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Orientation: Integrated Management of the Sea
Specialization Area: Analysis and Environmental assessment
Research Line: 3.6 Pollution and environmental impacts



PhD project: Possible effects of some pollutants as endocrine disruptors in sea urchins (*Paracentrotus lividus* L.) with molecular and proteomics tools

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Summary: Endocrine disrupting compounds (EDCs) are wide class of environmental contaminants (including flame retardants, plasticizers, cosmetic ingredients, pharmaceuticals and agricultural chemicals) used by the industry in everyday objects. They pose environmental risk due to their effects as androgenic or estrogenic endocrine disruptors, imitating male or female hormones respectively, interfering in vital functions of the organisms.

The increasing presence of those chemicals in the water due to the incomplete elimination in the wastewater treatment plants, is emerging as a new problem in water contamination, including coastal waters. This study aims to explore the possible effects of pollutants as an endocrine disruptor on the edible sea urchin *Paracentrotus lividus* to develop news biomarkers of contamination. Echinoderms are valuable test species in marine ecotoxicology and offer a wide range of biological processes related to reproduction and development appropriate for this approach.

