PhD in cognitive neurosciences

Title of the project: Evaluation of chronic consumption of gabapentinoids effects on the attentional processes in the rat.

Keywords
Antiepileptic drugs, Cognition, Attentional processes, adult rats, old rats

How to apply:
To apply, please provide a detailed resume (university, formations, skills, internships, the name of two references), a motivation letter (one page) and a summary of your last or relevant internship project (one page) and grades of the Master to Dr Véronique Lelong-Boulouard (veronique.boulouard@unicaen.fr) with "PhD Application" in the subject line.

Deadline for application: 30th April, 2021.

Description
Applications are invited for a 3-year PhD position in the field of cognitive neurosciences in the laboratory COMETEU1075INSERM/University of Caen, France.
Across complementary approaches, the COMETE Unit 1075 aims to investigate the fundamental mechanisms involved in mobilities and cognition, with a particular focus on attentional and memory processes, physical activity adaptation, spatial orientation, and how these mechanisms evolve throughout lifespan. Results obtained have impacts on fundamental research as well as in clinics, applied research, economic and technological valorization and public health.
This PhD project aims to characterize in rats the effects of chronic consumption of gabapentinoids on attentional performances. Effects of different gabapentinoids were investigated and compared, notably pregabalin and gabapentin. Gabapentinoids are second generation antiepileptics, widely prescribed in many indications. Along with the doubling of sales of boxes of these drugs over the past 10 years, warning signs have been issued, associating their consumption with a higher risk of life-threatening events, such as road accidents. While not elucidated so far, attentional disturbances, that could possibly be a side effect of these drugs consumption, would be responsible for such accidents affecting mobility. Besides, due to strong pharmacokinetic and pharmacodynamic variability, elderly subjects could be particularly sensitive to central adverse effects. Our project aims to set up an adapted protocol to assess the effects of acute and chronic administration of gabapentinoids *1)* on the attentional processes in rats (through a specific device behavioral, *i.e.* TUNL task in the Touch screen chamber) *2)* on the molecular and structural level by measuring several neurotransmitters in the brain structures involved in attentional processes.

Required qualifications:
Candidates must hold a Master's degree in neuroscience or related field

Required Experience and Skills:
- Experience with behavioral assessment in rodent models (animal care, anxiety, locomotor activity, memory assessment, pharmacological injections)
- Knowledge and/or expertise in neuroscience-related experiments (stereotaxic surgery and intracerebral infusions), basic cellular and/or molecular biology techniques (Western-blot, ELISA, Immunohistochemistry, Immunofluorescence, qPCR)
- Knowledge of neural mechanisms of learning, memory, and/or other aspects of cognition
- Good written and oral communication skills in French and English
- Excellent ability to work both independently and collaboratively.

Start date: 1st October, 2021

Only those individuals selected for an interview will be contacted. A competitive selection to fund the projects will then be organized by the doctoral school EDnBISE, n°497.