Universidad de Navarra

Facultad de Ciencias

MASTER'S DEGREE IN BIOMEDICAL RESEARCH
Research Project Proposal
Academic year 2024-2025

Project Nº 03

Title: New therapeutic strategies for liver cancer.

Department/ Laboratory *Laboratory where the project will be carried out indicating Department, Area, Faculty, CUN, CIMA etc.*
CIMA. Solid tumors Program. Hepatology: liquid biopsy and carcinogenesis laboratory.

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Summary *Short summary of the project with a **maximum extension of 250 words**, including the goals and the methodology that will be used*

Our data demonstrate that the splicing factor SLU7 regulates the stability of many proteins. Moreover, SLU7 is a survival factor for tumor cells of very different origin. We therefore hypothesize that SLU7 silencing could represent a new therapeutic target for cancer.

Our current objectives are:

(1) To investigate in animal models the therapeutic anti-tumoral potential of SLU7 inhibition using different strategies to silence SLU7 expression;

(2) To investigate the mechanisms involved in the proteostasis process regulated by SLU7, including protein-protein interactions, protein degradation/stability, post-translational modifications, protein translation, etc. This will also allow us to identify new targets to be exploited as anti-tumor therapy.

To characterize these mechanisms we used cell lines, bile derived organoids and tumor samples from patients, and animal models (mice models of liver damage and carcinogenesis). Methods to be used include transfection strategies (overexpression and silencing), Western blot, immunoprecipitation, real-time PCR, sequencing, BioID interactions, immunocyto(histo)chemistry, etc.

yes	X
no	

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