POST-DOCTORAL POSITION

VISION INSTITUTE – PARIS – FRANCE

DEPARTMENT OF DEVELOPMENTAL BIOLOGY

The Nicol lab at the Vision Institute (Paris, France) is seeking a postdoctoral fellow to join the *Mechanisms of sensory map development* team. The Vision Institute is part of Sorbonne University, CNRS and Inserm and offers a highly multidisciplinary environment with teams active in fields ranging from theoretical neuroscience or developmental biology to the development of retinal prostheses.

Our group investigates the cellular and molecular mechanisms wiring neuronal networks with special interest in the visual system. The candidate will join a project aiming at understanding how the subcellular compartmentation of second messenger signals influences the remodeling of cell adhesion in developing axons and controls the wiring of retinal axons into the brain. We use multiple experimental approaches including the use of FRET biosensors, TIRF imaging, optogenetics, *in utero* electroporation and light sheet microscopy. This experimental diversity enables to carry out investigations both *in vitro* to reach a high spatio-temporal resolution and *in vivo* to investigate the wiring of an intact nervous system.

The successful applicant should hold a PhD in neuroscience or cell biology. Previous experience in live cell imaging is welcome but not required. The candidate is expected to work independently for the design and realization of experiments. Fluency in English is mandatory but ability to speak French is not required.

The position is funded for 2 years starting early 2021 and further extension is possible. Applications should be sent to Xavier Nicol (xavier.nicol@inserm.fr) and should include a statement of research accomplishments and interests, a CV and the contact information of three references.

Lab website : http://xaviernicol.toile-libre.org/

Selected relevant publications:

- cAMP-Dependent Co-Stabilization of Axonal Arbors from Adjacent Developing Neurons. Louail A, Sierksma M, Chaffiol A, Assali A, Couvet S, Nedjam M, Roche F, Zagar Y, Duebel J, Nicol X. Cell Reports. (2020)
- SpiCee: A Genetic Tool for Subcellular and Cell-Specific Calcium Manipulation. Ros O, Zagar Y, Loulier K, Baudet S, Aghaie A, Roche F, Baudet S, Louail A, Petit C, Mechulam Y, Nicol X. Cell Reports. (2020)
- SponGee: A Genetic Tool for Subcellular and Cell-Specific cGMP Manipulation. Ros O, Zagar Y, Ribes S, Baudet S, Loulier K, Couvet S, Ladarre D, Aghaie A, Louail A, Petit C, Mechulam Y, Lenkei Z, Nicol X. Cell Reports. (2019)
- A cholesterol-enriched plasma membrane subdomain compartmentalizes ephrin-generated cAMP signals to prune developing retinal axon arbors. Averaimo S, Assali A, Ros O, Couvet S, Zagar Y, Genescu I, Rebsam A, Nicol X. Nature Communications. (2016)