Martins da Silva, Joana Rita  
University of Santiago of Compostela  
Nationality: Portuguese

PhD project: **Neuroprotective effects of potent antioxidant molecules isolated from Bifurcaria bifurcata and Codium tomentosum in an in vitro and in vivo Parkinson Disease model**

**Supervisors:** Dr. Maria Amparo Alfonzo (University of Santiago de Compostela)  
Dr. Rui Pedrosa (Polytechnic Institute of Leiria)

**Summary:** An increased demand for new natural products from marine organisms exists, with macro-algae appearing as a leading producer of bioactive compounds with biomedical potential that have capacity to treat many human diseases, including Parkinson’s disease (PD). The main aim of this high-impact study will be the evaluation of the neuroprotective effect of isolated molecules from Bifurcaria bifurcata and Codium tomentosum algae that revealed high antioxidant activity in preliminary studies. The protective effects will be measured in a neurotoxicity in vitro and in vivo 6-hydroxydopamine (6-OHDA) induced-model, SH-SY5Y cells and (Lewis rats). Antioxidant activities of the molecules will be evaluated. The neuroprotective effect will be evaluated by cell viability, as well as intracellular signaling pathways linked to neurotoxicity induced by 6-hydroxydopamine in presence or absence of the isolated molecules. This study aims to find novel antioxidant compounds from B. bifurcata and C. tomentosum with neuroprotective activity and therapeutic potential on PD.
Foto relacionada con el tema de tesis Parkinson Disease