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PRELIMINARY PHYTOCHEMICAL IDENTIFICATION OF LEAF EXTRACTS OF EUGENIA UNIFLORA L. WITH ANTIMICROBIAL ACTIVITY

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RESUMO

Introduction: *Streptococcus agalactiae*, Group B *Streptococcus* (GBS), is the leading cause of invasive infections in the newborn. Furthermore, GBS is an important pathogen for a wide range of animal species due to its ability to cross the host-specific barrier. The emergence of antibiotic-resistant GBS strains makes it necessary to search for and develop new therapeutic agents, and medicinal plants turn out to be an alternative as a source of active principles. Among them, *Eugenia uniflora* L. is a medicinal plant native from Misiones, Argentina, with antibacterial properties against GBS previously described by our research group. Objective: The aim of this work was to identify the fractions obtained from ethanolic and aqueous extracts of *Eugenia uniflora* L. leaves with antibacterial activity against GBS. Methods: The extracts were obtained according to the updated version of the Argentine Pharmacopoeia. Bioactive compound separation and retention factors (Rf) determination were carried out using Thin-Layer Chromatography (TLC). Chloroform-methanol (80:20) V / V for the ethanolic extract and ethyl acetate-formic acid-water (40:50:10) V / V for the aqueous extract were used as solvents. The antibacterial activity of the fractions was determined by contact bioautography. Bioautograms were visualized by UV light (254 nm and 365 nm) and Natural products-polyethylene glycol reagent (NP-PEG). *Streptococcus agalactiae* ATCC BAA-611 was used as a reference strain. Results: Ethanolic extract was separated into nine colored fractions. The fraction with Rf 0.79 showed antibacterial activity. Aqueous extract was separated into four colored fractions. The fraction with Rf 0.49 showed antibacterial activity. NP-PEG assays revealed that the components with antibacterial activity in both extracts were flavonoids. Conclusions: *Eugenia uniflora* L. leaf extracts with antimicrobial activity are in the group of flavonoids. This work is the first step to identify chemical compounds in native medicinal plants of Misiones, Argentina, that could mean an alternative for the treatment of GBS infections.

PALAVRAS-CHAVE: Anti-Bacterial Agents, Chromatography, Thin Layer, Eugenia uniflora, Plant Extracts, Streptococcus agalactiae.

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