



**MASTER'S DEGREE IN BIOMEDICAL RESEARCH**

**Research Project Proposal**

Academic year 2024-2025

**Project Nº 01**

**Title: Multiplex bioimaging of single-cells using spatially resolved analysis and computational pathology**

**Department/ Laboratory**

*ImmunoPathology Lab, Anatomía Patológica CUN*

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**Summary**

Spatial biology is based on the principle that complex immune cell profiling and spatial context matter. The functional state of a cell within its local and surrounding environment can be used as biomarkers that may guide therapy in patients with cancer and has the power to predict the likelihood of clinical response. The aim of this project is to develop computational pathology strategies for integrative analysis needed to integrate information across multiple molecular layers using spatially resolved and multiparametric single-cell analysis. They will allow for the characterization the spatiotemporal patterns of an antitumor immune response, which are essentials for developing predictive biomarkers of response to immunotherapy.

yes	
no	X

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