

IR: EMBRC:Unlocking the potential for Health and Food from the seas

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Project Information

Research project title

Polysaccharides from the marine reservoir

Key words

Microorganisms, bioactive polymers, immunomodulant activity, physicochemical characterization, structure/activity relationship.

Research project abstract.

The focus of the EMBRC project is on the strengthening of the monitoring, surveillance and study capacities of marine environments and biological communities associated with them. Organisms of food interest and the identification of bioactive molecules will be explored.

The present PhD project will consider bioactive molecules such as polysaccharides for both pharmacological and nutraceutical interest isolated from marine bacteria and cyanobacteria since marine organisms are an untapped reservoir of polysaccharides with potential beneficial effects for both human health and wellbeing. Among the main activity associated with these polymers, there are immunomodulation, anti-inflammatory, anticoagulant, antithrombotic, antitumor, antiviral and antioxidant.

Furthermore, the chemical and the physicochemical characterization together with the biological activities of new polysaccharides will improve the knowledge of the structure/activity relationship to better exploit the production of new polymers for food ingredients and pharmaceutical products.