

POSTDOCTORAL POSITION

Team of María Cecilia Angulo
Neuron-oligodendroglia interactions in myelination and myelin repair
Institute of Psychiatry and Neuroscience of Paris (IPNP); INSERM U1266, Paris, France

The position will be for 2-3 years
Starting date: January 2021

We seek to hire a highly motivated young postdoctoral fellow to investigate how neuron-oligodendroglia interactions drive cortical circuit maturation and function, impacting cognitive processes. The postdoc candidate should have expertise in electrophysiology *in vivo* and behavior. A background in patch-clamp recordings in brain slices as well as experience in transgenic mice and glial cells would be appreciated but not required. The post-doc candidate will integrate our team located in the new Institut of Psychiatry and Neuroscience of Paris (IPNP) inside Sainte-Anne Hospital, a highly stimulating environment.

Although neuronal activity is the core of brain function, neurons alone cannot provide the entire basis for highly complex information processing tasks. Oligodendrocytes (OLs), the myelin-forming glial cell type in the CNS, produce myelin sheaths that enwrap axons and increase conduction velocity. Myelination plays a critical role in action potential fidelity and synchronization of neuronal networks. In turn, myelination is dynamically regulated by neuronal activity and experience. Furthermore, impaired myelin integrity has profound consequences on behaviour and cognition in neurodevelopmental disorders such as schizophrenia and in neurodegenerative diseases such as Multiple Sclerosis. However, how myelin abnormalities affect sensorimotor and cognitive processes is poorly understood. The present project will explore how neuron-oligodendroglia interactions and myelination affect cognitive processes at the level of the cortex in different transgenic mice.

Five selected publications of the host team:

- Benamer N et al. (2020) *Nat Commun* (In Press)
- Orduz D et al. (2019) *Nat Commun* 10:4249
- Ortiz FC et al. (2019) *JCI Insight* 4(9):e123434
- Wake H et al. (2015) *Nat Commun* 6:7844.
- Orduz D et al. (2015) *eLife* 4:e06953

Website: <https://ipnp.paris5.inserm.fr/research/teams-and-projects/19-equipe-angulo>

Interested candidates should send their CV, a motivation letter including research interests and names of 2 referees to: maria-cecilia.angulo@parisdescartes.fr