



We are recruiting a motivated postdoctoral fellow to study cerebellar circuit dynamics using **optical voltage recording at the cellular level in behaving mice**. Our team has developed ULoVE¹ and 3D-CASH² technologies and is the world leader for two-photon recording of Genetically Encoded Voltage Indicators (GEVIs)^{1,3}, which is performed routinely in the lab on cell populations *in vivo*. This project is centered on the study of inhibitory microcircuits in the context of pattern separation.

Requirements : Candidates will have performed *in vivo* multiphoton optical recordings or targeted patch-clamp recordings, must be skilled in programming (data analysis) and familiar with viral transduction and associated genetic strategies.

This position is funded by an ANR grant for **2 years** and covers all experimental costs.



References :

1. Villette, V. *et al.* Ultrafast Two-Photon Imaging of a High-Gain Voltage Indicator in Awake Behaving Mice. *Cell* **179**, 1590-1608.e23 (2019).
2. Akemann, W. *et al.* Fast optical recording of neuronal activity by three-dimensional custom-access serial holography. *Nat Methods* **19**, 100–110 (2022).
3. Liu, Z. *et al.* Sustained deep-tissue voltage recording using a fast indicator evolved for two-photon microscopy. *Cell* S0092867422009163 (2022) doi:10.1016/j.cell.2022.07.013.

Our lab, located in the **Institut de Biologie de l'École Normale Supérieure** in Paris Latin Quarter, provides a rich and vibrant experimental and training environment, in addition to all the required facilities (animal breeding, virus production, imaging, FabLab), to embark on this project. The team is highly multidisciplinary, combining expertise ranging from state-of-the-art molecular biology to physiology, optics and instrumental development. The selected candidate will have full access to unique ultrafast random-access multiphoton microscopy, developed in the lab in the past decade.

Potential applicants should contact Vincent Villette at vincent.villette@bio.ens.psl.eu with their CV, cover letter, and contact information of one or more academic references.

