Universidad de Navarra

Máster en Investigación Biomédica
Facultad de Ciencias

Research Project Proposal
Academic year 2015-2016

Project Nº 35

Title: Identification and validation of targets to develop new therapies to stop the progession of AD: epigenetic and non-epigenetic targets.

Department/ Laboratory Laboratory of Neurobiology of Alzheimer´s disease, at CIMA (lab 2.01)

Director 1 Ana Garcia Osta
Contact: agosta@unav.es, 194700 (2023)
Codirector: Mar Cuadrado-Tejedor
Contact: mcuadrado@unav.es, 194700 (2023)

Summary

The primary research in our lab is devoted to the discovery of cellular and molecular mechanisms of cognitive deficits, specifically in Alzheimer's disease (AD). Our goal is to identify molecular neurobiological abnormalities which could help in the development of effective pharmacological treatments to slow or halt disease progression and remission of clinical manifestations associated with the disease. Toward this goal we used transgenic mouse models of AD, where we can study the main signs of the disease from the molecular to the behavioural point of view. We also use these mouse models to test pre-clinically the potential therapeutic relevance of novel drug treatments.

More specifically we are interested in understanding how epigenetic mechanisms, such as histone acetylation, alter gene expression, which could lead to identification of new therapeutic targets. We study the molecular changes associated to adaptive synaptic plasticity processes that occur in situations such as continued administration of drugs (histone deacetylase inhibitors, phosphodiesterase inhibitors, growth factors), induction of neurotoxicity processes and, in particular, those related to learning and memory phenomena.

POSSIBILITY OF PhD

YES** (PhD grant required)