# PhD position in Experimental Neuroscience and Biophotonics

**Position:** Ph.D. Student

**Deadline:** 31 October 2026

**Employment Start Date:** 1 April 2027

**Contract Length:** 48 months

**City:** Bilbao

**Country:** Spain

**Institution:** Instituto Biofisika (CSIC-UPV)

**Department:**

**Description:**

**Exploring the geometry and function of the brain extracellular space by fluorescence microscopy**

This project seeks to identify new structure-function relationships of the brain extracellular space in the context of signaling and metabolite diffusion. For this, we will apply super-resolution STED microscopy and 2-photon microscopy in live mouse brain slices, and complement these experiments with classical immunohistochemistry and potentially electrophysiological recordings.

Our STED microscope is custom-built with open laser beams and optical components, and previous experience with advanced fluorescence microscopy or optics is an advantage, though not a must.

**We offer**

The **Tønnesen Group, aka Neuronal Excitability Lab**, is a small research group were everyone has a defined project and plays a specific role. A small group allows for better supervision and development of team spirit. We are among a few labs that have the techniques and competences to work at the interface of optics and neuroscience to address the brain extracellular space, and combined with our scientific curiosity we are in a prime position to make new discoveries. We try to maintain a positive learning environment based on curiosity and positive encouragement. Our team is international with current members from Denmark, Italy, Mexico and Spain, and our work language is English. The work involves hands-on experiments using mice, as well as reading up on scientific literature, data analysis and interpretation, and presenting results at lab meetings and conferences.

**We seek**

A physicist with knowledge on optics/microscopy and an interest in neuroscience, or *vice versa*, or someone with other relevant background motivated to learn. The most important thing is not the previous educational background of the applicant, but the interest and motivation to learn and master advanced optical imaging that is technically challenging and requires patience and stamina.

**Practical info and how to apply**

Our neuroscience lab is located at the **Instituto Biofisika** in Leioa, a suburb to **Bilbao**, Spain. The successful candidate will be employed on a **4-year** fully funded contract and will be enrolled at the Neuroscience PhD program of the **University of the Basque Country**. Part of the program is a 3-month stay at a foreign lab of relevance for the project, though this is voluntary. Following initial screening we will help qualified applicants apply through the formal online application system. Net salary is around 2.000 Eur/month.

Applicants should email their application or any requests for further information to group leader Jan Tønnesen jan.tonnesen@ehu.eus using email subject: **PID2025 PhD**

- CV (max 2-pages)
- Motivation letter (Max 1 page)
- Contact information for two reference persons