**Thesis subject:** IMPACT OF ALCOHOL USE DISORDER ON COGNITIVE AND BRAIN AGING (ALCOH-OLD)

**Abstract:** Ten percent of the French population has an Alcohol Use Disorder (AUD), which can be associated with brain alterations and neurocognitive deficits. The brain of elderly subjects is particularly vulnerable, with a potential interaction between the effect of alcohol and ageing. This premature or accelerated ageing results in greater brain damage than expected for their age, leading to the consideration of alcohol as a major risk factor for the development of neurodegenerative diseases. Thus, minor neurocognitive disorders presented by an elderly subject with AUD could be attributable to alcohol consumption or to a neurodegenerative disease at the pre-symptomatic stage of Mild Cognitive Impairment (MCI) for example. Similarly, an elderly subject with major neurocognitive impairment and AUD could meet both the criteria for Korsakoff’s syndrome (KS) or Alzheimer’s disease (AD). The similarities and specificities of the neuropsychological deficits and brain damage profiles of these different clinical populations remain poorly understood, even though it is essential to identify the origin of the disorders in order to propose adapted and personalized care. In both major neurocognitive disorders (AD versus KS), and minor ones (elderly AUD versus MCI), the identification of common pathophysiological mechanisms would help explain how AUD contributes to the development and evolution of neurodegenerative diseases. The objective of the ALCOH-OLD project is therefore to better understand the impact of AUD in normal and pathological cognitive and brain ageing. A series of three studies (alcohol-ageing interaction, AUD-MCI comparison, KS-AD comparison), mainly based on the cross-analysis of three clinical cohorts, is thus planned.

**Candidate profile:** He/she will be in charge of data analysis (neuropsychological and neuroimaging) and dissemination of results (conference papers and manuscript publication). He/she will also be involved in laboratory activities (which may include data acquisition, data entry, quality control, etc.).

The candidate must have obtained or be a student in a Master 2 in Neuropsychology, Clinical Neurosciences or Behavioural Sciences. We are looking for a highly motivated student with good working skills. He/she should 1) be able to take initiatives, 2) have organizational skills and 3) work in a team. Previous experience in the field of aging, Alzheimer’s disease, AUD or neuroimaging (use of programming tools like Matlab/R-Statistics) would be an added-value. A good level of written and spoken English is required.

**Environment:** The team is based at the Cyceron center, a structure that provides a stimulating work environment as it groups several research units and several research tools including one human 3T MRI, one small animals 7T MRI, one small animal PET-MRI, one human PET-CT and a cyclotron. The lab is located in the beautiful city of Caen (Normandy, France) which is 2 hours by train from Paris; and 10 minutes away from the beaches. The city is within driving distance of popular Normandy attractions including Bayeux and its famous tapestry, the D-Day Landing Beaches, and the picturesque Pays d’Auge, home of cider and cheese. Normandy is ideal for horse riding and sailing!
The candidate will be hosted in the Inserm Unit U1237 directed by Denis Vivien, in Gael Chételat’s Team. The PhD student will be supervised by Anne Lise Pitel, expert in the field of clinical neuroscience of AUD. The candidate will join a multidisciplinary team working on neurodegenerative and psychiatric diseases, using complementary neuropsychological and neuroimaging techniques. This position offers the opportunity to work in a high-quality research environment with strong clinical and research collaborations. The student will interact particularly with the researchers of the AUD research axis: biologist, psychiatrist, psychologist and students. He/she will benefit from the experience of the clinicians of the Addiction and Neurology Department of the University Hospital of Caen for the clinical part and from the staff of the Cyceron platform for the neuroimaging part.

**Contact:** Send a detailed CV, a letter of motivation and two recommendation letters of academics or researchers to Anne Lise PITEL (anne-lise.pitel@unicaen.fr).