NHS England

NHS England – East of England & Anglia Ruskin University

JOB DESCRIPTION

NIHR ACADEMIC CLINICAL FELLOWSHIP IN ANAESTHETICS

CT3, ST4 AND ACCS4

RESPONSE MODE – "ACUTE RESPIRATORY DISTRESS SYNDROME" ARU CENTRE FOR BIOMEDICAL RESEARCH AND HEALTH INNOVATION

September 2026

JOB DESCRIPTION

Academic Clinical Fellowship (ACF) in Anaesthetics
This post has been awarded under the Response Mode theme

Objective of the post

This ACF post is aimed at medically qualified residents in anaesthetics with outstanding potential for development as academics. The post provides an opportunity for combined anaesthetics and academic training. The post allows residents to combine first class training in anaesthetics with research training and is specifically designed to support the post-holder to develop and submit a highly competitive application for a PhD training fellowship during the initial three-year training period.

The post will be appointed at either CT3, ACCS4 or ST4 level

Eligibility Criteria

For CT3/ACCS4 entry:
The anaesthetic trainee applicant must be in a current Core Anaesthesia Training programme at CT2 level or ACCS Anaesthesia Training Programme at ACCS3 level and have an outcome 1 at their most recent ARCP. Full Pass at Primary FRCA is desirable at the time of commencing appointment.

For ST4 entry:
The anaesthetic trainee applicant may be in a current Core Anaesthesia Training programme at CT3 level or a current ACCS Anaesthesia Training Programme at ACCS4 level. They must have evidence of an outcome 1 at their most recent ARCP. In addition, evidence of full Pass at the Primary FRCA examination is required at the time of interview. Alternatively, the anaesthetic trainee applicant may have completed a Core or ACCS Anaesthesia training programme and hold an outcome 6 at final ARCP.

Any applicant deemed appointable at the ACF interview that does not currently hold an NTN/Deanery Reference Number (DRN) at CT3 or ACCS4 level will need to be assessed and interviewed through the National Clinical Recruitment process and deemed appointable in order to be formally appointed to the ACF post.

Clinical training programme directors

Dr Helen Underhill, Consultant Anaesthetist
Dr Nina Walton, Consultant Anaesthetist

Academic training programme director
Dr John Davies, Clinical Academic Training Lead

Academic contact, duration of the post and outcome
The post will be appointed at either CT3, ACCS4 or ST4 level

This ACF post is funded for three years and carries an academic national training number - NTN (A). After appointment, the ACF will be provided with an individually tailored training programme that will comprise 25% research and 75% Anaesthetics training.

It is expected that the post holder will compete for and successfully secure a competitive research training fellowship within the three-year tenure of the post, allowing them to complete research towards a higher degree (PhD or MD). In their application to competitive clinical PhD fellowships, the ACF will be supported by our named clinical academic mentors, as well as the IAT Lead, and University academic support services. The clinical academic mentors will also provide advice on clinical academic careers, liaising with local trusts and universities where appropriate.

After completion of a research training fellowship, it is anticipated that the post holders will continue higher training within NHS England - East of England to complete specialist training in anaesthetics. They will also be in a strong position to apply for the post of Clinical Lecturer or compete for an Intermediate Fellowship to pursue their academic career.

If a candidate is unsuccessful in obtaining funding for a higher degree, they can transfer into a non-ACF Anaesthesia specialty training post in the East of England and pursue full-time clinical sub-specialty training.

NHS organisation(s) in which training will take place
Broomfield Hospital, Mid and South Essex NHS Foundation Trust

Research institution in which training will take place
ARU Centre for Biomedical Research and Health Innovation

Day release or block release for protected research time?
Day release or block release, to be determined.

Clinical component of the training

ACFs participate in the normal specialty resident rotation.

ACFs will be recruited at CT3, ACCS4 or ST4 level and will spend their three years in a clinical training post at Broomfield Hospital. These posts are indistinguishable from the mainstream Anaesthetic CT3, ACCS4, ST4 posts at Broomfield Hospital and involve normal full time on-call commitments.

