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Cytotoxic and molluscicidal activities of *Plinia rivularis* (Myrtaceae) leaves.

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Introduction: The Myrtaceae family is one of the most important families in the Brazilian flora in function of the wide occurrence of edible and/or medicinal species. Some native species still are unknown. The *Plinia rivularis* (Myrtaceae), known as “guaburiti” and “jaboticabarana”, produce comestible fruits. Previous studies concerning the biological, pharmacological or chemical properties of this species were not found. In this work we present our results on the cytotoxic and molluscicidal activities of *P. rivularis* leaves.

Methods: The crude extract of *P. rivularis* leaves was obtained by maceration in ethanol. The cytotoxic activity of the extract (1000, 100, 10 ppm) was evaluated in triplicate (n = 10) by bioassay on *Artemia salina* larvae (TAS) according to Meyer (Planta Medica, 45, 31, 1982). The molluscicidal activity (lethality) was tested on *Biomphalaria glabrata* adult snails (LBG) according to WHO recommendations (WHO, 61, 927, 1983). The snails (ø = 10-15mm) were submersed (24 h) in 400, 300, 200 and 100 ppm solution of the extract. Next, the snails (n = 4) were placed in dechlorinated water for another 24 h (recovery period). The number of dead molluscs was recorded at the end of the 48 h period. Negative control and niclosamide (1.0 ppm, 100% mortality) groups were run in parallel.

Results and Discussion: The extract presented cytotoxic activity in the TAS bioassay, with LC₅₀ < 1000 ppm, suggesting low cytotoxicity. The LBG bioassay showed LC₅₀ = 167 ± 15 ppm. Phytochemical analysis of the crude extract revealed the presence of phenolic compounds (data not showed), but a correlation between these compounds and the evaluated activities still is not clear.

Conclusions: The extract of *P. rivularis* (Myrtaceae) leaves presented moderate cytotoxic and molluscicidal activities. The LC₅₀ < 100 ppm is considered more expressive.

Plinia rivularis (Myrtaceae)

Palavras-Chave: ***Plinia rivularis* (Myrtaceae)**

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