Universidad de Navarra

Research Project Proposal
Academic year 2022-2023
Máster en Investigación Biomédica

Project Nº 55 ASIGNADO

Title: *Analysis of the anti-parkinsonian effect of immunomodulatory compounds*

Department/ Laboratory *Department of Biochemistry and Genetics (UNAV)/Neuroscience Program (CIMA)*

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Summary

The aim of our group is to understand the type of neuroinflammatory reaction generated by dopaminergic neurodegeneration and its effect on neuronal viability to design neuroprotective strategies for the treatment of Parkinson´s disease (PD). The goal of this project is to evaluate the effect of immunomodulatory compounds in experimental models of PD, the MPTP and AAV9-α-synuclein over-expression mouse models. Parkinsonian mice will receive the drug along several weeks and at the end of the experiment the motor behavior will be evaluated prior sacrifice. The neuroprotective effect will be analyzed by histological techniques to analyze preservation of the nigrostriatal pathway. To determine the type of inflammatory response generated in the midbrain and in the striatum, we will dissect out these regions and from cell suspensions we will characterize microglial activation and the infiltration of immune cells in the brain by flow cytometry. From the data obtained we expect to identify inflammatory responses associated to neuronal death or neuroprotection.

yes	X
no	

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