



MÁSTER EN INVESTIGACIÓN BIOMÉDICA
Research Project Proposal
Academic year 2026-2027

Project Nº 13					
Title: Complement as a driver of precision therapy in ovarian cancer					
Department/ Laboratory Translational Oncology. Program in Solid Tumors. Division of Cancer. Cima Universidad de Navarra					
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Summary <p>Ovarian cancer remains the deadliest gynecologic malignancy, largely due to frequent relapse and the rapid development of resistance to standard therapies, including PARP inhibitors and immunotherapy. Although it is considered an immunogenic tumor, only a minority of patients benefit from immune checkpoint blockade, highlighting the need to identify key mechanisms of immune evasion within the tumor microenvironment.</p> <p>Our research has focused on the role of the complement system in cancer. We have shown that complement activation promotes an immunosuppressive tumor microenvironment that supports tumor progression. Importantly, we demonstrated for the first time that pharmacological modulation of complement enhances the efficacy of PD-1 blockade in preclinical models, providing a strong rationale for targeting complement in cancer therapy, which is currently being evaluated in clinical trials.</p> <p>We now hypothesize that complement activation acts as a central driver of immune escape in ovarian cancer and represents a therapeutically actionable vulnerability. This project aims to investigate how complement shapes the tumor microenvironment and influences therapeutic response. The master's student will work with unique clinical samples from ovarian cancer patients, apply advanced spatial and molecular techniques, and participate in preclinical studies using syngeneic in vivo models to evaluate the impact of complement inhibition.</p> <p>Overall, this project will provide insight into the interaction between innate immunity and cancer and may contribute to the development of novel biomarker-driven therapeutic strategies for ovarian cancer.</p>					
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Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?					