Universidad de Navarra
Facultad de Ciencias

MASTER'S DEGREE IN BIOMEDICAL RESEARCH
Research Project Proposal
Academic year 2024-2025

Project Nº 36

Title: *Translational biomarkers for the evaluation of neuromodulation strategies.*

Department/ Laboratory *Physiological Monitoring & Control Lab, CIMA/University of Navarra.*

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Codirector:
Contact:

Summary *Short summary of the project with a **maximum extension of 250 words**, including the goals and the methodology that will be used*

During this project, you will join the Physiological Monitoring & Control Team at CIMA to develop an investigation aimed at characterizing the dynamics of neural systems in health and disease.

Depending on your background and/or skills you will use systems neuroscience tools (electrophysiology, fiber-photometry and/or optogenetics) to identify the neurofunctional domains affected in patients and animal models of disease (epilepsy, Parkinson's, Alzheimer's, or ASD).

With the ultimate goal of developing new therapeutic approaches aimed at restoring normal cerebral dynamics, you could participate in the evaluation of different neuromodulatory approaches (electrical, magnetic or sensory stimulation) to investigate brain activity and its alteration under disease.

In addition, you would have the opportunity to participate in technological developmnets including the implementation of techniques for data analysis (Python/Matlab software development), building recording electrodes, design of chronic implantation devices and wearable monitoring systems.

yes	X
no	

Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?