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# Mutagenicity, genotoxicity, and scavenging activities of extracts from the soft coral *Chromonephthea braziliensis*: a possibility of new bioactive compounds

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**ABSTRACT.** Coral reefs are diverse ecosystems that have a high density of biodiversity leading to intense competition among species. These species may produce unknown substances, many with pharmacological value. *Chromonephthea braziliensis* is an invasive soft coral from the Indo-Pacific Ocean that is possibly transported by oil platforms and whose presence can be a threat to a region's biodiversity. This species produces secondary metabolites that are responsible for inducing damage to the local ecosystem. In the present study, extracts

 

were prepared from dried colonies of *C. braziliensis* (solvents: hexane, dichloromethane, ethyl acetate, and methanol). We evaluated their mutagenicity using the *Salmonella* reverse mutation assay (TA97, TA98, TA100, and TA102 strains), their genotoxicity using the DNA breakage analysis and micronucleus assay, and scavenging activity using the 1,1-diphenyl-2-picrylhydrazyl-free radical assay. Cytotoxicity and mutagenicity were not observed for any of the extracts. Genotoxicity was observed for the dichloromethane, ethyl acetate, and methanol extracts at high concentrations, but no DNA damage was observed in the micronucleus assay. Scavenging activity was not detected.

**Key words:** *Chromonephthea braziliensis*; Mutagenicity; Toxicity; Secondary metabolites

 