

Title: EVALUATION OF ANTIMICROBIAL ACTIVITY IN VITRO OF GROSS ETHANOLIC EXTRACT OBTAINED FROM LEAVES OF *Mikania hirsutissima*

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Abstract:

The Cerrado biome has vast wealth of plant species, many of these plants are used in the popular medicine and often have pharmacologically active substances. The plants used in traditional medicine have increasingly being studied for possible sources of substances with antimicrobial activity. This study aimed to determine the antimicrobial activity by minimum inhibitory concentration (MIC), in vitro, of the ethanol extract of *Mikania hirsutissima* (cipó-cabeludo) against bacteria and yeast fungi of the genus *Candida*. To evaluate the antimicrobial activity of the gross ethanolic extract was performed on broth microdilution technique in sterile microplates with 96 wells, according to the Clinical and Laboratory Standards Institute. Thus, 16 microorganisms were tested, 12 of bacteria (*Bacillus cereus* ATCC 11778, *Enterobacter aerogenes* ATCC 13048, *Enterococcus faecalis* ATCC 29212, *Escherichia coli* ATCC 25922, *Klebsiella pneumoniae* ATCC 13883, *Listeria monocytogenes* ATCC 7644, *Proteus mirabilis* ATCC 35659, *Pseudomonas aeruginosa* ATCC 27853, *Salmonella* Enteritidis ATCC 13076, *Salmonella* Tiphymurium ATCC 14028, *Staphylococcus aureus* ATCC 25923, *Staphylococcus epidermidis* ATCC 12228) and 4 yeast (*Candida albicans* ATCC 90028, *Candida glabrata* ATCC 2001, *Candida krusei* ATCC 6558, *Candida tropicalis* ATCC 750). For the control of bacteria the antibiotics chloramphenicol and ampicillin were used; and to control the fungi, amphotericin B and fluconazole. The ethanolic extract of leaves of *Mikania hirsutissima* showed activity against the bacteria *Bacillus cereus* ATCC 11778 and *Staphylococcus epidermidis* ATCC 12228 at concentrations of 250 µg / mL and 2000 µg / mL, respectively. As for yeast, *Candida tropicalis* ATCC 750 had sensitivity at 1000 µg / mL. According to the results, we concluded that the ethanolic extract of *Mikania hirsutissima* leaves presented antimicrobial potential against bacteria and yeast, reinforcing the importance of new studies with plants from the Cerrado biome.

Key - words: antimicrobial potential, medicinal plants, *Mikania hirsutissima*

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