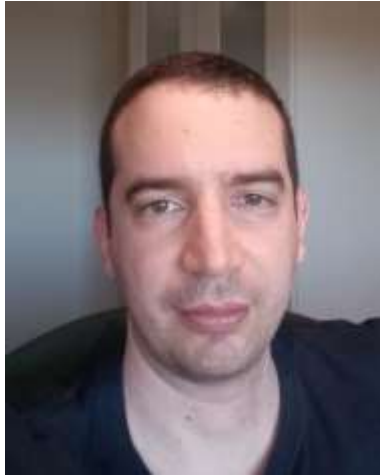


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**PhD project: Effect of increasing nutrient inputs on the taxonomic composition of prokaryote plankton from the Ría de Vigo and the adjacent shelf**

**Supervisors:** Dr. Emilio Fernández Suárez (Universidade de Vigo)  
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**Summary:** There is a constant increase in inputs of anthropogenic organic and inorganic matter (nutrients) into coastal systems. The sources of those nutrients can be urban, industrial, sewage, wildfires, etc., feeding prokaryote plankton communities from the surface of the ocean. A plethora of studies have demonstrated that those increasing nutrient inputs can cause changes in prokaryote biomass and bacterial production. However, there is little information about how those inputs change the community composition of coastal prokaryote plankton, using 16S rRNA gene amplicons. Controlled (inorganic, organic, and a mix of inorganic and organic) nutrients, atmospheric depositions, riverine nutrients, and wildfire ash leachates were added to microcosms containing water from the Ría de Vigo. Different types of nutrient additions resulted in increased proportions of Flavobacteriales, Rhodobacterales, and potentially pathogenic Vibrionales, especially after adding mixed and organic nutrients. Furthermore, wildfire ash leachate additions increased the proportions of hydrocarbonoclastic taxa, such as the Nitrincolaceae family, together with the aforementioned taxa.

Parallely, controlled nutrient additions to communities from the middle ría were compared with those from the adjacent shelf, showing that the former might be more resistant to inorganic nutrient additions, while the latter could be more resistant to a mix of inorganic and organic nutrient inputs.

