Skipp, Professor of Proteomics, to identify new therapeutic targets. As leaders in research into haemoglobin scavenging candidates will also be able to pursue research to advance haptoglobin as a treatment for subarachnoid haemorrhage, by joining ongoing pharmacokinetic and pharmacodynamics studies in pigs to inform dosing for Phase I and II clinical trials. The opportunities are diverse and will be tailored to the successful candidate.

Description of clinical component of programme (up to 500 words):
The clinical component of the training is based at the Wessex Neurological Centre, which is a major regional neurosciences centre providing Neurosurgery, Neurology, Neuroradiology (including Interventional), Neurophysiology and Neuropsychology specialist input. It serves a population over 3 million residents and has been an early adopter of subspecialisation with all major subspecialties represented in the department (Oncology, Skull Base, Vascular, Functional, Paediatrics, Spine). The centre has three dedicated neurosurgical theatres and a new fourth theatre currently being fitted with intraoperative MRI, as well as a dedicated 13 bedded neurointensive care unit. Continuous training in general neurosurgery is provided throughout the programme. In addition to elective and emergency surgery, trainees will attend general neurosurgery clinics and sub-specialty clinics and MDTs as well as monthly M&M. At ST1 and 2 level trainees will be on the junior on call rota and at ST3 and above contribute to either the cranial or the spinal middle grade rota. Trainees will be involved in audit and quality improvement projects throughout the programme and expected to present their results at the academic half-day meeting. In addition to training in neurosurgery, the programme allows for career development on a year by year basis with attachment to sub-specialties including neurointensive care, neuroradiology, neurophysiology, neurology and neurorehabilitation.
Specific support provided to trainee
• Experience in a Consultant led clinical service exposing to a wide variety sub-specialties. • Excellent Clinical, Educational and Academic Supervision. • A large and supportive neurosurgery research team comprising 5 clinical research nurses, two clinical trials assistants, four clinical research fellows and a clinical lecturer for collaboration, advice and guidance • A programme of organised neurosurgery curriculum teaching built around weekly local lectures, regional study days with neighbouring neurosurgical units and national neurosurgery bootcamp • Access to the regional NIHR clinical research fellow training scheme • Subspecialty Training and Career Development with attachments or clinic attendance in the following specialties: Oncology, Skull Base, Vascular,

Functional, Paediatrics, Spine

- Study leave.
- Training in clinical research including support of experimental medicine, Phase I, II and III clinical trials design, conduct and management of clinical trials and research, submission and maintenance of regulatory documents, recruitment of subjects, medical cover for research studies, participation in regulatory inspection preparation (e.g. MHRA and HSE)
  training development (assist in training and education of staff, GCP and trial specific, ethics and applications, medical students, clinical and research staff)
- Interaction with researchers leading the edge in their area and ability to choose a project to their best fit.
- Ability to attend a range of courses applicable to research methodology.
- Academic meetings held in the Clinical Neurosciences Division and the Wessex Neurological Centre, including joint meetings.

Milestones and timing of achievement of academic and clinical competencies

The exact milestones and timing of achievement of clinical competences will vary depending on the stage on the clinical experience and stage of training of the ACF when they start the post. The acquisition of clinical competencies and progression through the ARCP will not be different from that of a non-academic post during the 27 month clinical component of the ACF.

With respect to academic milestones and timing of achievement, these are broad guidelines since exact timing of achievement will depend on how time is split between clinical and research time (ie one block, several blocks or split weeks):

Year 1	
1.	Identification of topic of interest for research project, additional research supervisors if necessary and initial literature review.
2.	Identification of specific learning needs for the project and appropriate courses.
3.	Attendance at appropriate NIHR Training Programme courses and meetings.
Year 2	
1.	Academic competencies in utilising current software for database building, statistical analyses and reference management; understanding principles of data handling, confidentiality and sharing for pilot study data collection; processing, cleaning & analysis of data in collaboration with existing studies; submitting applications within the research governance framework.

