# Job Description

# NIHR Academic Clinical Fellowship

# General Surgery ST1 (1 Post)

# NIHR Research Theme Acute Care

The University of Leeds, in partnership with Health Education England Yorkshire and the Humber and the Leeds Teaching Hospitals NHS Trust, has developed an exciting pathway of academic clinical training opportunities.

Applications are now invited for an **Academic Clinical Fellowship in General Surgery at ST1 level** in the **NIHR Research Theme Acute Care.** *This is a multi-specialty vacancy; an appointment may not be made in this specialty. There will be 1 ACF post in either General Surgery or Vascular Surgery.* This new post has been created as part of the Health Education England and National Institute for Health Research (NIHR) Academy Integrated Academic Training programme and offers candidates a comprehensive experience of clinical academic medicine working alongside internationally renowned clinicians and researchers.

We are seeking highly motivated, enthusiastic individuals with the potential to excel in both their clinical and academic training and who have the ambition to be the next generation of academic clinicians.

This Academic Clinical Fellowship (ACF) programme in General Surgerywill be run by the University of Leeds, the Leeds Teaching Hospitals NHS Trust and Health Education England Yorkshire and the Humber. Academic Clinical Fellowships (ACFs) are 3 year fixed-term national training posts. They attract an NTN(A) and trainees undertake 75% clinical and 25% academic training over the term of the post. They are employed by the NHS Trust and have an honorary contract with the University at whose Medical School their academic research is supported.

ACF trainees will join the vibrant Leeds Clinical Academic Training scheme and undertake the Research Training Programme provided by the University for which funding is provided by NIHR. They also are eligible for a £1,000 bursary per year to support research training activity (e.g to attend academic conferences).

ACF trainees would also normally complete and submit an external funding application for a research fellowship to enable them to complete a higher degree (PhD or research MD) following the completion of their ACF fixed-term post, which would be completed as Out-of-Programme-Research (OOPR).

All Academic Clinical Fellowships are run-through posts, regardless of specialty, with the exception of ‘Medical Education’ ACFs. A trainee entering ACF at ST1 in a specialty with a Core Training period would therefore be guaranteed continued training to CCT in the eventual specialty, as long as they progress satisfactorily through both their academic and clinical training. Run-through status is withdrawn if ACFs do not complete the academic component.

# POST DETAILS

## Job Title

NIHR Academic Clinical Fellow (ACF) – General Surgery (NIHR Research Theme Acute Care)

## Duration of the Post

Up to 3 years (25% academic, 75% clinical).

## Lead NHS Hospital/Trust in which training will take place

Leeds Teaching Hospitals NHS Trust with regional clinical rotations

## Research institution in which training will take place

**Leeds Institute of Medical Research at St James’s (LIMR),** School of Medicine, University of Leeds and other allied Institutes within the University of Leeds dependent on the specifics on the research project e.g. Institute of Mechanical Engineering, Faculty of Biological Sciences.

## Research Protected Time:

ACFs would have day release training to attend and complete an accredited postgraduate programme in health research methodology at the University of Leeds (24 contact days plus additional private study usually completed in one year). Arrangements for research blocks or weekly research days, constituting 25% FTE academic time (and comprising a total of 9 months over the 3 year ACF post), are managed by local agreement with the academic supervisors within the Leeds Institute of Medical and Clinical Sciences and clinical training programme director. This period of research will be used to obtain specific experience and knowledge in the research area of interest, obtain pilot data and apply for an external doctoral research fellowship.

## Academic Clinical Fellowship Training Programme: Research Component (NIHR Research Theme Acute Care)

Emergency admissions are responsible for more hospital admissions than all new cancer or diabetes diagnoses and this trend that is set to rise. Many patients presenting as surgical emergencies are not acutely unwell, but present with non-specific symptoms that could be managed in the community. Other patients require emergency surgery are amongst the sickest treated in the NHS, and have a high risk of postoperative complications and death. The Getting It Right First Time (GIRFT) 2017 Report estimated that of 697,314 emergency general surgical admission, no surgical procedure was delivered in 305,507 cases, at a cost of £361M. Further, it recommended that a reduction in non-surgical admissions by 30% was possible, with a cost saving of £108M.

Academic Surgery at the University of Leeds has a growing research portfolio in the use of remote patient monitoring supported by Leeds NIHR MedTech Co-operative in Surgical Technologies, Leeds RCS Eng. Surgical Trials Centre, and the Centre for Computational Imaging & Simulation Technologies in Biomedicine. Profs David Jayne and Julian Scott have a strong track record of supervising ACFs and PhDs, including previous ACFs who have completed PhDs in remote patient monitoring funded through the NIHR DRF programme.

Artificial intelligence (AI) is increasingly used to aid diagnosis, guide treatment, and model patient outcomes. At University of Leeds, AI research programmes include multi-paradigm diagnostic methods and systems, interventional planning and guidance, image-based optimisation of medical devices, and high throughput image analytics. Many patients presenting as an emergency with acute vascular and abdominal conditions undergo radiological imaging, providing a rich data repository for interrogation using AI techniques.

