



Research Project Proposal
Academic year 2016-2017

Project Nº 49
Title: Assessment of atrophy and white matter lesion burden using magnetic resonance imaging (MRI) in people with subjective memory complaints, as possible biomarkers of Alzheimer's disease.
Department/ Laboratory Neurology and Radiology Departments, CUN
Director: Dr. Mario Riverol Contact: mriverol@unav.es Codirector: Dra. María Fernández-Seara Contact: mfseara@unav.es
Summary <p>Subjective memory complaints are common in the elderly population but their clinical relevance in relation to the development of Alzheimer's disease is unclear. A patient is considered to experience subjective memory complaints when he/she complains about memory deficits that are not detected by cognitive screening tests. The University of Navarra Hospital has a database containing MRI imaging studies and neuropsychological test results on a large cohort of patients who presented with subjective memory complaints, a fraction of which has developed Alzheimer's disease.</p> <p>The goal of this project is to explore the association between subjective memory complaints, atrophy and white matter lesion burden (two imaging biomarkers) and the risk of developing Alzheimer's disease.</p> <p>During this project, the student will learn state of the art neuroimaging techniques to evaluate atrophy and white matter lesion burden and will become familiar with the clinical implications of Alzheimer's disease.</p> References <p>(1) van Oijen, M., et al. (2007) Subjective memory complaints, education, and risk of Alzheimer's disease. <i>Alzheimer's & Dementia</i>. 3:92-97.</p> <p>(2) Burns, J. M., et al. (2005) White matter lesions are prevalent but differentially related with cognition in aging and early Alzheimer Disease. <i>Archives of Neurology</i>. 62:1870-6.</p> <p>(3) Frisoni, G. B., et al. (2010) The clinical use of structural MRI in Alzheimer disease. <i>Nature Reviews Neurology</i>. 6:67-77.</p>



POSSIBILITY OF PhD

YES*

*(PhD grant required)