



Applications are invited for a prestigious 3-year PhD studentship in Neuroimaging Image Analysis as applied to measurement of Blood Brain Barrier Permeability Imaging commencing in October 2012 and funded by the Row Fogo Charitable Trust. Funding will cover UK/EU tuition fees and a tax-free annual stipend of **£13,590**. Applications are therefore limited to UK/EU nationals, unless the applicant has suitable top-up funds available.

The studentship will be based in the Brain Research Imaging Centre at the University of Edinburgh (<http://www.bric.ed.ac.uk/>) where additional support and training will be provided by the SINAPSE collaboration of Scottish Universities (<http://www.sinapse.ac.uk/>).

The project will involve development of medical image analysis techniques in one of the centre's key areas of interest, cerebral small vessel disease in ageing, stroke and dementia and in particular measurement of blood brain barrier permeability using MR imaging methods:

- i) Permeability imaging applied to subtle blood-brain barrier disruption.

Our centre has pioneered the application of permeability imaging to diseases associated with subtle blood-brain barrier breakdown, in particular lacunar stroke, diabetes, and Alzheimer's disease. However, due to the subtle nature of the process, the imaging technique remains challenging. This project aims to improve the methodology including post-processing techniques with the aim of moving closer towards quantification of subtle blood-brain barrier abnormalities.

The project would suit an individual with a strong background in computing, engineering, physics, or mathematics with an interest in biomedical applications and a strong desire to develop their computer programming and image analysis skills. The successful candidate will develop their skills in image analysis, computing, imaging physics, and understanding of changes in the brain with ageing and small vessel disease. Applicants should hold, or expect to obtain, a good honours degree (1<sup>st</sup> or upper 2<sup>nd</sup> class, or equivalent), and/or an undergraduate plus masters degree in a relevant field.

**Applications will be welcomed up to and including Friday Dec 2nd 2011.**

Further details can be obtained by contacting Dr MV Hernandez or Prof JM Wardlaw (c/o k.shuler@ed.ac.uk).