



MÁSTER EN INVESTIGACIÓN BIOMÉDICA

Research Project Proposal

Academic year 2026-2027

Project Nº 10

Title: A resting-state fMRI study on the Regulation of Eating Behavior in healthy lean individuals

Department/ Laboratory Laboratory where the project will be carried out indicating Department, Area, Faculty, CUN, CIMA etc.

Biomedical Imaging Laboratory at the Radiology Department of Clínica Universidad de Navarra.

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Summary Short summary of the project with a maximum extension of 250 words, including the goals and the methodology that will be used.

The regulation of eating behavior depends on the complex integration of signals within various brain networks. Magnetic resonance imaging (MRI) enables the investigation of brain structure and activity within networks associated with appetite regulation processes. In particular, resting-state fMRI (rs-fMRI), acquired while participants are simply resting in the scanner, provides a unique window into the brain's intrinsic functional architecture.

This project aims to characterize the functional connectivity of neural networks involved in appetite control and food reward in a population of healthy, lean individuals. By combining structural and functional MRI data, we will map the interactions between key brain regions, including the hypothalamus, the insula, and the prefrontal cortex.

Students will gain knowledge of MRI and its application in neuroscience, participate in MRI scanning sessions, administer behavioral and clinical questionnaires related to eating habits, and analyze the obtained data using specialized software tools.

yes	
no	X

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