

PhD Thesis Project Offer

Provisional Title of the Doctoral Thesis

FIGHTING CHEMOTHERAPY TOXICITY WITH CANNABINOID SYNERGY

Subject area* / Research line

HEALTH SCIENCES / Basic research in biomedicine; Research on Pain

Summary of the Doctoral Thesis (maximum 300 words)

The proposed doctoral thesis is part of the **ENTOURAGE-CT project** (see below), led by **Dr. Abalo** (Pharmacology and Nutrition Area) and **Dr. Uranga** (Histology and Pathological Anatomy Area) from the Department of Basic Health Sciences. The research will be conducted within the framework of the **High-Performance Research Group in Pathophysiology and Pharmacology of the Digestive System (NeuGut)**: <https://servicios.urjc.es/pdi/grupos-investigacion/neugut>.

Chemotherapy-induced toxicity represents a major health challenge, leading to severe gastrointestinal (GI) and neurofunctional complications that compromise patients' quality of life and treatment adherence. Current clinical strategies are largely symptomatic and fail to address the underlying mechanisms responsible for these adverse effects. This gap results in increased healthcare costs, prolonged hospital stays, and reduced therapeutic success.

The **ENTOURAGE-CT project**, within which the doctoral thesis will be developed, pursues the following objectives:

- To characterize alterations in the gut-brain axis induced by anticancer chemotherapy.
- To identify and validate biomarkers of chemotherapy-induced toxicity.
- To evaluate the therapeutic potential of formulations based on non-psychoactive phytocannabinoids.
- To compare the efficacy and safety of different formulations aimed at reducing the adverse effects of chemotherapy.
- To investigate the role of the endocannabinoid system in chemotherapy-induced alterations and in responses to novel therapeutic strategies.

The project will employ a range of **preclinical and translational methodological approaches** spanning the fields of **pharmacology, neuroscience, oncology, and bioinformatics**.

Collaborations have been established with several hospitals (**La Princesa, Alcorcón**), industry partners (**Curaleaf**), and international researchers from **Ireland, Poland, and Australia** to achieve specific project objectives.

The doctoral candidate will have the opportunity to undertake one or more research stays at international institutions with the aim of obtaining the **International Doctorate Mention** for the PhD degree.

Is the development of this thesis associated with the execution of any research project? If so, provide details of the project (title, funding entity, and execution period)

FIGHTING CHEMOTHERAPY TOXICITY WITH CANNABINOID SYNERGY (ENTOURAGE-CT)

Knowledge-generation project funded by the **Spanish Ministry of Science, Innovation and Universities** and the **State Research Agency (AEI)** (Grant No. PID2025-170291OB-I00).

Project duration: September 1, 2026, to August 31, 2030.

Academic Profile of the Student (maximum 200 words)

Master's students or recent graduates in **Biomedicine, Biology, Pharmacy, Biotechnology, Medicine, or related fields.**

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*See the Subject Areas at <https://www.urjc.es/informacion-practica#oferta-proyectos-de-tesis>.
Each project will be included in a single subject area.