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Evaluation of the Antiparasitic Activity of Fractions Obtained from the Aerial Parts of *Citharexylum myrianthum* Cham.

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Palavras Chave: *Citharexylum myrianthum, Leishmania, Atividade antiparasitária, cromatografia*

Highlights

Evaluation of antiparasitic activity of *Citharexylum myrianthum*.
Different fractions from branches and leaves showed activity against *Leishmania* spp.
Hexane fraction leaves reduced parasite viability with moderate effect on macrophages.

Resumo/Abstract

Citharexylum myrianthum Cham., commonly known as Tucaneira, is a plant native to the Brazilian Atlantic Forest, still little investigated scientifically regarding its chemical composition and biological properties. The present study investigated the antiparasitic potential of the aerial parts of this species. The leaves and stems were first ground and subjected to static maceration extraction in methanol at room temperature for seven days. Subsequently, the methanolic extracts were fractionated by liquid-liquid partition using three solvents of different polarities: ethyl acetate (AE), dichloromethane (DCM), and hexane (HEX). Each fraction was concentrated in a rotary evaporator until complete solvent removal, yielding 1.5 g, 6.7 g, and 46 g, respectively. The dichloromethane fraction from the stems (DCM-G) showed an IC_{50} of 55.2 µg/mL in macrophages and reduced the viability of *L. braziliensis* and *L. amazonensis* with values of 16.1 and 32.3 µg/mL, respectively. This indicates that the fraction was more effective in inhibiting the growth of *Leishmania* strains than in affecting host cells. The hexane fraction from the stems (HEX-G) showed similar behavior, causing inhibition of macrophages at 63 µg/mL, while reducing the growth of *L. amazonensis* and *L. braziliensis* at lower concentrations (26.1 µg/mL and 25.3 µg/mL, respectively). The hexane fraction from the leaves (HEX-F) presented an IC_{50} of 51.5 µg/mL in macrophages, with values of 33 µg/mL for *L. amazonensis* and 28.3 µg/mL for *L. braziliensis*, also showing greater effect on the parasites than on host cells. The ethyl acetate fraction from the leaves (AE-F) also showed antiparasitic activity, although with lower selectivity toward macrophages. Although the analyses were performed using extracts and fractions, they demonstrated relevant effects against *Leishmania* spp., suggesting the presence of bioactive compounds of pharmacological interest and highlighting the importance of continuing studies to isolate and identify the substances responsible for the observed activity.

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