

**Título: A PHYTOCHEMICAL PROFILE STUDY AND ANTIMICROBIAL ORGANIC EXTRACT POTENTIAL *Gochnatia polymorpha* (Less.) Cabrera FRONT OF PATHOGENS MICROORGANISM**

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**Resumo:**

In order to solve microbial resistance situation, researches has been conducted to new natural or synthetic drugs discovery that act in the reduction of this resistance. In this regard, studies with native plants have been much important, especially for therapeutic purposes active compounds searches. Therefore, this study aimed to evaluate the antimicrobial organic extract of *Gochnatia polymorpha* potential front of pathogenic microorganisms and determine its phytochemical profile. For antimicrobial susceptibility testing was performed using forward ethyl acetate extract to *Staphylococcus aureus* (ATCC 25923), *Staphylococcus epidermidis* (ATCC 12228), *Enterococcus faecalis* (ATCC 19433), *Klebsiella pneumoniae* (ATCC 13883), *Escherichia coli* (ATCC 25922), *Pseudomonas aeruginosa* (ATCC 27853) and *Proteus mirabilis* (ATCC 25933) strains. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were performed by broth microdilution method, with graded concentrations ranging from 200 to 0.09 mg/mL extract. As a positive control was used gentamicin 200 mg/mL. The extract exerted inhibitory activity against all bacteria tested, with MIC values ranging from 100 to 6.25 mg/mL and CBM 200 to 6.25 mg/mL. The best result was observed in *P. mirabilis* with 6.25 mg/mL of MIC and MBC, respectively. Phytochemicals tests revealed free steroids and triterpenoids presence. Furthermore, the ethyl acetate extract of *G. polymorpha* showed greater antimicrobial potential against strains of gram negative bacteria such as *P. mirabilis* and *E. coli*, suggesting this way, the *G. polymorpha* use as a compounds source with therapeutic potential against pathogenic bacteria. It is worth noting that investigations are needed depth on this plant antimicrobial potential in order to validate its use in traditional medicine.

**Palavras-chave:** microdilution, pathogenic bacteria, triterpenoids.

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