



Universidad  
de Navarra

Facultad de Ciencias

**MASTER'S DEGREE IN BIOMEDICAL RESEARCH**

**Research Project Proposal**

Academic year 2023-2024

**Project Nº 48 ASIGNADO**

**Title: Evaluation of the electric response to viral treatment in pediatric brain tumors**

**Department/ Laboratory**

Programa de tumores sólidos y programa de neurociencias/Laboratorio 2.03/CIMA

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**Summary** The tumor microenvironment (TME) plays an essential role in malignancy, and neurons have emerged as a key component of the TME that promotes tumorigenesis across a host of cancers. Recent studies on brain tumors highlight bi-directional signaling between tumors and neurons that propagates a vicious cycle of proliferation, synaptic integration, and brain hyperactivity. In this work, we will set up a model to evaluate the signaling between neuron and cancer cells and how these circuits are perturbed after virotherapy. We will employ relevant experimental models that include ex vivo culture of brain slices with and without tumors treated with an oncolytic virus. We will evaluate the response to the treatment by electrophysiology and its relationship with tumor maintenance and efficacy.

yes	<input checked="" type="checkbox"/>
no	<input type="checkbox"/>

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