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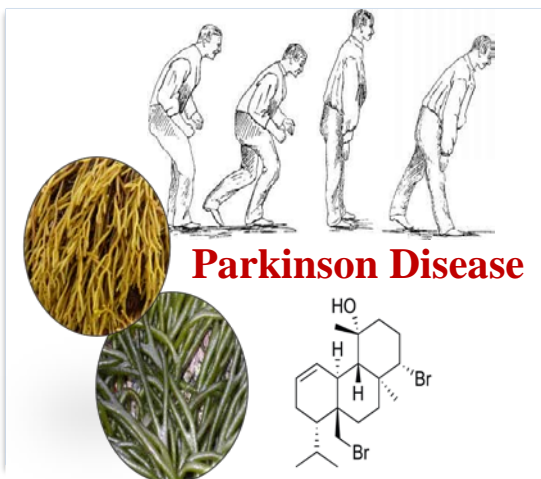
Orientation: Sustainable Use of Marine Resources  
Specialization Area: Transformation and Valorization  
Research Area: 2.16 New products of marine origin



**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 Alfonso (University of Santiago de Compostela)  
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**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.





## Parkinson Disease

