Universidad de Navarra
Facultad de Ciencias

MÁSTER EN INVESTIGACIÓN BIOMÉDICA
Research Project Proposal
Academic year 2024-2025

Project Nº 46

Title: *Characterization of innate immunity in blood samples from amyotrophic lateral sclerosis (ALS)*

Department/ Laboratory *Laboratory where the project will be carried out indicating Department, Area, Faculty, CUN, CIMA etc.*
Navarrabiomed and Cima-Universidad de Navarra

Director 1 *Ivonne Jericó*
Contact: *ivonne.jerico.pascual@navarra.es*
Codirector: *Marisol Aymerich*
Contact: *maymerich@unav.es*

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

Amyotrophic Lateral Sclerosis (ALS) is a neurodegenerative disease with a poor prognosis with no cure. Neuroinflammation is one of the pathophysiological mechanisms involved in neuronal loss in ALS. Infiltration of monocyte-derived macrophages (MDM) and lymphoid cells that actively contribute to neurodegeneration has been described in both patients and transgenic models of the disease. Recent studies suggest that MDM infiltration occurs at early stages of the disease. We hypothesize that systemic innate immunity plays a relevant, and still poorly understood, role in the pathophysiology of ALS it is related to the progression rate of the disease. In this project we propose to perform a longitudinal characterization of myeloid cells in peripheral blood from ALS patients by flow cytometry. Then we will investigate whether there is a correlation between the immunophenotype and different parameters that include: rate of progression, survival, prognosis, markers of neuronal death and innate immune activity.

yes	
no	X

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