



POST-DOCTORAL POSITION IN MITOCHONDRIA AND NEURAL DEVELOPMENT

We are looking for a highly-motivated Post-doctoral researcher to join a project studying mitochondria during neural development. The project is led by Richard Belvindrah, Associate Professor in the group of Fiona Francis at Institut du Fer à Moulin, Paris.

Project

The hippocampus is an important brain structure for learning and memory. Hippocampal development relies on well-orchestrated neuronal migration that occurs during embryonic development. We previously demonstrated that doublecortin, a microtubule associated protein, when mutated in mice generates neuronal layering defects in the CA3 region of the hippocampus. Organelle defects are observed in mutant cells. It is known that cytoskeleton remodeling is crucial for correct neuronal migration, but how mitochondrial function regulates migratory dynamics is poorly understood. To elucidate this, the Post-doctoral researcher will work at the interface of cell biology and biophysics, in collaboration also with Stéphanie Bonneau at Laboratoire Jean Perrin (Sorbonne University), using state-of-the-art microscopy approaches such as SIM, spinning-disk and confocal microscopy.

Profile

The candidate should have a PhD in Life Sciences and a strong interest in neural development together with a solid expertise in microscopy and quantitative imaging. A background in metabolism would also be useful. The candidate will take part in experimental design, will conduct experiments, perform analyses and contribute actively in research communication. He/she should be able to work as part of a group, have excellent organizational skills and a good level of spoken and written English.

Application details

The position is fixed term for 1 year at first, starting in January 2022, with the possibility of extension. Applications should be sent to richard.belvindrah@inserm.fr and include a CV (with a list of publications), a cover letter summarizing past and current research and two recommendation letters, **before November 1st, 2021**.

Selected publications related to the project

Belvindrah R, Natarajan K, Shabajee P, Bruel-Jungerman E, Bernard J, Goutierre M, Moutkine I, Jaglin XH, Savariradjane M, Irinopoulou T, Poncer JC, Janke C, Francis F.
Mutation of the α -tubulin Tuba1a leads to straighter microtubules and perturbs neuronal migration.
J Cell Biol. 2017 Aug 7;216(8):2247-2249. doi: 10.1083/jcb.201705172.

Khalaf-Nazzal R, Stouffer MA, Olaso R, Muresan L, Roumegous A, Lavilla V, Carpentier W, Moutkine I, Dumont S, Albaud B, Cagnard N, Roest Crolius H, **Francis F**.
Early born neurons are abnormally positioned in the doublecortin knockout hippocampus.
Hum Mol Genet. 2017 Jan 1;26(1):90-108. doi: 10.1093/hmg/ddw370. PMID: 28007902.

Belvindrah R, Nosten-Bertrand M, Francis F.
Neuronal migration and its disorders affecting the CA3 region.
Front Cell Neurosci. 2014 Mar 4;8:63. doi: 10.3389/fncel.2014.00063. eCollection 2014.