The Paris Brain Institute (ICM) is recruiting
<u>Postdoctoral Fellow #1 in brain organoid modeling</u>
3 years (funded by ANR)

The Paris Brain Institute is a private foundation recognized as being of public utility whose purpose is fundamental and clinical research on the nervous system. On a single site, 650 researchers, engineers and physicians cover all the disciplines of neurology with the aim of accelerating discoveries in brain function and developing new treatments for neurological and psychiatric disorders.

POSITION

You are passionate about somatic mosaicism and neurodevelopmental genetic disorders, and you want to contribute to major discoveries impacting patients' health and care all in a state-of-the-art research environment? The Baulac lab at the ICM is the place for you!

A fully-funded 36-months postdoc position is opening starting in April 2022. We are looking for a highly qualified and motivated postdoctoral fellow with expertise in **brain organoids, genetic engineering and single cell multi-omics** to complete our team and develop new disease models and genetic tools to better understand the biological mechanism underlying genetic cortical malformations.

MAIN MISSIONS

Our laboratory investigates the genetic etiology and the pathomechanisms underlying developmental epilepsies, with a special focus on **brain somatic mosaicism** in cortical malformations, notably focal cortical dysplasia (FCD). To do so, we employ a multi-disciplinary approach integrating genetic/genomic studies in human brain tissues and disease modeling *in vitro* and *in vivo*. For more information on our team and research check our website at: http://www.baulacleguernepilepsy.com.

The main aim of the project is to **understand the molecular and cellular bases of focal cortical dysplasia and epileptogenesis, notably the developmental mechanisms leading to FCD**. To achieve this, genetic engineering approaches will be applied to generate hiPSC-derived mosaic brain organoids mimicking FCD somatic mutations. The successful candidate should be able to generate and characterize cortical organoids using different approaches, including Crispr-editing, 3D cell culture, high-throughput screening, imaging and single-cell omics.

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PROFILE

KNOWLEDGE

- Ph.D. in Neuroscience/Molecular Biology, and have a strong publication record including at least one first-author paper
- Knowledge of cell and molecular biology, genetics and molecular genetics, neurodevelopment
- Strong experience in **cell culture** and **genome editing**
- Good skills in **bioinformatics and computational biology** and be able to effectively apply **R and Python programming languages** to the analysis of single-cell data.

SKILLS

- We are looking for an open and collaborative person who likes teamwork and enjoy sharing knowledge
- Organizational skills, efficient planning, autonomy and ability to conceptualize new ideas are required
- Fluency in English is required, fluency in French is not required to work in our team/institute, even if learning French is encouraged

Please send a CV and a motivation letter to stephanie.baulac@icm-institute.org