

**INTERACTION BETWEEN MARINE SYMBIOTIC MICROORGANISMS  
AND *Zoanthus pulchellus*.**

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The genus *Zoanthus* has been studied over the years, due to novel additions of bioactive compounds with pharmacological potential, such as zoanthamine. As a result of competition for survival, this secondary metabolite is responsible for controlling the ecological relationships of numerous marine invertebrates due to, among other things, defensive effects (Paul, 1992). Although almost 40 years have passed since it was discovered, literature on its complex biosynthesis is scarce due to the peculiar relationship that the coral establishes with numerous microorganisms, especially with the dinoflagellate of genus *Symbiodinium sp.* These symbiotic organisms may, very often, be involved in the metabolic complementation/handoffs of small molecules that may become building blocks for the resulting metabolites, that likely leads to an enhanced natural product diversity (Van Oppen and Medina, 2020). This study aims to contribute to the investigation of an unsolved debate: the involvement of symbiotic organisms, in particular those isolated from the colonial zoanthid *Z. pulchellus*, in the production of natural products, and thus, shed light on the origin of zoanthamine alkaloids.

**Keywords:** *Zoanthus*, zoanthamine, *Symbiodinium*, symbionts, dinoflagellate, marine natural products

## References

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