2.	Obtaining ethical committee and NHS Research & Development proposals for exploratory project if required.
3.	Sample collection.
4.	Data collection / analysis.
5.	Attendance at relevant internal and external training courses.
Year 3	
1.	Data analysis.
2.	Application for Clinical Research Fellowship (Doctoral Training).
3	Study publication

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

Mandated attendance at NIHR training programme courses provided by the Faculty and NIHR CLRN covering aspects such as trial design, GCP, statistics, grant and paper/abstract writing, time management etc. This programme is cross speciality and cross regional with neurosurgical representation by 1-3 neurosurgical research fellows at any one time.

Trainee centredness:

The training will be centred on the trainee's own needs, identified early, and by dedicated supervisors during the post. The fellowship will be tailored towards the development of the trainees research skills and portfolio and achievement of successful external funding.

Quality assurance of the programme:

The research methods training will be provided through the Postgraduate School at the University of Southampton Faculty of Medicine. The academic supervisors have completed the postgraduate research supervision training provided by the University and the School is establishing training workshops for mentors for PhD and postdoctoral fellows.

All employees must abide by the guidance set out in the NHS Code of Conduct and Standard Business Conduct for NHS Staff (HSG 93/5), as amended or replaced from time to time. Managers must also comply with the NHS Code of Conduct for Managers.

All clinical professionally regulated staff must abide by the codes of conduct issued by their respective regulatory bodies (e.g. GMC) and ensure that they maintain updated registration as required by the role.

Mentoring Arrangements:
Monthly meeting with (Clinical Lead) & (Academic Lead) and weekly meeting with research supervisor during research block. An independent mentor will be appointed with whom the trainee will be able to discuss any issues of supervision/primary mentorship and the overall quality of the programme.
Academic Lead (University) for the IAT Programme:
Name: Professor Elaine Dennison Position: Professor of Musculoskeletal Epidemiology Address: Faculty of Medicine, University of Southampton, Building 85, Life Sciences Building, Highfield Campus, Southampton, SO171BJTelephone: 023 8070 4021 Email: emd@mrc.soton.ac.uk
Academic Supervisor (University) Details:
Name: Professor Ian Galea Position: Professor in Clinical & Experimental Neurology Address: Clinical Neurosciences, Clinical & Experimental Sciences, Faculty of Medicine, University of Southampton, Mailpoint 806, Level D, Southampton General Hospital, Southampton SO16 6YD, UK Telephone: 02380 777222 Email: I.Galea@soton.ac.uk And Name: Diederik Bulters Position: Consultant Neurosurgeon and Honorary Senior Clinical Lecturer Address: Wessex Neurological Centre, University Hospital Southampton Telephone: 02381205282 Email: d.bulters@soton.ac.uk
Education Supervisor (Trust) Details:
Name: Diederik Bulters Position: Consultant Neurosurgeon and Honorary Senior Clinical Lecturer Address: Wessex Neurological Centre, University Hospital Southampton Telephone: 02381205282 Email: d.bulters@soton.ac.uk

Clinical Supervisor(s) Details:
Name: Diederik Bulters Position: Consultant Neurosurgeon and Honorary Senior Clinical Lecturer Address: Wessex Neurological Centre, University Hospital Southampton Telephone: 02381205282 Email: d.bulters@soton.ac.uk and the neurosurgery consultants of the Wessex Neurological Centre
Deanery Programme Training Director Details:
Name: Salima Wahab Position: Consultant Neurosurgeon Address: Wessex Neurological Centre, University Hospital Southampton Telephone: 02381205282 Email: salima.wahab@uhs.nhs.uk
Deanery Programme Manager Details:
Name: Sue Ksous – Education Programme Manager Neurosurgery Email: sue.ksous@nhs.net
Confirmation that ACF posts attract an NTN(a):
This post will attract a NTN