According to the 2021 Anaesthetic Curriculum they will undertake their Stage 1:3 year if CT3 or ACCS4 and Stage 2 specialty training, during which they will undertake modular attachments to various subspecialty areas of anaesthesia. All are delivered in Broomfield apart from three months of cardiac anaesthesia which is delivered in Essex Cardiothoracic Centre, Basildon and three months of neurosurgical anaesthesia which is delivered at Addenbrooke's Hospital, Cambridge.

In line with national guidance, the East of England School of Anaesthesia expects all residents to use the Royal College of Anaesthetists Life Long Learning platform to evidence progression. Stage 2 structured guidance documents are in place to ensure residents seek all elements of subspecialty training. In line with national guidance, the mentoring, tutoring and annual training review (ARCP) processes will involve representatives from both the Academic and Anaesthetic Departments in Broomfield. The region has a strong track record at the FRCA examination. Regular local and regional Final FRCA teaching is in place as are a number of Simulator Centre training days. There is an expectation that the resident would secure their full Final FRCA prior to embarking on the full time academic module in year three.
The ACF Programme is principally designed to nurture residents wishing to pursue an academic career. In addition, the post also equips the resident with the necessary training to re-enter full time Stage 3 level training in anaesthesia after three years should this be required. Subject to satisfactory ARCP outcome, Stage 3 level training towards a CCT in Anaesthesia

could be accommodated within the School's existing Training Programme. The Region can provide training across the entire range of anaesthetic subspecialty choices, with particular strengths in cardiothoracic anaesthesia, neuroanaesthesia, transplant anaesthesia. In addition, the Region also has existing Special Interest Area Training schemes for subspecialty training in pain medicine, obstetric anaesthesia and intensive care.

Research component of the training

This post has been awarded under Response Mode - "Acute respiratory distress syndrome" within the ARU Centre for Biomedical Research and Health Innovation – reflecting the importance of developing new approaches to understand and treat acute and life-threatening pulmonary conditions.

The Anglia Ruskin University (ARU) School of Medicine has developed a strong culture of research and innovation, and established links with research institutes of excellence across the university and beyond. ARU conducts world-leading and impactful research, which has the potential to innovate and the power to enhance social, cultural and economic well-being at national and global levels. Sixteen of ARU's research areas were classed as generating world-leading research by the Research Excellence Framework (REF) in 2021.

The opportunity sits within the newly-formed Centre for Biomedicine and Health Innovation (CBHI), a translational research centre bringing together expertise across biomedical science, life sciences, clinical research and health innovation. Previously the Biomedical Research Group and Medical Technology Research Centre, the CBHI forms part of ARU's wider health innovation ecosystem and is focused on translating fundamental biomedical discoveries into improved diagnostics, treatments and patient outcomes.

Acute respiratory distress syndrome (ARDS) is a major cause of morbidity and mortality in critically ill patients and is characterised by disruption of the pulmonary microvascular endothelial barrier, leading to vascular leak and pulmonary oedema. There remains a significant unmet need for novel therapeutic strategies that can protect the pulmonary circulation and reduce lung injury in ARDS.

Our research programme investigates the molecular mechanisms regulating the pulmonary microvasculature, with a particular focus on the novel role of taste G-protein coupled receptors (GPCRs), including the sweet taste receptor family (T1R) in vascular function. We have identified the presence of these receptors within the pulmonary endothelium and demonstrated that their regulation attenuates ARDS-induced endothelial barrier disruption and lung injury in a human cell model, an *in vivo* mouse model, and a human clinical trial. Our research has also identified specific bitter taste receptors (T2R) in the microvasculature however far fewer studies have been performed in this area. We are thus focused on understanding the role of T2R in regulating microvascular function in experimental models of ARDS, providing an opportunity to investigate these receptors as potential therapeutic targets for pulmonary vascular dysfunction.

Academic Clinical Fellows (ACFs) will contribute to a multidisciplinary translational research programme combining *in silico*, *in vitro* and *in vivo* approaches to investigate T2R biology and identify novel therapeutic compounds. The research focuses on:

1. Drug discovery and molecular modelling – using available crystal structures and AlphaFold model predictions to identify novel and selective T2R antagonists.
2. Receptor pharmacology – testing candidate compounds in HEK-T2R overexpressing cell lines to determine their ability to activate or inhibit individual T2R receptors and characterising downstream signalling responses such as intracellular calcium release.

