

New opportunities for research: Marine sponges, source of antioxidant compounds to be protected and valorised

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Abstract

The coasts attract millions of tourists every year. This is important for the local economy, but it also causes a series of consequences on the environment. In fact, an increase in population leads to an increase in waste produced, of which one part is found in the sea and together with other phenomena such as coastal erosion contributes to destroying the landscape. Ecotourism is an important element of the environmental protection strategy at the local level, not least because it allows local inhabitants to enjoy the economic benefits derived from the environment instead of destroying it.

The sea waters that cover about 70% of our planet are a source of bioactive molecules important in the treatment of many diseases. Sea sponges are engines that filter a lot of water and bring in many bacteria, some of which live in symbiosis with them and others are eaten by them through the production of chemicals, antimicrobial substances and bioactive molecules to be used in medicine of the future. In addition, they are a source of secondary metabolites such as phenols important for contrasting oxidative stress at the base of many human diseases, alkaloids with anticholinesterase activity and many compounds important to induce apoptosis in different tumor cells (*Costantino et al. 2015*). In particular, biological activity of methanol extracts of different sponges from Maratea (*Agelas oroides*, *Spirastrella cunctatrix*, *Ircinia*, *Axinella verrucosa*) was evaluated *in vitro* through several tests like TPC, DPPH, FRAP and BCB (*Milella et al. 2015*). Relative antioxidant capacity index (RACI) was used to compare the antioxidant capacity data of different extracts generated by different method. *Agelas oroides* showed the highest antioxidant activity, showing to be the most promising source.

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References

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