Quote Ref: LS/90036

THE UNIVERSITY OF MANCHESTER

FACULTY OF LIFE SCIENCES

PARTICULARS OF APPOINTMENT OF POST DOCTORAL RESEARCH ASSOCIATE

- The University invites applications for the above position which is tenable from 1 July 2009 for up to 29 months.
- Previous applicants need not apply.
- Salary will be in the range of £28,839 - £35,469 per annum, depending on experience
- Applications should be returned by 9 April 2009 to:

  Dr Deborah Bentley (Research Manager)
  Faculty of Life Sciences
  AV Hill Building
  University of Manchester
  Oxford Road
  Manchester
  M13 9PT

  Email:deborah.bentley@manchester.ac.uk

- Please quote ref LS/90036 on all correspondence.
- **A properly constituted application must include a completed University application form obtainable from http://www.manchester.ac.uk/aboutus/jobs or requested from lifesciences-hr@manchester.ac.uk, Tel: 0161 275 8836. You may attach a CV or additional sheets to provide further information if necessary**
- Staff currently employed by the University are advised that on appointment to this post the following terms and conditions will apply:
  -1 August Incremental date / with a qualification period of 6 months in post (if appropriate)
  -up to 3 months notice

Unfortunately it is not possible for the University to acknowledge applications or contact all unsuccessful applicants. If you have not been contacted within 4 weeks of the closing date, you should assume that, on this occasion, your application has not been successful. We would, however, like to take this opportunity to thank you for your interest in the University of Manchester.

WITH THE COMPLIMENTS OF THE DIRECTOR OF HUMAN RESOURCES

The University of Manchester

Job Description

Job Title: Postdoctoral Research Associate in Inflammation in Cerebral Ischaemia

Reports To: Dr Stuart Allan

Organisation Unit: Faculty of Life Sciences

Date: March 2009

Project Title

Subarachnoid haemorrhage as a valid model for stroke

Background

This is a translational project funded by an MRC Models of Disease grant awarded to Dr Stuart Allan, Professor Nancy Rothwell, Dr Pippa Tyrrell, Dr Andrew King and Dr Stephen Hopkins. The aim is to study inflammatory changes and the evolution of ischaemic injury in experimental models of ischaemic stroke and subarachnoid haemorrhage and to compare these with changes in patients.

Disruption of the blood supply to the brain results in cerebral ischaemia and poses a massive clinical, social and economic burden, with very limited effective therapies. Inflammation has been implicated in the initiation of stroke, subsequent injury and repair, in endogenous neuroprotection (via numerous endogenous anti-inflammatory pathways) and in the confounding effects of important clinical risk factors such as diabetes, obesity, vascular disease and infection. In the acute phase inflammation appears to be largely detrimental, but in the longer term can promote repair, neurogenesis and stem cell survival.

The overall aim of this project is to validate experimental and clinical subarachnoid haemorrhage as a means of understanding the contribution of inflammation to cerebral ischaemia and to test the efficacy of potential treatments.

Specific aims are to:

1. Validate experimental models of subarachnoid haemorrhage by comparing inflammatory changes and the progression of brain injury in models of subarachnoid haemorrhage against those observed in subarachnoid haemorrhage patients.

2. Validate the use of subarachnoid haemorrhage to study the contribution of inflammation to cerebral ischaemia by:

a. Comparing the magnitude and temporal profile of inflammatory changes and brain injury in experimental models of subarachnoid haemorrhage and stroke.
b. Testing whether interleukin-1 receptor antagonist, which is protective in experimental models of stroke, protects brain tissue in models of subarachnoid haemorrhage.

3. Compare changes over time in circulating inflammatory mediators and brain injury in subarachnoid haemorrhage and stroke patients.

The results of this project will provide validation on the utility of experimental models of subarachnoid haemorrhage and ischaemic stroke and inform planned clinical studies in subarachnoid haemorrhage and ischaemic stroke patients.

Key Responsibilities, Accountabilities or Duties:

You will take responsibility for all aspects of experiments to address the objectives above.

You will be expected to:

- Set up experimental models of subarachnoid haemorrhage and become proficient in these and experimental models of ischaemic stroke
- Investigate established interventions in neuroinflammatory pathways in experimental subarachnoid haemorrhage and ischaemic stroke paradigms
- Liaise with staff running the clinical side of the project
- Analyse the expression of inflammatory mediators in both preclinical and clinical samples
- Produce work of suitable quality for publication in peer-reviewed journals
- Analyse and interpret data and make a significant input to the scientific direction of the project
- Actively read the scientific literature relating to (and around) the project
- Present research findings at local, national and international meetings
- Write-up and submit your work for publication in peer-reviewed journals
- Keep accurate records of your research methods and findings
- Take an active part in group meetings
- Assist in the supervision of PhD and undergraduate students when requested
- Perform routine laboratory tasks and duties in contributing to the general running of the laboratory

Essential Knowledge, Skills and Experience:

- PhD in a related subject (e.g. neuroscience/physiology/pharmacology)
- Experience in *in vivo* models of disease, ideally with surgical experience
- Ability to independently manage your own research on a day-to-day basis
- High motivation to advance the field of inflammation and cerebral ischaemia
- Strong interest in translational research
- Excellent interpersonal and communication skills and ability to work with colleagues at all levels
- Good organisational and time management skills
- Publication record in a relevant field
- Good written and spoken English
- Ability to contribute intellectually to the research project
- Ability to summarise and analyse data using appropriate statistical methods

- Ability to present data for presentation and publication
- Experience in writing up results for publication in peer-reviewed journals
- Ability to develop and refine techniques and experimental approaches
- Willingness to contribute to the work of others in the lab by offering practical and intellectual help

Desirable Knowledge, Skills and Experience:

- A research background in inflammation and/or cerebral ischaemia
- Experience of preclinical MRI
- Experience of working in a large, multidisciplinary laboratory
- Hold/have held a UK Home Office personal licence
- An interest in public engagement in science

Please note: The above particulars are intended as a general guide to the duties of the post and the conditions of the service. They do not constitute a contract of employment between the University and the person appointed. The successful applicant will, however, receive a full set of conditions of service on appointment