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Variation of antimicrobial activity of the sponge *Aplysina fistularis* (Pallas, 1766) and its relation to associated fauna

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The sponge *Aplysina fistularis* (Pallas, 1766) was studied to determine if it produces different levels of antibiotic activity during an annual cycle, and to try to establish some ecological relations of this phenomenon. Monthly collections of sponges were made at Isla Espiritu Santo, Baja California Sur, Mexico from May 1989 to June 1990. Bioassays of antimicrobial susceptibility were carried out and densities of the associated organisms were recorded. Antibiotic activity levels of the sponge correlated with inquilism level. Because antimicrobial activity was always found, we believe that metabolites are produced continuously, although the sponge is probably able to change the substance production mechanism in the presence of a particular stimulus. The massive reproduction of the associated invertebrates and the arrival of large quantities of organisms over a short time could be important stress factors for the sponge and a stimulus that modifies the production of secondary metabolites.

Palabras clave: *Aplysina fistularis*, sponges, Antibiosis, Associated fauna, Chemical ecology, Metabolites

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