Centre de Recherche Neurosciences Lyon

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

Inserm
Institut national de la santé et de la recherche médicale

Funded postdoc opportunity

On the neural basis of effort-based decision-making and apathy

Duration: 2 years (initial 1-year contract, renewable for an additional 1 year).

Starting date: Flexible, between February 2025 and June 2025.

Location: Lyon Neuroscience Research Center (CRNL), a CNRS and INSERM laboratory, situated at Groupement Hôpitaux Lyon Est in Lyon, France. The CRNL is ideally located near both the neuroimaging center (equipped with a 3T MRI, soon-to-be-installed 7T MRI, MEG, and PET scanners) and the psychiatric and neurological departments of Lyon's hospitals. Lyon is a vibrant and beautiful city, just 1 hour from the French Alps by car, and 2 hours from the Mediterranean coast and from Paris by train.

Salary and benefits: €2240 net per month for candidates with less than 2 years post-PhD experience; €2400+ net per month for candidates with 2+ years post-PhD experience. In addition, the French health insurance is fully covered, along with other benefits, including reimbursement for public transportation.

Supervisor: Dr. Gérard Derosière, INSERM Researcher.

Project description: This project aims to leverage recent advances in effective connectivity quantification and modulation to explore the role of recurrent circuits between fronto-striatal structures and the motor cortex in effort-based decision-making and apathy. Using a multimodal approach that combines brain stimulation techniques with fMRI, we will test two main hypotheses: 1. Fronto-striatal structures dynamically modulate motor cortex activity during decision-making, depending on the effort and rewards at stake. 2. Altered connectivity within fronto-striato-motor circuits contributes to apathy in Parkinson's disease patients.

Profile sought: We are looking for a highly motivated postdoctoral researcher with a PhD in Neuroscience or a related field.

Required skills: Strong programming skills (Matlab, Python, and/or R); Autonomy in problem-solving; Proficiency in English (speaking French would be a plus to work with Parkinson's disease patients); Experience in brain stimulation and/or fMRI; Willingness to learn or experience in effective connectivity analysis of fMRI data; Experience working with neurological patients would be an asset.

This position offers an exciting opportunity to work in a cutting-edge research environment and contribute to an important field of study with potential clinical applications.

To apply, please submit your CV, a motivation letter, and contact information for two references via email to: gerard.derosiere@inserm.fr