



**IN VITRO EVALUATION OF THE AMOEBICIDAL ACTIVITY
OF POLAR EXTRACT FROM *Eugenia hiemalis* (MYRTACEAE)
AGAINST TROPHOZOITES OF *Acanthamoeba castellanii***

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Acanthamoeba is an opportunistic protozoan widely distributed in the environment¹ and is well recognized to produce serious human infections, including keratitis and granulomatous encephalitis². The treatment includes biguanide together with diamidine, however, reinfection can occur and thus more effective drugs are necessary². *Eugenia hiemalis* Cambess. (Myrtaceae) is a tree that grows in Brazil and other countries of South America, commonly known as “guamirim”³. There are very few studies on its chemical composition and biological activity. Therefore, the aim of this study was to evaluate *in vitro* amoebicidal activity of its extract against trophozoites of *Acanthamoeba castellanii*. Fresh leaves of *E. hiemalis* collected in Blumenau (Santa Catarina, Brazil) were extracted with water by infusion during ten minutes. The polar extract was concentrated under reduced pressure at 40 °C and analyzed for its amoebicidal activity. The concentrations of 20, 15, 10, 7.5, 5 and 2.5 mg/mL of the extract were tested against *A. castellanii* Neff (ATCC 30010) trophozoites. Damage to *A. castellanii* cells was monitored using an inverted microscope and counted in a Fuchs-Rosenthal chamber after 24 and 48 h. According to the results obtained, the polar extract showed remarkable amoebicidal and amoebostatic effect on *A. castellanii*. Trophozoites have been inhibited by the polar extract with an IC₅₀/48 h of 8.690 mg/mL against the vegetative form of the tested parasite. The extract demonstrated a good activity against *Acanthamoeba castellanii* Neff. Nevertheless, further studies are needed in order to establish the real potential of compounds against the tested parasitic protozoa.

References:

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