



MÁSTER EN INVESTIGACIÓN BIOMÉDICA

Research Project Proposal

Academic year 2026-2027

Project Nº 16

Title: Diagnostic and Therapeutic Strategies for Liver Cancer

Department/ Laboratory

CIMA. Solid tumors Program. Hepatology: liquid biopsy and carcinogenesis laboratory

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Summary

Hepatocellular carcinoma (HCC) and cholangiocarcinoma (CCA) remain a major clinical challenge, highlighting the need for improved diagnostic tools and new therapeutic strategies. Our group has shown that the splicing factor SLU7 regulates the stability of multiple proteins and acts as a survival factor in tumor cells of different origins. Based on these findings, demonstrate that SLU7 represents a new therapeutic target for HCC and different types of cancer.

The main goal of this project is to investigate the therapeutic potential of SLU7 inhibition in liver cancer, particularly in CCA, and to explore its role in proteostasis, including protein-protein interactions, protein degradation and stability, and post-translational modifications. These studies may contribute to the identification of new molecular mechanisms that could be exploited as anti-tumor therapeutic targets. The methodology may include cell culture, gene silencing approaches, molecular and biochemical assays, analysis of protein stability and interactions, and the use of in vitro and in vivo models of liver cancer.

In parallel, the project will contribute to the development and optimization of new diagnostic strategies of liquid biopsy as well as cellular models for the study of liver tumors, including patient-derived organoids (from bile and tumor biopsies) and other preclinical models.

This project will provide the student with training in translational cancer research and in experimental approaches aimed at improving the diagnosis and treatment of liver tumors.

yes	X
no	

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