Translational Imaging Biomarkers Lab

The Translational Imaging Biomarkers laboratory at the Institute of Neurosciences of Alicante, led by Dr. Silvia De Santis, is looking for candidates for a 2-year postdoctoral contract for a researcher with background in bioinformatics and experience in transcriptomics.

The researcher will join the laboratory with the objective of investigating the association between morphological and functional subtypes of brain glia cells in health and disease. To this end, techniques like spatial transcriptomics, magnetic resonance imaging and immunohistochemistry will be used. The mapping between different modalities will be achieved through machine learning approaches.

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Neuroinflammation and neurodegeneration are hot topics in brain research, and they have become very promising targets for the development of novel disease-modifying treatments. Our research focuses on the development, optimization and application of innovative, non-invasive and translational imaging tools, relevant to both basic and clinical research. The objective is to characterize such biomarkers throughout life, with special attention to healthy aging, as well as identify early biomarkers, which can precede and predict diseases such as multiple sclerosis and Alzheimer's, taking into account the gender dimension. An additional line of research is dedicated to developing computational approaches based on machine learning so that the developed methodologies can be optimally transferred to the clinic. Our laboratory is a highly multi-disciplinary environment, at the frontier between biology, mathematics and computer vision.

For any question or expression of interest: dsilvia@umh.es