



Research Project Proposal
Academic year 2018-2019
This form must be filled in ENGLISH

Project Nº 37

Title: *RNA sequencing for the characterization of glial cell activity*

Department/ Laboratory *Neuroscience Program*

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Codirector:

Contact:

Summary

Our group is interested in the identification of neuroprotective strategies for the treatment of neurodegenerative diseases. Currently, we are studying the anti-parkinsonian properties of the modulation of the endocannabinoid system using animal models of Parkinson's disease. Previous results from our group point towards the involvement of glial cells in the neuroprotective effect of endocannabinoids. The question that we want to answer in this project is how the endocannabinoid 2-AG modulates glial cell activation. To achieve this goal, we will purify microglia and astroglial cells from control and parkinsonian animals treated with an enhancer of 2-AG levels. RNA from these cells will be sequenced to characterize the response of glial cells under pathological conditions and their response to cannabinoid-based therapies. The results obtained by RNAseq will be validated by flow cytometry, quantitative PCR and histological techniques.

yes	X
no	

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