3. Pulmonary endothelial biology – using human pulmonary microvascular endothelial cells to investigate how T2R modulation affects endothelial barrier integrity and vascular permeability.
4. ARDS models and therapeutic validation – evaluating promising compounds in established LPS-induced models of endothelial injury and, where appropriate, progressing lead compounds into other models of ARDS to assess their effects on lung injury and pulmonary oedema.

The project sits within Prof Havovi Chichger's research group and provides ACFs with an opportunity to develop extensive multidisciplinary research skills spanning molecular biology, cell biology, pharmacology, computational modelling and experimental respiratory medicine. The laboratory has established a range of cellular and molecular assays to investigate receptor function and endothelial barrier integrity, alongside well-characterised experimental models of ARDS. This translational approach will enable ACFs to gain experience across the research pathway, from target identification and drug discovery through to preclinical therapeutic evaluation, providing valuable skills and expertise relevant to respiratory, cardiovascular and critical care research.

For Academic Clinical Fellows, CBHI provides an excellent multidisciplinary research environment in which to develop expertise across basic biomedical research, translational science, clinical research and health innovation. Its focus on translating scientific discoveries into clinically relevant interventions provides opportunities for ACFs to develop research that addresses important unmet healthcare needs while gaining experience across the full pathway from laboratory discovery to patient benefit. There will be a range of mentorship opportunities, both within the Centre and at ARU, and with the wider Cambridge Cardiovascular research network and partnerships.

The Research opportunity at ARU

We prioritise building a strong community for our trainees, with the aim of providing support, both personally and developmentally, and a sense of belonging and have developed an IAT community to provide opportunities for trainees to meet, receive research insights and training, gain mentorship and career advice, as well as pastoral support.

Trainees will be encouraged to participate in ARU's community of researchers at various stages of their careers, and present at seminars to gain experience of presenting and receiving constructive feedback in a supportive, collegiate environment.

Each IAT trainee is assigned a Research Supervisor from their designated research group. In addition, the ACF will receive research training and mentorship from the head of the research institute, the head of the research group, and other research group members. The Research Supervisor meets with their trainee at least once every 2 weeks within their academic time and it is their responsibility to support trainees in engaging with research, developing as researchers, and preparing for higher research degrees. ARU Trainees are also assigned an IAT mentor, a clinician with IAT experience who serves as a key point of contact for non-operational issues related to their training.

We have established a monthly seminar series, tailored specifically for our IAT trainees. The core topics are based on the NIHR IAT guide and are reviewed annually to ensure relevance. All IAT trainees are enrolled in the ARU Doctoral School, which provides training and support for postgraduate research students across the university, including support for applications to higher degrees. The ACFs will be enrolled into the Researcher Development Programme at ARU and thereby have access to postgraduate researcher development opportunities such as research proposal training, effective presentations training, academic writing training, ethics & research integrity training, and qualitative/quantitative methodology training. There

are also opportunities for ACFs to join ‘writing together’ spaces, again open to all postgraduate researchers at ARU.

We offer IAT trainees access to a 12-week distance-learning, 30-credit module on Research Methodology. This module offers flexible, multidisciplinary training for healthcare professionals on qualitative and quantitative research methods, with a focus on applying research principles to their own projects or ideas.

ARU upholds the Concordat to Support Research Integrity and became a signatory to the revised Concordat to Support the Career Development of Researchers in 2022. Committed to Athena Swan since 2012, ARU achieved an institutional silver award in 2024 for advancing gender equity, supported by our Athena Swan Silver Action Plan (2024–2029).

Programme contact for further information
Essex Clinical Academic Training Office Inbox, ecat@aru.ac.uk

NHSE local office contact for further information
england.recruitment.eoe@nhs.net

Further information about Integrated Academic Training pathways and programmes can be found on the NIHR website. Please visit http://www.nihr.ac.uk/IAT to find out more.