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Nationality: Spanish

Orientation: Sustainable use of marine resources
Specialization Area: Aquaculture
Research Area: 2.12 Upwelling of toxic algae and marine biotoxins



PhD project: Advances in the development of liquid chromatography tandem mass spectrometry for the analysis of emerging marine biotoxins

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Summary: Liquid Chromatography (LC) coupled to Mass Spectrometry (MS) is being widely applied as analytical tool in the field of marine biotoxins both for regulated and for new and emerging compounds. LC-MS/MS recently became the reference method for the control of lipophilic toxins in the European Union and new methods are being developed and optimised to extend the applicability of this technique to other groups. The ability of this technique to resolve issues in particular those related with sensitivity and selectivity, and specially its power for confirmation, makes its application in the field of marine biotoxins very valuable. The present work is focused on the development and optimization of LC-MS/MS as analytical tool for the determination of two groups of emerging toxins in Spanish coasts: Ciguatoxins (CTXs) and Cyclic Imines (CIs). This work is under the scope of a project of the Spanish Government funded by the Ministry of Economy and Competitiveness (AGL2014-52403-R).

