



**UNIVERSITA' DEGLI STUDI DI PAVIA**  
**DIPARTIMENTO DI BIOLOGIA E BIOTECNOLOGIE**  
"Lazzaro Spallanzani"  
via Ferrata 9 - 27100 PAVIA (Italia)

## **Postdoctoral Research Fellow Position**

A two-year fellowship is available in the lab of Dott. Paolo Spaiardi at the Department of Biology and Biotechnology "L. Spallanzani", Pavia on the project "Functional restoration of symmetric motor control in unilateral facial paralysis due to nerve damage".

**Project background:** Facial paralysis is an extremely common condition that affects 1.81% of people during their lifetime. Correction of unilateral facial paralysis due to nerve injury involves complex surgical procedures that are highly invasive and may involve long-term comorbidities. To overcome these limitations, we propose to use signals from the contralateral healthy hemiface to achieve functional recovery of unilateral facial paralysis, in a rat model. To this end, the bioelectrical signal detected by the healthy nerve branches will be reproduced symmetrically at the level of the contralateral damaged nerve branches.

**Requirements:** Here, we are looking for a highly motivated candidate that will be responsible for performing microsurgical operations on the nerves and implanting the recording/stimulation devices (cuff-electrodes). Using electrophysiological techniques, the candidate will also i) acquire the bioelectric signals derived from the healthy nerves, ii) process the signals and use them to stimulate the contralateral damaged nerve, iii) monitor the symmetric movement of the vibrissae to verify the restoration of the compromised functions. Candidates with experience in in-vivo rodent models and/or biophysics/electrophysiology are encouraged to apply.

**Starting date:** January 2024

Interested candidates should email a cover letter and CV to **Dr. Paolo Spaiardi** ([paolo.spaiardi@unipv.it](mailto:paolo.spaiardi@unipv.it)) or **Dr. Francesca Talpo** ([francesca.talpo@unipv.it](mailto:francesca.talpo@unipv.it))