



Two ERC-funded postdoctoral positions are available at CNRS in France

In the team Neuronal Circuits and Motor Control, headed by Dr. Julien Bouvier.

We study the neuronal control of movement in health and disease. **We are looking for two motivated scientists to explore the diversity and specialization of descending circuits for the orchestration of integrated and adaptive movements at the functional, connectomics and genetic levels.** Applicants should be interested in systems neuroscience and motor control, have a constructive team-spirit, and have some of the following skills:

Project 1:

To investigate the diversity of descending brainstem neurons from the anatomical and gene expression standpoints. Approaches will combine circuit tracing, high-throughput sequencing, and histology.

Relevant skills:

- Tissue dissociation, flow cytometry;
- RNA sequencing and genomic data analysis ideally at the single cell or single nucleus level;
- Interest in learning experimental approaches on mice for anatomical and functional investigations.

Project 2:

To investigate the organization and diversity of specific brainstem neurons through their connectivity, activity and function. Approaches will combine advanced viral circuit tracings with in vivo functional imaging, electrophysiology and optogenetics, and behavioral analysis.

Relevant skills:

- Rodent stereotaxic surgery, behavioral analysis, video-tracking;
- Fiber photometry and/or electrophysiological recordings and/or optogenetics in vivo;
- Minimal skills in programming or bioengineering will be a valuable asset.

You would be joining a dynamic, international, and well-equipped team supported by ERC and ANR in a brand-new multidisciplinary Institute at the heart of the Paris-Saclay cluster.

Interested candidates should send to julien.bouvier@cnrs.fr: a 2-page summary of previous research and interests, a complete CV, and contact details of 2 references.

Positions can start in 2024, for 2 years initially with extensions possible based on advancement.

Team website: www.bouvier-lab.com / Twitter: [@julbouvier](https://twitter.com/julbouvier)

Recent publications:

- Hérent C, Diem S, Usseglio G, Fortin G, Bouvier J. [Upregulation of breathing rate during running exercise by central locomotor circuits in mice](#). *Nature Communications*, 2023
- Usseglio G, Gatier E, Heuzé A, Hérent C, Bouvier J. [Control of orienting movements and locomotion by projection-defined subsets of brainstem V2a neurons](#). *Current Biology*, 2020.
- Schwenkgrub J, Harrell E, Bathellier B, Bouvier J. [Deep imaging in the brainstem reveals complex functional dynamics in V2a neurons controlling locomotion](#). *Science Advances*, 2020
- Hérent C, Diem S, Fortin G, Bouvier J. [Absent phasing of respiratory and locomotor rhythms in running mice](#). *Elife*, 2020