# Job Description

# NIHR Academic Clinical Fellowship

# Medical Microbiology ST3 (1 Post)

# NIHR Research Theme Platform Science and Bioinformatics

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 Medical Microbiology at ST3 level** in the **NIHR Research Theme Platform Science and Bioinformatics.** *This is a multi-specialty vacancy; an appointment may not be made in this specialty. There will be 1 ACF post in either Histopathology or Medical Microbiology.* 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 Medical Microbiologywill be run by the University of Leeds, the Leeds Teaching Hospitals NHS Trust, Public Health England 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) – Medical Microbiology (NIHR Research Theme Platform Science and Bioinformatics)

## 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 - Medical Microbiology ACFs will be based within the Department of Microbiology, based at Leeds General Infirmary, with a move to purpose built facilities at St James University Hospital planned; the post holder will also rotate to one or more local district general hospitals (see below) in order to obtain adequate clinical experience to fulfil the requirements of the FRCPath Medical Microbiology curriculum.

## Research institution in which training will take place

**Leeds Institute of Medical Research at St James’s (LIMR),** School of Medicine, University of Leeds. The academic Microbiology department is currently situated in the Old Medical School at Leeds General Infirmary i.e., alongside the NHS Microbiology Department. Public Health England also deliver regional public health Microbiology services from the Old Medical School.

## 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 LIMR 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 (see below).

## Academic Clinical Fellowship Training Programme: Research Component

## The Leeds Institute of Medical Research is a research Institute (in the School of Medicine, University of Leeds) dedicated to defining the molecules involved in human diseases and using this knowledge to develop novel therapies and new drugs. The institute has bench to bedside and bedside to bench strategies, which are based upon our own multi-disciplinary research work and strong clinical interactions. By fostering research in a world-class Institute, we hope to facilitate improvements to human healthcare.

Professor Wilcox’s Healthcare Associated Infection (HCAI) research group joined the Institute in 2011 to strengthen the infection related work of the Institute, and continues to expand (<https://medicinehealth.leeds.ac.uk/infection-antimicrobial-research>). Professor Wilcox’s research group is focussed on HCAIs, and is closely aligned to the clinical infection service within Leeds Teaching Hospitals and to Public Health England (PHE; Leeds is part of the PHE network of laboratories). The group undertakes a multidisciplinary, multi-targeted approach: molecular/structural biology in mechanisms, molecule design, infection epidemiology and prevention; effective diagnostics; optimised prescribing; and new treatment options. The HCAI RG has delivered bench-to-bedside research successfully for >15 years centred on our novel gut model, which has yielded >40 publications to date. Our research on Clostridium difficile infection (CDI) is world leading, and our expertise has been harnessed to address other AMR threats. We have secured major AMR/HCAI-related funding from UK NIHR, MRC, EU Innovative Medicine’s Initiative, US National Institutes of Health and Centers for Disease Control and Prevention.

The ACF will join the HCAI RG focussing on predicting the adverse consequences associated with antibiotics, including their effects on the gut microbiome. Our aims are to determine when and in whom specific antibiotics are best prescribed to minimise resistance emergence and selection, including the use of diagnostic assays to identify individual level risks.  We have developed models that can simulate the desirable and undesirable effects of antibiotics.  We use a clinically reflective in-vitro chemostat model, primed with pooled human faeces, of the human colonic environment to investigate antimicrobial effects on gut microbiota and key pathogens.  This model has proved to correlate closely with clinical data, indeed surpassing the predictive value of animal models.  Model data have directly influenced antibiotic development programmes, clinical trial design (CDI therapeutics), and NHS antimicrobial prescribing guidelines.  The gut models yield daily controlled sequencing data on the gut microbiome before and after antibiotic exposure spanning 6-8 weeks.  Furthermore, ongoing developmental work will miniaturise and automate the models, greatly increasing throughput.  The ACF will be trained in the use of the in-vitro chemostat model, bacterial detection and quantification, sequencing and bioinformatics appropriate to the project. These opportunities mean that the ACF will be particularly well placed to generate pilot data on which to base funding applications for a PhD.

## Academic Clinical Fellowship Training Programme: Clinical Component

The post holder will enter the West Yorkshire Medical Microbiology training programme at ST3 level. For most of the time the post will be based at Leeds General Infirmary for both academic and service commitments. The post holder will also rotate to one or more local district general hospitals (see below) in order to obtain adequate clinical experience to fulfil the requirements of the FRCPath Medical Microbiology curriculum. The total DGH rotation will not exceed 20% of the duration of the training post.

The appointee will be expected to participate fully in the clinical work of the department to which he/she is attached. This is delivered through a number of different methods including telephone liaison, attendance on specialty ward rounds and bacteraemia ward rounds (following up positive blood cultures). In addition, the trainee will participate in audit projects and receive training in Infection Prevention and Control. The trainee will have sufficient laboratory exposure to fulfil the requirements of the FRCPath examination in Medical Microbiology, but diagnostic laboratory work is not a major component of the post.

In addition, this post will include a component of public health infection training to be arranged, likely in Yorkshire and Humber at appropriate Public Health England site(s) in conjunction with the above clinical training/duties.

One Thursday afternoon per month is set aside for postgraduate training, which is ‘protected time’ and consists of a series of postgraduate lectures at the LGI site. Additional regular teaching sessions include a weekly Journal Club (Monday), case discussion session (Wednesday) and the departmental clinical lunchtime meeting on Tuesdays (term time only).

# CONTACTS

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

**Academic Lead**

Professor Mark Wilcox

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**Clinical Supervisor**

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Consultant Microbiologist,

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## Training Programme Director (clinical):

Dr Nicola Young

Consultant Microbiologist and Microbiology West Yorkshire Training Programme Director

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## Academic Training Programme Director

Professor Phil Quirke [p.quirke@leeds.ac.uk](mailto: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>