The **ACF in NIHR Research Theme Acute Care** will be hosted in Academic Surgery and work as part of an interdisciplinary research group investigating the use of AI to improve surgical outcomes. Previous work by the group has included a novel automatic method for determining left ventricular function from cardiac magnetic resonance images using convolutional neural networks and the use of spatio-temporal networks aimed at segmenting soft tissues in endoscopic images. The ACF will work closely with the Centre for HealthTech Innovation and the Centre for Computational Imaging & Simulation Technologies in Biomedicine. The ACF will be jointly supervised by Profs Jayne and Scott (Clinical) and Prof Frangi (Computer Vision) who have a strong track record of co-supervising ACFs and PhDs, including ACFs who have transitioned to NIHR DRF and MCR CRF PhDs. Research training will be bespoke, incorporating radiological imaging, machine learning, data analytics data modelling, and include access to new hybrid clinical imaging.

Exemplar projects include: i) CT assessment of Acute Abdominal Aortic Aneurysm, timing of intervention using Fat Attenuation Index Score, suitability for Endovascular Repair and validation using the Cydar technology and in silico modelling of devices, ii) machine and deep learning methodologies applied to CT scans from patients presenting with acute abdominal conditions (e.g. inflammatory bowel disease) to predict disease progression and the need for surgical intervention.

The ACF will be based in the Division of Gastroenterology, Anaesthesia and Surgical Sciences, LIMR. They will have full access to state of the art research facilities within LIMR and elsewhere across the St James’s University Hospital and University Campuses as necessary. They will be supported by a team of laboratory researchers, including technical support and supervision by postgraduate research assistants. As part of LIMR, the ACF will be expected to attend the compulsory basic research training courses organised by the University of Leeds, regular research group meetings, and the external speaker seminar programme. As much of the research is interdisciplinary in nature it is likely that collaboration with other Institutes within the University of Leeds, such as the Institute of Mechanical Engineering and the Faculty of Biological Sciences, may be necessary, in which case appropriate additional supervision will be arranged. There will be the opportunity to undertake interdisciplinary research as part of the Surgical Technologies theme of the new Leeds NIHR BRC.

## Academic Clinical Fellowship Training Programme: Clinical Component

Leeds has a long tradition of surgical training and was one of the first to establish a School of Surgery. Twice weekly MRCS teaching session are provided at Leeds General Infirmary. The Yorkshire School of Surgery organises monthly regional teaching days covering the whole of the Core Surgical Curriculum (mapped to the ISCP) and involving simulation for technical and non-technical skills as well as a lecture programme on clinical and non-clinical topics. There is local access to (i) Basic surgical skills course, (ii) Care of the Critically Ill Surgical Patient and (iii) ATLS. The clinical training will be based in Leeds and will rotate between surgical specialities based at St. James’s University Hospital and Leeds General Infirmary. It is likely that one of the clinical rotations will be outside Leeds (but within easy travelling time) to increase clinical experience. Each post will be of 6 months duration and all posts have the flexibility to allow the ACF to attend the academic component. The surgical specialities include:

* Colorectal Surgery
* Upper GI Surgery
* Hepatobiliary & Pancreatic Surgery
* Breast & Endocrine Surgery
* Urology
* Orthopaedics and Trauma
* Paediatric Surgery

Over the three year training programme the ACF will gain exposure to several general surgical sub-specialties. He/she will be expected to acquire appropriate surgical skills in both the elective and emergency settings and in line with their non-academic contemporaries. The ACF should have completed the MRCS examination by the end of the training programme.

# CONTACTS

## Academic Supervisors:

**Professor David Jayne**

Leeds Institute of Medical Research

Level 7 Clinical Sciences Building

St James’s University Hospital

LS9 7TF Phone: 0113 206 5281

Email: D.G.Jayne@leeds.ac.uk

**Educational and Clinical supervisors** will be assigned following appointment to align with the individual’s needs

## Training Programme Director (clinical):

**Mr Nehemiah Samuel**

**Core Surgery TPD**

Consultant Maxillofacial Oncology

Leeds Teaching Hospitals NHS Trust

Email: nsamuel@nhs.net

**Mr AB Harikrishnan**

General Surgery TPD

Consultant Colorectal Surgeon

Email: harikrishnan@doctors.org.uk

## Academic Training Programme Director

Professor Phil Quirke p.quirke@leeds.ac.uk

# Further Information

Because of the nature of the work for which you are applying, this post is exempted from the provisions of Section 4 (2) of the Rehabilitation of Offenders Act 1974 by virtue of the Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975.

Applicants are therefore, not entitled to withhold information about convictions, which for other purposes are “spent” under the provisions of the Act, and in the event of employment any failure to disclose such convictions could result in dismissal or disciplinary action by the University. Any information given will be strictly confidential and will be considered only in relation to an application for positions to which the Order applies.

For further information about the Academic Clinical Fellowship programme, please refer to the NIHR Academy webpage

<https://www.nihr.ac.uk/explore-nihr/academy-programmes/integrated-academic-training.htm>