

**Postdoctoral position in the Team “Multimodal Neuroimaging and Lifestyle in Aging and Alzheimer’s disease” (Dr. Gaël Chételat , UMR-S U1237-PhIND, Caen, France)**

\* Duration: 2 years (1 year renewable 1 year).

\* Starting date: June 2018

\* Research team: Multimodal Neuroimaging and Lifestyle in Aging and Alzheimer’s disease headed by Dr. Gaël Chételat; [www.gael-chetelat.fr](http://www.gael-chetelat.fr); Research unit: INSERM-UNICAEN-EFS UMR-S U1237-PhIND, GIP Cyceron, Boulevard Henri Becquerel, BP5229, 14 074 CAEN Cedex, France

\* Salary: according to experience

**Job Description:** The aim of the project is to investigate vascular and white matter lesions across the Alzheimer’s disease (AD) continuum using two large neuroimaging datasets (IMAP+ and Silver Santé Study). The postdoc will define the optimal methodologies and implement the corresponding preprocessing pipelines to extract information related with WM lesions from multimodal neuroimaging data. He will apply these methods to data acquired in controls and patients. Then he will investigate the changes in normal aging and across the AD spectrum, and the relationships between WM lesions and other neuroimaging alterations as well as cognitive deficits in patients with subjective cognitive decline (SCD), mild cognitive impairment (MCI), and Alzheimer’s disease (AD). The postdoctoral researcher will have access to cross-sectional and longitudinal cognitive and neuroimaging data including, but not limited to, FLAIR, T1, T2, ASL, resting-state and task-related fMRI, DTI, FDG-PET, and AV45-PET.

**Requirements for applicants:** PhD Degree in neuroscience, psychology, engineering, or equivalent, and experience in neuroimaging are essential. The applicant should notably have a solid background in neuroimaging analyses related to vascular and white matter lesions. Programming skills are highly desirable though not necessary (Matlab, R, Python, C++, Perl). Experiences in the treatment of other imaging modalities (fMRI, PET) and /or experience in the field of normal and pathological aging will be appreciated, although not essential.

**The lab:** The Multimodal Neuroimaging and Lifestyle in Aging and Alzheimer’s disease team, headed by Dr. Gaël Chételat, is organized around four main areas of interest: i) improving neuroimaging biomarkers for early Alzheimer’s disease diagnosis; ii) further the understanding of the physiopathological mechanisms of Alzheimer’s disease with multimodal imaging, iii) investigating the relationships between lifestyle factors and brain biomarkers and iv) developing non-pharmacological interventions to promote mental health and wellbeing in aging population. The team is currently involved in 2 large projects: Multimodality Imaging of Early-stage Alzheimer’s disease (IMAP+) and Silver Santé Study, a European study granted by the European Commission ([www.silversantestudy.eu](http://www.silversantestudy.eu); H2020, 2015-PHC-22) assessing the effects of two 18-month interventions (English versus meditation training) on behavioral and biological markers of aging and Alzheimer’s disease. The team is included in the INSERM-UNICAEN-EFS UMR-S U1237-PhIND directed by Pr. Denis Vivien and is based at the Centre Cyceron (Caen, France), a structure devoted to multimodal imaging. The structure provides a stimulating work environment as it groups several research units and several research instruments, such as a cyclotron, PET-CT and MRI.

**To apply:** Send a CV, motivation letter and contact details of two academic referees to Gaël Chételat via [silversantestudy@cyceron.fr](mailto:silversantestudy@cyceron.fr).