

**Group Name:** Mecanismos moleculares alterados en la enfermedad de Alzheimer y otras demencias

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**Title of the MRP:** Regulation of glycosylation of proteins

**Summary of the MRP:**

Glycosylation is a post-translational modification that critically influences protein structure and function. It also plays a key role in proper cellular localization and protease processing.

This TFM aims to identify the glycosylation sites of specific proteins, such as apolipoprotein E (apoE) and APP, and to explore how their glycosylation can be altered. We will modulate the glycosylation mechanisms in a cell line, utilizing cellular biology and biochemical techniques, and subsequently analyze the resulting impact on the glycosylation pattern, function, and localization of these specific proteins.

The ultimate goal is to determine whether modifying glycosylation is a useful and feasible tool to modulate protein function, allowing this approach to be applied in disease models such as Alzheimer's

**Methods and technology involved in the MRP:**

Cell line culture techniques: Culture maintenance, cell treatment, and collection of media and extracts.

Biochemical techniques such as electrophoresis, affinity to lectins (binds specific glycans), deglycosylation assays, transfection and immunocytochemistry.

Imaging techniques: confocal and spinning disk microscopy.

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