

Further Particulars

1. Job Details

Clinical Research Fellow in studies of cerebral Small Vessel Diseases

Clinical Sciences/Centre for Clinical Brain Sciences (Dementia Research Centre) Small Vessel Diseases Research Group

Line manager: **Professor JM Wardlaw**

2. Job Purpose

The clinical research fellow will work on studies of how cerebral small vessel diseases (SVD) lead to different lesion outcomes seen on magnetic resonance brain imaging (MRI), different clinical presentations, and effect of interventions in two ongoing clinical trials (LACI-2 and TREAT@SVDs). The studies use advanced MRI, retinal imaging and systemic vascular measures to assess small vessel function, including MRI diffusion, blood-brain barrier, cerebrovascular reactivity, pulsatility, blood flow, and spectroscopy, supported by a large multidisciplinary team of imaging and SVD experts.

The post is funded through the Edinburgh Dementia Research Centre in the UK MRC Dementia Research Institute, and is central to a portfolio of studies investigating SVDs funded by Fondation Leducq (Perivascular Spaces Transatlantic Network of Excellence), EU Horizon 2020 (SVDs@Target), British Heart Foundation (LACI-2 trial) and Stroke Association/BHF/Als Soc (R4VaD study). The post is funded for 3 years and provides a superb opportunity to obtain a PhD.

3. Main Responsibilities

Recruit, assess and consent patients against pre-defined criteria, keeping the patients and all study staff informed of progress. 20%

Perform and supervise, with other relevant staff, study-related procedures and including advanced MR imaging, pulse wave velocity and other physiological measurements. 25%

Assist with established study databases and data entry and verification access requests, curation and analysis processes. 15%

Assist with preparation of ethics amendments, reports to funders, conference abstracts and papers for publication. 10%

Prepare papers describing the results of the research for publication in high quality journals, prepare reports for funders, and present data at relevant conferences. 20%

Participate in the NHS stroke service applicable to the requirements for continued professional development. 15%

4. Planning and Organising

- Plan efficient use of own time with flexibility to accommodate and optimise patient recruitment, data collection and analysis
- Ensure that the study operates to good clinical practice regulations
- Collect study information, verify data and maintain study database
- Plan study meetings and presentation of interim results
- Plan preparation of reports, conference abstracts and manuscripts describing results arising from the study
- Plan publications, presentations and reports describing the results for maximum impact.

5. Problem Solving

- Deal with usual problems arising in care of patients with recent stroke (e.g. appropriate investigations and secondary prevention treatment)
- With supervisors and other study personnel, resolve organisational issues to optimise patient recruitment and smooth running of the study
- With supervisors and other study personnel, resolve issues concerning data analysis

6. Decision Making

- Identify suitable patients to recruit for the study including careful screening for MR compatibility
- Obtain consent, plan study procedures
- Establish a study database, in conjunction with the supervisors
- Discuss patients with senior stroke physicians and radiologists to ensure optimum clinical care
- Usual management decisions concerning secondary prevention of stroke

7. Key Contacts/Relationships

- The post-holder will be supervised by Prof JM Wardlaw (lead for the studies, imaging; trial design) with contributions from colleagues in Stroke Medicine and Dementia Prevention, particularly Dr F Doubal.
- The post-holder will work closely with staff in the Lothian Stroke Service, the Neuroradiology Department, the Wellcome Trust Clinical Research Facility, and other staff in the SVDs Research Group (e.g. statisticians) in the Centre for Clinical Brain Sciences and the Edinburgh Dementia Research Centre.
- The post-holder will liaise with other centres in the UK Dementia Research Initiative, the Fondation Leducq Transatlantic Network of Excellence in Perivascular Spaces in Small Vessel Diseases, the EU Horizon 2020 SVDs@Target, the LACI-2 trial, and the R4VaD study.

8. Knowledge, Skills and Experience Needed for the Job

Qualifications/Training

Essential

- A good medical degree (MB ChB or equivalent), full registration with the GMC and MRCP (UK) or equivalent.
- Several years' relevant postgraduate clinical experience of stroke medicine, neurology, medicine for the elderly, or possibly neuroanaesthetics if it includes experience in assessment of patients with stroke or TIA.

Desirable

- Some prior experience of clinical research, particularly including neuroimaging, would be an advantage.

Experience

Essential

- Experience of working flexibly and effectively in a large multi-disciplinary team.
- Basic assessment of cognition in clinical practice.

Desirable

- Experience of small vessel disease clinical presentations.
- Experience of issues related to and limitations of using MRI in stroke.

Knowledge, Skills and Competencies

Essential

- Excellent organisational skills.
- Good oral and written communication skills.
- Knowledge of Word, PowerPoint, Excel.
- Good interpersonal communication skills.

Desirable

- Knowledge of other software packages (e.g. Endnote, statistics packages).
- Some experience of image analysis would be helpful but is not essential

Personal Attributes

Essential

- The post-holder should have a very good CV with evidence of academic excellence at all stages in their career to date.
- The post holder should have a serious interest in mechanisms of small vessel disease.
- The post holder will be seeking a career in stroke medicine, neurology, geriatric medicine, emergency medicine or general internal medicine.
- Ability to prioritise and multi-task effectively across several research projects running concurrently.
- Good timekeeping skills.
- Rigorous attention to detail and careful documentation of results.

Desirable

- Ability to write efficiently.
- Expecting to undertake work for a further degree, usually a PhD.
- Personal motivation and enthusiasm to develop the work.
- Interest in training in clinical research methods; stroke imaging and assessment; systematic reviews; and small vessel disease, hence prior experience in these areas is less essential.

9. Dimensions

The post is funded for 3 years through the Edinburgh Dementia Research Centre (MRC funded) which is part of the UK Dementia Research Institute, a multimillion £ UK Government response to the increasing global burden of dementia.

The post holder will work with Professor Joanna Wardlaw as part of her Foundation Programme in the Dementia Research Institute. Also with other academic consultants in stroke and dementia and staff in neuroimaging working on SVDs. Several programmes of work including the LACI-2 trial that focus on mechanisms or treatment of SVDs are led from Edinburgh and offer opportunities for exchanges with UK and international centres.

The SVDs research group at Edinburgh is at the forefront globally of research into SVDs. The Stroke Research Group and Dementia Prevention Groups are also leading internationally. The Neuroimaging research group in Edinburgh has about 50 full and part time staff, plus visiting researchers and students and has several research MR scanners, MR-PET, and extensive image analysis labs.

10. Job Context and any other relevant information

This post is part of a large multidisciplinary team working on mechanisms and treatment of SVDs. The primary purpose of the post is to recruit, assess and perform studies using advanced MRI, retinal and systemic measures of vascular function in patients with various clinical presentations of SVD (stroke, cognitive impairments). The post provides an ideal opportunity to work for a PhD. The candidate will be encouraged to consider applying for personal fellowship funding to undertake a PhD (since this conveys considerable prestige) and the department has an excellent track record in obtaining clinical PhD fellowships.

The post holder will have substantial opportunities to learn about advanced MRI acquisition and analysis, clinical trials and observational studies, statistics, regulatory matters, systematic reviews, scientific writing and presenting results at international meetings. The Dementia Research Institute and several international collaborations in SVDs offer opportunities for exchanges and superb environment for nurturing future independent senior clinical academic researchers. The UK Dementia Research Institute is a vibrant, ambitious and interactive community that leads the UK's dementia research effort and aims to deliver a step-change in the scientific understanding of dementias, generate new targets for drug development and reinvigorate the therapeutic pipeline.