NHS
Cambridge
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NHS Foundation Trust

UNIVERSITY OF CAMBRIDGE

Academic Clinical Fellowship

In

Obstetrics and Gynaecology

(ST1)

One post

Entry: August 2027

Job title	Academic Clinical Fellow in Obstetrics and Gynaecology
Post(s)	ACF-2027-14-009 – Prevention and Public Health Post 1 – Infectious Diseases OR Obstetrics and Gynaecology OR Renal Medicine
NIHR Priority Research Theme	Post **ACF-2027-14-009** has been awarded under the research theme **Prevention and Public Health** The appointee will be expected to develop a research programme in that theme area.

These posts will attract an Academic National Training Number – NTN(a)

Duration and Outcome

This post will be appointed at ST1 level and is funded for three years. The principal aim of the ACF scheme is to allow academically gifted clinical trainees the opportunity for 25% protected research training and during that time to formulate and submit an application for an externally funded Research Training Fellowship (RTF) (e.g. Medical Research Council, Wellcome Trust, British Heart Foundation). If candidates are unsuccessful in obtaining funding for an RTF/PhD, they can transfer into non-ACF ST3+ posts and pursue full-time clinical sub-specialty training. It is anticipated that all successful ACFs completing RTFs would be in a strong position to compete for Clinical Lecturer posts following award of their higher research degree, as per the Integrated Academic Training programme.

NHS Organisation(s) in which training will take place

The Rosie Hospital, Cambridge University Hospital NHS Foundation Trust

Research Institution(s) in which training will take place

University of Cambridge (Department of Obstetrics & Gynaecology) and Cambridge University Hospital NHS Foundation Trust. Depending on the specific of research topic projects may be pursued at one of a number of other research institutes on the Cambridge Biomedical Research Campus (Addenbrooke's Hospital).

Day release or block release for protected research time?

It is anticipated that the successful applicant will be available for research on a block basis (e.g. 3-9 months durations) comprising 25% WTE over three years. This will be subject to negotiation.

Description of the Research Component

The department has research encompassing a very wide range of methods, from population epidemiology through to very basic molecular and cell biology. The project will be decided following mutual discussion and taking into account the successful candidate's previous experience and personal interests.

The University Department of Obstetrics & Gynaecology

- Professor Gordon Smith (Head of Department and Honorary Consultant)
- Professor Catherine Aiken (Professor and Honorary Consultant)
- Professor D S Charnock-Jones (Professor (Non-clinical) in Reproductive Biology)
- Professor Francesco Colucci (Professor (Non-clinical) in Immunology)
- Professor Miguel Constância (Professor (Non-clinical) in Reproductive Biology)

The Department of Obstetrics and Gynaecology has programmes of basic, translational and clinical research addressing the determinants of pregnancy complications. Work in the Department is funded by the Women's Health theme of the Cambridge Biomedical Research Centre, a Wellcome Trust Investigator award, and numerous project grants (MRC, BBSRC, Wellcome Leap and a range of research charities).

Prof Charnock-Jones and Prof Constancia both use transgenic mouse models to identify key genes involved in murine placentation with the aim of better understanding normal reproductive function. Prof Constancia has a major interest in placental epigenetics, in particular genomic imprinting (i.e. selective epigenetic silencing of genes according to parent of origin). Prof Colucci is an immunologist whose main area of interest is the biology of the natural killer cell. His research programme includes the role of a sub-type of this cell type, uterine natural killer cells, in the control of murine and human trophoblast invasion of the maternal uterine resistance vessels. Translational research in the department focuses on the role of placental dysfunction in determining the risk of adverse pregnancy outcome. Prof Smith led a large scale prospective cohort study (POPS) of unselected women in their first pregnancy where placental function was studied by assessing circulating markers in maternal serum, by serial Doppler ultrasound of the utero-placental circulation and by assessing placental gene and protein expression following birth. The Wellcome Trust have awarded £3.2 million to Prof Smith and Prof Charnock-Jones for a second cohort of 5,500 nulliparous pregnant women which commenced recruitment in 2020. This study, POPS2, has a nested randomised controlled trial, evaluating a novel approach to screening for the risk of placentally-related complications at term. Translational research in the department also includes use of multiple forms of "omics" analysis of human biological samples, which creates highly complex datasets. This work supports a focus on the use of machine learning and artificial intelligence to identify novel methods of disease prediction and to yield insights into the mechanisms of disease, and involves close collaboration with the Biostatistical Machine Learning

theme at the nearby MRC Biostatistics Unit. Finally, clinical research in the Department uses secondary analysis of diverse data sources to study determinants and predictors pregnancy outcome. Prof Aiken is involved in analysing short and long term pregnancy outcome using record linkage, as well as having a particular focus on the effects of metformin on the fetus and placenta.

Research from the Faculty within the Department has been published in many leading general journals, both basic science journals including Nature, Science, Nature Medicine, Nature Genetics, Nature Genetics, Nature Microbiology, PNAS, JCI and leading clinical journals, including NEJM, Lancet, JAMA, BMJ, and PLoS Medicine.

The research component of the post can, therefore, be selected on the basis of the successful candidate's previous experience and interests and could extend from analysis of clinical data, translational research using human samples, computational studies, through to relevant animals studies.

Description of the Clinical Training Component

Cambridge University Foundation NHS Trust (CUFT), Addenbrookes Hospital is world renowned and provides most tertiary obstetric and gynaecology services for the Eastern region as well as general obstetrics and gynaecology for the local population.

The Trust also includes the Rosie Hospital, which provides a full range of women's and maternity services. There are approximately 6000 deliveries per year.

The fellow will complete a total of 3 years training [with 25% of time spent in academic work] and then move to ST4 either as part of the regional general training programme or ideally in a funded clinical training fellowship.

Obstetrics and Gynaecology Department

The East Anglia area is mainly rural and covers the counties of Norfolk, Suffolk and Cambridgeshire with a population of around 3 million. The Deanery training area also includes the counties of Bedfordshire, Essex and Hertfordshire.

The post is based at CUHFT, which It provides general Obstetrics & Gynaecology services to the local population and offers sub-speciality referral services for the region. The Rosie Hospital is the maternity unit and has approximately 6,000 deliveries per year. There are 5 sub-specialist Consultants in Maternal-Fetal Medicine. In the Gynaecology Division, there are 4 sub-specialists in Gynaecological Oncology, 3 in Reproductive Medicine and 2 in Uro-gynaecology. All sub-specialist services offer RCOG approved sub-specialist training and take regional referrals for the management of complex cases.

Further Information and Contacts

Clinical Academic Training Office (CATO) at the University of Cambridge

CATO Director	Professor Alasdair Coles Email: ajc1020@medschl.cam.ac.uk
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NIHR	http://www.nihr.ac.uk/IAT