

**Paris Brain Institute (ICM) is recruiting a  
Collective Interest Project (CIP) Post-doctoral fellow (M/F)**

**Contract start date: October 2024**

**Contract duration: 1 year, renewable**

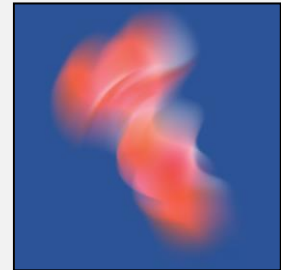
**At Paris 13<sup>th</sup> district**

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 aims 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. Early-career researchers will receive training in fields that they have yet to receive training in, such as genetics, cellular physiology, imaging, optogenetics, behavior, or modeling.

**To attract high-level interdisciplinary researchers, we offer 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 project **FUST: Fish Ultrasound screening of optimal channels to Stimulate neurons deep in vivo**, the candidate will be hosted by the **Mov'it team and SIBBIL team, co-supervised by Pierre Pouget, an expert in functional ultrasounds and network physiology, and Claire Wyart, an expert in optogenetics and imaging**. Supervised by these 2 teams to activate specific neurons in the mammalian brain, the postdoctoral fellow will require autonomy to innovate sonogenetic tools leveraging mechanosensory activation for remote neuronal stimulation in the brain. The postdoctoral fellow will first implement an ultrasound screening assay to identify the best candidate channels to mediate remote ultrasound activation without heating and then test them in vivo at different depths while measuring the specific and non-specific responses to ultrasounds.

### MISSIONS

- Screening of channels responding to ultrasounds in cell cultures and in vivo using zebrafish larvae
- The postdoctoral fellow will supervise engineers in the SIBBIL and Mov'it teams.
- The position will be held in the Paris Brain Institute with scheduled visits in biophysics lab of Francesco Tombola in University of California in Irvine (<https://www.faculty.uci.edu/profile/?facultyid=5609>), a world expert on ion channels & mechanoreception
- The position comes with 10 000 euros available for training.

### CONDITIONS

- Remuneration scale: 35 000 – 45 000 € ("brut annuel")
- Fixed-term contract (CDD) renewable

## PROFILE

### KNOW-HOW

- Expertise in molecular cloning and channel physiology in vitro
- Supervision of technicians, students, and / or engineers
- PhD in biophysics, electrophysiology, imaging, neuroscience
- Academic reading, writing, and conversational skills in English (required) and French (desired)

### KNOWLEDGE

- Knowledge acquired through education in Biophysics, Neuroscience, Dynamic Imaging
- Fluent in English, notions of French
- Knowledge of coding using Python, R
- Organized, disciplined, proactive, autonomous, excellent team player
- PhD in biophysics, bonus: expert on ion channel physiology
- Strong training in electrophysiology, at ease in mathematics and calculation of conductance and IV curves

### SOFT SKILLS

- Rigorous, communicative, 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 of new paradigms, and analyzing new data
- Excellent communication, both oral and written

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

*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](mailto:claire.wyart@icm-institute.org) , [pierre.pouget@icm-institute.org](mailto:pierre.pouget@icm-institute.org) and [joana.guedes@icm-institute.org](mailto:joana.guedes@icm-institute.org) with the subject: “DBS CIP FUST Post-doc (M/F)”**

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