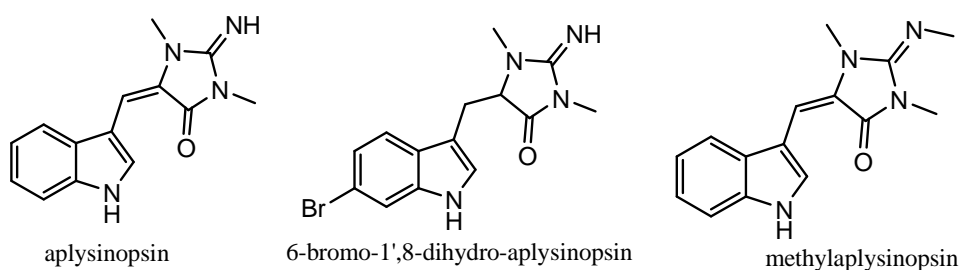


## Characterisation of aplysinopsin in *Tubastraea coccinea* and *Tubastraea tagusensis* using HPLC-MS

**Merielle de Souza Costa, Katharine Augusto da Silva Monteiro, Silvia Siag Oigman, Lidilhone Hamerski**

*Instituto de Pesquisas de Produtos Naturais, Universidade Federal do Rio de Janeiro, Rio de Janeiro-RJ, Brazil; [costa.mere@gmail.com](mailto:costa.mere@gmail.com)*

**Abstract:** Sun Corals were introduced in Brazil by foreign vessels in the 1980s, readily spreading by Brazilian coast. Nowadays, Sun Corals can be found in rocky shores and coral reefs of coastal regions from states of Rio de Janeiro, São Paulo, Santa Catarina, Espírito Santo, and Bahia. The Sun Corals invasive species were identified as *Tubastraea coccinea* and *Tubastraea tagusensis*, which are endemic from the Pacific Ocean. The secondary metabolism study of *Tubastraea sp.* indicated the presence of a wide variety of substances like fatty acids, sterols, polyoxazole macrolides, anthraquinone derivatives and alkaloids [1]. Aplysinopsin and its derivatives have been isolated from numerous sponges and corals genera and are the most representative alkaloids that have been isolated from *Tubastraea sp.* [2]. This alkaloid class is a tryptophan-derived marine natural product with different pharmacological activities, including activity in the central nervous system [3]. Thus, in order to determine the qualitative and quantitative variability of aplysinopsin class alkaloids, *T. coccinea* and *T. tagusensis* were analyzed by HPLC and LC/MS. The work conducted on *T. tagusensis* ethanolic extract revealed a high concentration of aplysinopsin and a diversity of related alkaloids including 6-bromo-1',8-dihydro-aplysinopsin, 6-bromo-4'-de-N-methylaplysinopsin and methylaplysinopsin.



**Figure 1. Alkaloids identified in *T. coccinea* and *T. tagusensis***

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of discriminating between serotonin 5-HT<sub>1A</sub>, 5-HT<sub>2A</sub>, 5-HT<sub>2C</sub> receptor subtypes. *Bioorganic & Medicinal Chemistry*, 18 (13), 4783-4792, 2010.

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