Statistical Geneticist - Research Associate/Research Assistant

Research Associate - £31,604 - £38,833
Research Assistant - £25,728 - £30,688

We seek a talented and ambitious statistician with an interest in genetics and/or stroke to join a team of statistical geneticists, genetic epidemiologists and bioinformaticians working on large-scale genomic studies of cardiovascular disease at the CEU, Department of Public Health and Primary Care, University of Cambridge.

The successful candidate will use genome-wide epidemiological, computational and statistical techniques to investigate potential causal relationships between conventional and novel risk factors and cerebral small vessel disease (SVD) using Mendelian randomisation. Mendelian randomisation uses genotypes as instrumental variables to assess associations avoiding confounding and reverse causation that limit the interpretation of observational associations. Cerebral SVD is a major health problem as (1) it causes lacunar stroke, the cause of a quarter of all ischaemic strokes; (2) it is the major vascular pathology underlying vascular dementia; and (3) it is an important pathology underlying intracerebral haemorrhage. Despite its importance there are few effective treatments. Hypertension is the major risk factor and blood pressure-lowering treatment slows progression, but no other proven treatments exist currently. This reflects a lack of understanding about the underlying pathophysiology, something this post will address by evaluating whether risk factors that are potential treatment targets cause cerebral SVD. The work is expected to lead to high-impact publications and ultimately inform drug discovery programmes.

The team have access to a spectacular range of relevant datasets, including MEGASTROKE association data (~67,000 cases, 454,000 controls and ~8M variants), a unique collection of >3,000 SVD patients with genotyping and MRI brain imaging and the INTERVAL study, which has high-throughput measurements of blood metabolites, proteins, clinical blood cellular phenotypes, genotypes and sequencing. Results from genome-wide association analyses of many of these phenotypes will be directly available for integration into the research project for assessment of causality by Mendelian randomisation.

The project is a collaboration between the CEU and a world-leading stroke genetics group at the University of Cambridge led by Hugh Markus, Professor of Stroke Medicine and the successful applicant will be part of a team working collaboratively across these research groups. The appointee will work in the genetics team at the CEU, with Dr Joanna Howson (statistical geneticist), Dr Adam Butterworth (genetic epidemiologist) and Dr Will Astle (statistical geneticist) and also with the stroke genetics group, Prof. Hugh Markus, Dr Matthew Traylor and Prof. Cathryn Lewis, Genetic Statistics, KCL. The appointee will be expected to work closely with other teams in the CEU, including the biostatistics team who have a major international reputation for their work developing methods for drawing causal inferences from genetic data (Dr Stephen Burgess and Prof. Simon Thompson), expertise which is directly relevant to the research project.
The candidate is expected to have relevant post-graduate training, ideally in genetic epidemiology or applied statistics e.g. PhD in Statistics, Statistical Genetics, Medical Statistics, Genetic Epidemiology or Biostatistics, or have relevant equivalent experience.

Appointment at research associate is dependent on having a PhD (or equivalent experience is recognised), including those who have submitted but not yet received their PhD. Where a PhD has yet to be awarded or submitted appointment will initially be made at research assistant and amended to research associate when the PhD is awarded. If an individual has not submitted a PhD or is not working towards one they could be appointed as a Research Assistant if they have either a degree (first degree and/or Master's) in a relevant area or equivalent experience.

The funds for this post are available for 2 years from commencement in post.

Department of Public Health and Primary Care, Strangeways Research Laboratory, Worts Causeway, Cambridge CB1 8RN (approx 2 miles south of city centre).

Informal enquiries can be made to Richard Houghton: rth29@medschl.cam.ac.uk (telephone 01223 748674)

Closing date: 7th May 2018

Interview Date: 14th May 2018

Please ensure that you upload a covering letter and CV in the Upload section of the online application. The covering letter should outline how you match the criteria for the post and why you are applying for this role. If you upload any additional documents which have not been requested, we will not be able to consider these as part of your application.

Please include details of your referees, including e-mail address and phone number, one of which must be your most recent line manager.

To apply online for this vacancy, please go to the University's Web Recruitment System here: http://www.jobs.cam.ac.uk/job/16553/

You will need to register an account (if you have not already) and log in before completing the online application form.