



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

<b>Project Nº 25</b>	
<b>Title:</b> <i>Dissection of immunodynamics in metastatic lung cancer for personalized immunotherapy</i>	
<b>Department/ Laboratory</b> Program in <i>Solid Tumors. Lab of Adhesion and Metastasis 2.01 (CIMA)</i> .	
<b>Director 1</b> <i>Fernando LECANDA (If there will be two co-directors indicate both)</i> <b>Contact:</b> <a href="mailto:flecanda@unav.es">flecanda@unav.es</a> <b>Codirector:</b> <b>Contact:</b>	
<b>Summary</b> <i>Short summary of the project with a <b>maximum extension of 250 words</b>, including the goals and the methodology that will be used</i>	
<p>Lung cancer metastasis represents the most devastating consequence of cancer associated with dismal prognosis. Yet, current efforts to dissect critical determinants and molecular mechanisms of tumor cell dissemination remain unsuccessful. This project aims: (1) To dissect the contribution of the specific mutations to the immune landscape in different target organs of metastases. (2) To unveil critical targets in a mutant-specific manner for the development and evaluation of targeted anti-metastatic therapies. (3) To identify novel combinations with immune checkpoints to potentiate antitumor immune responses in different metastatic sites.</p> <p>The multimodal approach will heavily rely on cutting-edge technologies including the use of immunophenotyping, spatial transcriptomics, RNA-seq and single cell RNA-seq, adeno, retro and lentiviral transduction systems, and bioinformatic and computational tools (knowledge in Phyton, and R will be advantageous). This approach will preserve immunosurveillance and tumor-stromal interactions We look for an open-minded, highly motivated young scientist with strong organizational and excellent communications skills.</p>	
<b>References</b>	
<ol style="list-style-type: none"> <li>1. D. Ajona, (...) <b>F Lecanda</b>, LM Montuenga, R Pío <u>Cancer Discovery</u> (2017)</li> <li>2. B. Ruiz. (...) <b>F. Lecanda</b>. <u>Cancer Discovery</u> (2022)</li> </ol>	
yes	X
no	
Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?	