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## Culture improvements of mesophotic species with biotechnological interest in the framework of TASC MAR project

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Mesophotic choral ecosystems (MCEs) invertebrates are poorly investigated. Studies have demonstrated that MCEs species feature a variety of interesting metabolic and physiological strategies. TASC MAR Project is focused on the study of these species as potential resources of target biomolecules with pharmacological, biomedical, cosmetic or nutraceutical interest. Imare natural is one of the partners of this Project. Our efforts are now focused to produce the desired amount of biomass of each target species. Marine mesophotic invertebrates are very sensitive to the dissolved nitrogenous compounds. Similarly, other physical-chemical parameters of water ( $T^a$ , salinity, pH, phosphate, calcium, and trace elements) must be perfectly balanced to ensure the viability of cultures. Selected species isolated from mesophotic coral ecosystems (MCEs), (cnidarians, sponges and echinoderms) are being cultivated under specific technics, taking into account the environmental conditions of the collecting site. These studies are focused to generate a standard operating protocol for the cultivation of MACLIB organism that maximizes the production of target molecules, considering how production and environmental sustainability can be maximized. For example, this is done by integrating cultivation in the framework of multitrophic aquaculture (IMTA).

### Biography

Pedro Antonio Alvarez Molina has completed his graduation in Marine Sciences from the University of Cadiz and has taken PhD course in Biotechnology. In addition to collaborating in various research projects, he is working as Associate Investigator at the Zoology Department of the University of Granada. In close connection with the Fisheries and Aquaculture sector, he has been working in many national aquaculture projects focused on production of new species of commercial and biotechnological interest, as echinoderms and cnidarians. Since 2004, he has been working in Fisheries and Aquaculture for Andalusian Government in Spain.

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