TITLE: Antimicrobial Activity of the Ethanolic Extract of *Tecoma* spp. (BIGONEACEAE)

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ABSTRACT

It is notable the contribution of natural products in the search and identification of prototypes for the development of new drugs. The emergence of multiresistant pathogens and their impact on public health has become a global problem currently. In this sense, the discovery of new plant extracts with antimicrobial action has been encouraged in several countries. Several bioactive compounds have been identified in specimens of the genus *Tecoma* as flavonoids, alkaloids, phenols, tannins and terpenes, exhibiting antibacterial and antifungal activity. Thus, the objective of this study was to verify the antimicrobial potential of *Tecoma* spp. (BIGNONIACEAE). The ethanolic extracts was obtained from the flowers of *Tecoma* spp. from drying, grinding and turbo-extraction (dilution in alcohol 70,0ºGL, in proportion 9:1 alcohol/plant). The extract was then rotavaporized, providing the final crude extract, which was diluted in water and DMSO (9:1). For the evaluation of the antimicrobial effects of the vegetal samples was tested strains of *Proteus vulgaris ATCC13315, Proteus mirabilis ATCC15290, Staphylococcus aureus ATCC 25923* and *Staphylococcus epidermidis ATCC 12228.* Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) were determined. The ethanolic extract of *Tecoma* spp. presented bactericidal activity for *P. mirabilis (*1mg.mL$^{-1)}$, *S. aureus (*2 mg.mL^{-1}) and bacteriostatic in concentrations of 0,5 mg.mL^{-1} and 1 mg.ml^{-1}, respectively. The extract showed no activity against the strains *P. vulgaris* and S. *epidermidis* in the concentrations tested. In Iraq Amad et al. also detected antibacterial activity of *Tecoma* spp. using the MIC and CBM methods, suggesting a promising antimicrobial potential for species of the genus Tecoma. In this work it was possible to confirm the antibacterial potential of *Tecoma* spp. from the ethanolic extract of the flowers against two bacterial strains of clinical interest pointing out significant results in a reality of growth of bacterial resistance to the antimicrobials traditionally used.

Keywords: Antimicrobial, Tecoma sp., Extracts, Flowers.

Agency: CAPES, CNPq, FAPEMIG, UFSJ.