ANTIOXIDANT ACTIVITY OF ESSENTIAL OILS FROM THREE BRAZILIAN MARINE RED ALGAE SPECIES

Gressler, V.[1], Colepicolo, P.[2], Fujii, M.T.[3], Yokoya, N.S.[3], Pinto, E.[1]

[1]Departamento de Análises Clínicas e Toxicológicas, Faculdade de Ciências Farmacêuticas, Universidade de São Paulo, São Paulo, Brazil; [2]Departamento de Bioquímica, Instituto de Química, Universidade de São Paulo, São Paulo, Brazil; [3]Departamento de Ficologia, Instituto de Botânica de São Paulo, São Paulo, Brazil.

In order to survive in a highly competitive environment, marine algae developed defense strategies resulting the synthesis of compounds from different metabolic pathways. Recent trends in drug research from natural sources have shown that algae are promising organisms to furnish novel biochemically active compounds. There are only few reports about essential oils from algae. To our knowledge, none Brazilian species were investigate to verify their essential oil quality or biological activity. In this work, we evaluated the antioxidant activity of volatile compounds from three Brazilian algae species (*Polysiphonia tepida*, *Laurecia filiformis* and *Plocamium brasiliensis*). They were collected in Parati-ES, Brazil and fresh samples were distillated in a Clevenger apparatus for 4 h. The essential oils were analyzed by GC-MS to evaluate their terpenoid pattern. The antioxidant activity of samples were carried out by DPPH radical scavenging assay (5, 50, 100, 250 and 500 $mg.mL^{-1}$) were tested and their inhibition capability were determined spectrophotometrically. Absorbance was measured at λ=517 nm after 30 min of incubation. The results were 5.99, 8.1 and 17.25% of antioxidant activity for *P. tepida*, *L. filiformis* and *P. brasiliensis*, respectively.

Key words: algae, essential oil, antioxidant activity
Acknowledgement: CAPES, CNPq