

POST DOCTORAL POSITION IN PET IMAGING NEUROSCIENCE

A post-doctoral fellowship is currently available, funded by the Neurodis Foundation for three years in the first instance, within the Team of the Chair of Excellence in Functional Neuroimaging (Alexander Hammers; <http://www.fondation-neurodis.org/La-Chaire-d-Excellence-en-Neur.80.0.html>), based at the CERMEP imaging centre in Lyon, France.

Job description:

Epilepsy is the most common serious neurological disorder, with 0.8% of the population affected. We use positron emission tomography (PET) with novel and established radiotracers to further our understanding of developmental and acquired changes in neurotransmitters and their receptors. Some of the most pressing questions are why seizures arise (e.g. through abnormal networks involving heterotopic neurons), and where they arise (this is studied using functional imaging techniques in conjunction with structural imaging e.g. MRI, to find focal abnormalities).

The successful candidate will

- 1) explore the hypothesis that heterotopic neurons are a frequent underlying cause of cryptogenic focal epilepsies, using existing [¹⁸F]-FDG and [¹¹C]flumazenil PET data
- 2) use a novel PET ligand to explore the role of brain inflammation in some forms of epilepsy, including methodological work-up of the tracer
- 3) establish multivariate analyses of imaging data in the presurgical evaluation of focal epilepsies

The successful candidate will have access to the research facilities and state-of-the-art equipment in the CERMEP imaging centre (PET, PET/CT, MRI, MEG). Patient recruitment will be carried out in collaboration with the Epilepsy department of the Neurological Hospital, Lyon (Director Prof F Mauguière) on the same site.

The Functional Neuroimaging team and CERMEP offer an intellectually stimulating environment with weekly scientific meetings, various courses organised in-house (e.g. SPM, PET analysis, Neuroanatomy for Imagers), and the possibility of becoming involved in other projects on anatomical segmentation, classification and decision support.

The successful candidate will be encouraged to acquire French language skills if necessary. Funding for participation in language training schemes is available.

Requirements:

The candidate should have a PhD (imperatively completed before taking up his/her post) in the wider field of imaging research (ideally including PET) and a track record of successful research, including publication of high-quality research articles. The ability to carry out independent research, an organised and methodical approach to work, excellent computer skills, ability to work to strict deadlines and willingness to learn new skills are essential. Good programming or scripting skills, experience with relevant software (e.g. Matlab, SPM, PET modelling packages) are desirable. Excellent communication skills, including good command of written and spoken English are necessary.

Expected start date: around 1 November 2010

Gross salary range (INSERM scale): 34500–41500 €

Candidates should send an application in PDF format including a CV (with a list of representative publications), a letter of motivation, and the names of three referees by email to: contact@fondation-neurodis.org quoting "PET Neuroscience".

Application deadline: 20 September, 2010.

Shortlisted candidates will be invited for an interview shortly afterwards by the Neurodis Foundation; interviews via telephone or internet video conferencing will be possible.

For an informal discussion or for further technical or scientific information please contact: alexander.hammers@fondation-neurodis.org

For further administrative or financial information, please contact: contact@fondation-neurodis.org

We strive for equal opportunities.

Responsibilities:

The post-holder will be responsible for:

- Preparing and leading research projects and preparation of grants, in liaison with the Principal Investigators
- Identification and recruitment of patients with epilepsy and healthy volunteers for PET and MRI research
- Supervising MSc and BSc students as required
- Attending specialist clinical meetings as required
- PET scanning and MRI scanning of patients and healthy volunteers as part of a multidisciplinary team
- Quantitative analysis of PET and MRI data and developing new methods of analysis
- Assistance in the administration of research (e.g. in relation to ethical permissions and radiation protection licences, insurance, governance, auditing)
- Presentation of results at internal, national and international meetings
- Writing up of results for scientific publication