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Nationality: Spanish

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Orientation: Sustainable Use of Marine Resources

Specialization Area: Aquaculture

Research Area: 2.14 Upwelling of toxic algae and marine biotoxins



**PhD project: Development of alternative assays to physicochemical methods in order to confirm the presence of marine biotoxins in seafood.**

**Supervisors: Dra. Ana Gago Martínez (University of Vigo)**

**Summary:** Currently, a broad range of methodologies based on the use of alternative assays to instrumental methods have been developed for the screening and quantification of marine biotoxins because providing toxicological information but also low cost, simplicity and high-throughput analysis. Immunoassays, cell-based assays, receptor binding assays and biosensors, among others, stand out the most promising alternative methods. The aim of the present thesis includes development as well as evaluation of the applicability of this methods in order to establishing its effectiveness on different groups of marine toxins, paying particular interest on emerging toxins in UE. Analytical method based on high performance liquid chromatography coupled with tandem mass spectrometry (HPLC - MS/MS) will allow to confirm the results given by alternative assays.

Resulting data are a guide both towards development and improvement of specific methods for monitoring include identification, detection and quantification target families of toxins.

