



## Job description

### NIHR student internships in translational medicine Summer 2016

One internship will be available in each of the following three departments:

Nuffield Department of Primary Care Health Sciences: <http://www.phc.ox.ac.uk/>

National Perinatal Epidemiology Unit, within the Nuffield Department of Population Health. See <http://www.npeu.ox.ac.uk/> and [www.ndph.ox.ac.uk](http://www.ndph.ox.ac.uk)

Weatherall Institute of Molecular Medicine, within the Nuffield Department of Medicine. See <http://www.imm.ox.ac.uk/home> and <http://www.expmedndm.ox.ac.uk/home>

### Project information

Interested candidates should apply indicating their preference of project. The three available projects are as follows:

#### ***Project 1: Different ways of monitoring in hypertension and pregnancy***

The post holder will do a project linking with our programme of work around blood pressure management – including self-monitoring – in hypertension and pregnancy. There are a number of options:

- a) Self-monitoring of blood pressure is becoming common place but there are relatively few data regarding current UK practice. The student will analyse data from a large (>6000 respondents) survey of self-monitoring in hypertension. The intern would clean the data and analyse it before writing it up.
- b) Little is known about whether patients with moderately high blood pressure (mild hypertension) and a low risk of heart attack/stroke should be given medication to lower blood pressure. This study will examine the extent to which patients are prescribed pharmacological treatment for low risk mild hypertension using data from a large database of Primary Care records.
- c) Pilot a high-throughput platelet assay to characterize multiple platelet activation pathways in pregnant women, including those with gestational hypertension and pre-eclampsia. This will allow us to examine in detail the changes in platelet function during normotensive and hypertensive pregnancies.

These results will be written up in at least one paper and prepared for presentation. Funding will be available for the successful candidate to attend a conference with the aim of presenting this work. Day to day supervision will be by Prof Richard McManus

and Dr Claire Schwartz/Dr James Sheppard/Dr Kath Tucker depending on which project is chosen.

***Project 2: Identification of pathways driving inflammation in Inflammatory Bowel Disease***

The Simmons lab have a programme of translational work in IBD defining molecular drivers of inflammation in this disease. IBD results from a breakdown of immune tolerance to commensal microflora in individuals with a given genetic background. We have used systems immunology approaches to define new families of proteins associated with inflammation in IBD. In this work the student will work with other members of the team to define the functional role of such proteins in driving inflammation in primary human cells from healthy or IBD donors. They will be exposed to a wide variety of cellular and molecular techniques, gain bioinformatics experience, present in unit meetings and be involved in writing up the findings from their work. The student will be supported to attend a conference of relevance to their research and present their findings in this forum. Day to day Supervision will be assigned to an experienced post-doctoral fellow or clinician scientist together with Professor Simmons.

***Project 3: Actions to prevent severe pregnancy complications – do we learn the same lessons from in-hospital review of care and review by an external multidisciplinary team?***

Marian Knight's group focuses on using national observational data to investigate management of uncommon complications of pregnancy and early childhood. Examining in detail the management of women who have severe pregnancy complications can indicate areas where our care can be improved. When severe complications happen, a hospital team will identify lessons to improve care, and in some circumstances, an external team will also perform a similar review, known as a Confidential Enquiry. The post-holder will undertake a project investigating whether the lessons learned to improve care, and actions recommended by local review teams are the same or different to those recommended by the external team. The post-holder will be supported to attend a conference of relevance to their research and present their findings in this forum. Day to day supervision will be by Prof Marian Knight and Dr Manisha Nair.

**Purpose of the post**

These Translational Medicine Student Internships from the National Institute of Health Research (NIHR) have been awarded to NIHR Research Professors, to support the research training and development of a medical student or allied health professional, for a period of 2 months over the summer vacation.

The Intern will:

- Receive appropriate training;
- Develop a translational research project (see the job description for details);
- Prepare the work for potential presentation +/- publication in an academic journal.

Daily working relationships will be with the NIHR Research Professors and members of their teams :

Prof Richard McManus and Dr Claire Schwartz/Dr James Sheppard/Dr Kath Tucker  
Prof Marian Knight and Dr Manisha Nair  
Prof Alison Simmons and Heidi Zinecker

## **Main Duties**

This is an exciting opportunity for a student or early career to undertake an internship and obtain a research grounding in world-leading academic departments. The main duties of the posts will involve working up and then delivering the research projects. On a day to day basis the work will be variable and will depend on the project chosen. The successful candidate will be an integral member of the multidisciplinary research team and will thus benefit from exposure to a range of research techniques. For exceptional candidates the work may provide a grounding for future applications for clinical academic posts or fellowships.

## ***Selection criteria***

Candidates will be judged on the basis of the following criteria and should try to ensure that their application shows how they meet the criteria. Candidates will be expected to give examples of relevant experience which need not be work experience, but can be experience from other areas of life.

**Your application must include a supporting statement from a personal tutor or equivalent.**

## **Essential**

Enrolled on an undergraduate medical course with access to a long vacation (ie usually 1<sup>st</sup> /2<sup>nd</sup> /3<sup>rd</sup> year). Applications may be considered from suitably qualified students moving from a relevant MSc to PhD programme with a vacation in between OR an established health professional (e.g. midwife, neonatal nurse) considering a research career and able to take 8 weeks leave of absence from their clinical post.

Interest and enthusiasm for translational medicine

Ability to collaborate with team members from multiple scientific disciplines.

High standard of written English communication.

## **Desirable**

Previous experience of health research

## **How to apply**

Please apply via email to [recruit@phc.ox.ac.uk](mailto:recruit@phc.ox.ac.uk), with the subject heading 'NIHR Internship application', and attach the following documents:

- CV
- Covering letter explaining how you meet the criteria for the post
- Supporting statement from personal tutor or equivalent

Please state clearly which of the three projects you are applying for and whether you are also interested in any of the others.

Closing date for applications is noon on Wednesday 8 June and interviews will be held on Tuesday 28 June.