



Postdoc position in Molecular & Cellular Neuroscience Ecole Normale Supérieure (ENS Paris)

Team: “Glutamate Receptors and Excitatory Synapses” (<http://www.biologie.ens.fr/neuronr/>)

Head : Pierre PAOLETTI

Location: Institut de Biologie de l’Ecole Normale Supérieure (IBENS), Paris, France

Start date: November 1st, 2020

We seek to hire a highly motivated postdoctoral scientist to investigate the mechanisms and role of GluN3A-containing NMDA receptors in neuronal and brain function. **We and colleagues recently discovered (Grand et al., Nat Comm 2018; Otsu et al., Science, 2019) a new type of neuronal NMDA receptors** composed of the GluN1 and GluN3A subunits (GluN1/GluN3A receptors) that form **excitatory ion channels gated by glycine only**. This finding reshapes our understanding of NMDAR diversity and opens new vistas on brain molecular physiology and neurotransmission. Contrasting with ‘classical’ GluN2-NMDARs, our knowledge of GluN3A-NMDARs is still lagging far behind. This project aims to fill this gap by combining various advanced methodologies at the cross-road between molecular pharmacology, brain slice electrophysiology, optogenetics, cellular imaging and genetically modified animals.

The candidate should have a solid expertise in **cellular electrophysiology** and strong interest in neurotransmitter receptors, as well as **synaptic transmission and plasticity**. A background in molecular biology and molecular pharmacology and signalling would be a plus.

The project is to be developed in the team of Pierre Paoletti at the Institut de Biologie de l’Ecole Normale Supérieure (IBENS) in Paris. The Paoletti team has worldwide recognition for its work on the structure and function of glutamate receptors, and the regulation of excitatory synapses. **The position has 2 years of initial funding, with the possibility for extension.**

IBENS is a leading biology institute in Europe that gathers world-class researchers from fields including Genetics & Genomics, Cell & Developmental biology, Evolution, and Neuroscience. It is located **in the center of Paris** and offers a highly stimulating and dynamic environment, close to several other top research institutions (Institut Curie, Collège de France, ESPCI,...).

Candidates should send a CV and a brief statement of research experience to Pierre Paoletti: pierre.paoletti@ens.fr

Selection of publications from the host team:

- Esmenjaud et al. (2019) **EMBOJ** 38(2):e99894
- Paoletti et al. (2019) **Nat Rev Neurosci**, 20(9), 514-532
- Grand et al. (2018) **Nat Commun**, 9(1):4769
- Klippenstein et al. (2017) **eLife**, 6:e25808
- Zhu et al. (2015) **Curr Op Pharmacol**, 20 :14-23
- Vergnano et al. (2014) **Neuron**, 82(5), 1101-1114
- Stroebel et al. (2014) **J Neurosci**, 34, 16630-36
- Zhu et al. (2014) **PNAS USA**, 111, 6081-6086
- Zhu et al. (2013) **Nat Struct & Mol Biol** 20(4), 477-485
- Paoletti et al. (2013) **Nat Rev Neurosci**, 14(6), 383-400
- Nozaki et al. (2011) **Nat Neurosci**, 14, 1017-1022
- Mony et al. (2011) **EMBOJ** 30(15):3134-46
- Gielen et al. (2009) **Nature**, 459, 703-707