

Title: STUDY OF ANTIMICROBIAL ACTIVITY OF EXTRACTS OF *BYRSONIMA* SP.

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ABSTRACT:

Several types of fruit plants are used in Brazil, one of them is *Byrsonima* one of the genres of the family MALPIGHIACAE owning 150 species. Occurring predominantly in the Cerrado where they contain medicinal species The species of the genres *Byrsonima* are predominantly investigated their action against microorganisms. Accomplish an analysis of the potential of the microbial activity for the hydroalcoholic extracts obtained from the leaves regarding their antimicrobial activity. The assay was performed by the broth microdilution method with evaluation of cell growth quantification. Serial dilution at the following concentrations was performed at the following concentrations: 512 µg / ml 1024 µg / ml, 2038 µg / ml and 4096 µg / ml extract in 96-well plates with different enteropathogenic *Escherichia coli* strains (EAGC 042, EHEC 1184, ETEC 407, and EAEC 43845) 1.5 x 10⁶ CFU / ml concentration The plates were incubated for up to 24 h at 37 ° C. To determine cell viability, a 100µl aliquot was withdrawn from each well at 4, 6, 12 and 24 hour intervals and serially diluted (1: 9) with 0.9% saline, 20µl of the dilution was withdrawn and dripped on MacConkey media for colony counting. The colony count data were expressed as Log₁₀UFC / mL. Bacterial growth in the presence of the extract by log quantification of colony forming unit by Mg (Log₁₀ CFU / ML). For EAGC 042 the most effective concentration was 2018µg / ml in the time of 12 hours and in times 4, 6 and 24 hours was 4096µg / ml, for EHEC 1194 the most effective concentration was 2048 µg/ml in the time of 12 hours and in the times 4, 6, 24 hours was 4096 µg/ml, ETEC 407 the most effective concentration was 2048 µg/ml at times of 6, 12 and 24 hours and at 4 hours time was 4096 µg/ml, EAEC 43895 the most effective concentration was 2048 µg/ml at times of 12 and 24 hours and for the times of 4 and 6 hours was 4096 µg/ml. We observed extracts of leaves, presented pharmacological and antimicrobial importance, could be an option of pharmacological innovation, presenting death at concentrations of 2048 µg/ml and 4096 µg/ml, then studies are necessary to know the constituents of extracts of the species used.

Keywords: *Byrsonima*, Antimicrobial, Extracts.

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