Paris Brain Institute (ICM) is recruiting a

DBS Collective Interest Project (CIP) Post-doctoral fellow (M/F)

Contract start date: October 2024

Contract duration: 1 year, renewable

At Paris 13th district

The Paris Brain Institute (ICM) is a private foundation recognized as being of public utility, whose purpose is fundamental and clinical research on the nervous system. On the same site, 850 researchers, engineers and doctors cover all the disciplines of neurology, with the aim of accelerating discoveries on the functioning of the brain and the development of treatments for diseases such as: Alzheimer's, Parkinson's, multiple sclerosis, epilepsy, depression, paraplegia, tetraplegia, etc.

POSTDOCTORAL FELLOW

CONTEXT

DBS: from genetic mutations to motor circuit dysfunctions & recovery

DBS is an exciting new interdisciplinary, collaborative, and multi-model project at the ICM. By bridging approaches across disciplines, the project's goal is to build novel strategies to improve dopaminergic cell survival and deep-brain stimulation of resilient circuits in Parkinson's disease.

Collective Interest Projects - Collaborative, interdisciplinary, innovative & transformative

As part of DBS, we will implement the hiring of post-docs each dedicated to one collective interest project to be co-supervised by two ICM team leaders, experts from different fields. The early-career researchers will receive training in the field that they have not received training on yet, either genetics, cellular physiology, imaging, optogenetics, behavior or modelling.

We aim to attract high level interdisciplinary researchers by offering world class research facilities and double supervision from leaders in the relevant fields. You would be part of a dynamic community of young researchers within a highly collaborative environment.

*In the Collective Interest Project "**Knock-in Fish: Knocking-in dominant mutations causing early-onset Parkinsonism in zebrafish"** the candidate will be hosted by the **Picnic** team and **SIBBIL** team co-supervised by **Claire Wyart, an expert in optogenetics and imaging in zebrafish** and **Jacobo Sitt, expert in the analysis of large neuronal networks and behavior in humans**.*

Supervised by these teams, the postdoctoral fellow will require autonomy to innovate novel fish knock-in lines in which a single base is edited to mimic a mutation associated with early onset parkinsonism. The postdoctoral fellow will first generate the knock in mutation by advising engineers and technicians, and then will test the effects of the mutation on motor control and behavior, as well as on dopaminergic neurons and their roles in neuronal network dynamics within motor circuits.

The project will focus on the knock-in of the very conserved gene PPP2R5D, a very interesting target that has been involved in mental retardation and early onset Parkinsonism. The postdoc will work and supervise engineers to generate knock-in mimicking point mutations in humans.

MISSIONS

- *Develop an in vivo project linking PPP2R5D mutations to motor defects in zebrafish larvae*
- *Supervise technicians and engineers in the SIBBIL team to generate the molecular tools*
- *The position comes with 10 000 euros available for training per year*

CONDITIONS

- *Remuneration scale: 35 000 – 45 000 € (gross annual), based on experience*
- *Fixed-term contract (CDD), renewable, with possibility of extension to ensure high quality publication of the postdoctoral work*

PROFILE

KNOW-HOW

- *Expertise in genetics & behavioral analysis*
- *Expertise in fluorescent imaging and image analysis*
- *At ease with hypothetico-deductive and critical reasoning*
- *Experience with big data analysis, statistical analysis*
- *Supervision of technicians, students and / or engineers*
- *Big data analysis from gene to behavior embracing variability*
- *Academic reading, writing, and conversational skills in English*

KNOWLEDGE

- *Knowledge acquired through education in Neuroscience, Genetics, Biophysics, Dynamic Imaging*
- *Fluent in English & at ease for bringing concepts forward*
- *Knowledge in coding using Python, R and/or MATLAB*
- *Organized, disciplined, proactive, autonomous, excellent team player*
- *PhD in neuroscience, genetics*
- *Strong training in rational reasoning*

SOFT SKILLS

- *Discipline and organization*
- *Proactive attitude with leadership skills to provide clear guidance to engineers in team and facilities*
- *Sense of priority to organize experiments and perform experiments straight on target*
- *Rigorous, communicative, honest and curious to understand and broaden her/his field of expertise*
- *Excellent team player working with engineers, technicians and other postdocs in the DBS project*
- *Autonomy in setting up new experiments, thinking new paradigms and analyzing new data*
- *Excellent written communication combined with oral skills*

The Paris Brain Institute is committed to combating all forms of discrimination. We guarantee an inclusive and respectful working environment that embraces diversity.

All our positions are open to people with disabilities.

Please send your CV, letter of motivation and 2 reference letters with contact details to claire.wyart@icm-institute.org, jacobo.sitt@icm-institute and joana.guedes@icm-institute.org with the subject: "DBS CIP Knock-in Fish Post-doc (M/F)"