

**ERC-funded Postdoc positions**  
**2 postdoc positions in Neuroscience (Epilepsy Research) at the ICM, Paris, France**  
**Starting March 2017**

The Group «Genetics and physiopathology of epilepsies» headed by Stéphanie Baulac and Eric Leguern has openings for 2 postdoc positions funded by an ERC consolidator grant. The main goal of the research is to understand the molecular and cellular mechanisms underlying familial focal epilepsies (see refs: Ishida et al., 2013 Nat Genet; Boillot et al., Brain 2014; Boillot et al., Sc. Report 2015; Marsan et al., Neuro Dis 2016).

The ERC-funded project will focus on the DEPDC5 gene, which mutations cause a wide spectrum of focal epilepsy syndromes, with or without cortical malformations (Ishida et al., 2013). DEPDC5 is an inhibitor of the mTORC1 (mammalian target of rapamycin complex 1) signaling pathway, a master regulator of cell proliferation and growth. We aim to (1) assess how the mTORC1 signaling pathway may contribute to epileptogenesis and seizures, (2) attempt to explain the diversity of phenotypes, in particular the presence of cortical lesion by searching for somatic brain mutations, (3) and to explore neurobiological pathways and partners of DEPDC5.

The research work will combine high-throughput sequencing, *in vivo* proteomics & phosphoproteomics, transcriptomics, *in utero* electroporation, biochemistry, electrophysiology, and animal studies. Functional analyses will be made on human postoperative tissue and neuronal cultures from human iPSC and specific rodent models. We apply modern techniques based on single-cell approaches, CRISPR/Cas9 editing, and multielectrode array recordings. The work will be divided into two interactive projects depending on your skill set and interest.

Applicants should be fluent in English, motivated and organized, and possess good communication and team working skills. Applicants must have a Ph.D. and should have a strong background in:

- Position 1: molecular and cell biology
- Position 2: electrophysiology/multielectrode array recordings on brain slices

**We offer:**

- Working in a young and dynamic team in an outstanding scientific environment with cutting-edge facilities
- At least 3-years contract (up to 5-years) with the perspective of a long-term career development
- Employment, payment and social benefits are determined by INSERM.

If you are interested, please send your complete application (CV, publication list, summary of research interests, motivation letter, and names of 2 academic referees as a single pdf document) at your earliest convenience by e-mail to [stephanie.baulac@upmc.fr](mailto:stephanie.baulac@upmc.fr).

**Stéphanie Baulac**  
**Directeur de recherche INSERM**  
**Institut du Cerveau et de la Moelle**  
**Hôpital Pitié-Salpêtrière**  
**47/83, bd de l'Hôpital - 75013 Paris**  
**Tel: +33 (0)1-5727-4339**

