

**Study of structural and functional proteins in the sea anemone *Actinia fragacea*
(Cnidaria) and potential biomedical interest**

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Marine biological resources provide a diverse source of proteins with application in several biotechnological fields due to their broad structural and biological properties.

Cnidarians are examples of marine animals with biotechnology interest. These soft body animals are distinct as they possess a unique organ specialized in the production of toxins. Research has been performed in several species due to their ecological importance (e.g. jellyfish blooms; coral reefs), regenerative capacity and for their bioactive compounds. More recently, other biotechnology interests emerged including collagen of jellyfish as an alternative to mammal collagen and adhesives proteins of hydrozoans, in view of the development of biomimetic adhesives and antifouling compounds.

Their basic features, ecology and high diversity make cnidarians interesting models in different biotechnological fields and many are potential sustainable resources making important the investigation in different fields (e.g. chemical and biochemical composition, physical-chemical features, screening of bioactive molecules and microbioma). In this study we propose to perform molecular biology, proteomic tools and other protein characterization techniques in the pedal disc and tentacles of *Actinia fragacea* to analyse the collagen and protein adhesive molecular features. This study could provide information of interest in the biomedical field, with focus on the development of biomaterials for tissue engineering, wound healing and drug delivery.