



Research Project Proposal

Academic year 2019-2020

Project Nº 52 ASIGNADO

Title:

Exploring mTOR pathway in the brain and peripheral tissues of p27 KO mice: effect on memory and modulation by high fat diet.

Department/ Laboratory

Laboratory of Alzheimer's disease at CIMA, Neuroscience division

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Summary

The risk of Alzheimer's disease (AD) in elderly individuals is increased by other aging-associated comorbidities including obesity. Several studies have described the role of different components of the cell cycle machinery in both diseases, AD and in obesity. For instance, p27, which is member of the family of cyclin-dependent kinase (Cdk) inhibitors (inhibits Cdk2 and Cdk5), is regulated on both AD and obesity. This evidence suggests that the p27-Cdk2 axis must be an important link between AD and obesity. However, to date, none study has analysed the possible link between the p27-Cdk2 axis and these diseases. Previous studies in our group revealed that one of the pathways affected in the brain of p27 KO mice is the mTOR pathway, which is also important in the regulation of synaptic plasticity and memory. The main objective of this project is to explore the modulation of mTOR pathway *in the brain and peripheral tissues of p27 KO mice and analyze if this pathway constitutes the link between obesity and the risk of dementia.*

yes	X	Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?
no		