

PRELIMINARY ANTIMICROBIAL AND PHYTOCHEMICAL STUDY OF THE AQUEOUS, ETHANOL, METHANOL AND CHLOROFORM EXTRACTS OF THE LEAVES OF *NAPOLEONAEA IMPERIALIS* P. BEAUV. (LECYTHIDIACEAE)

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Abstract: The antimicrobial activity and phytochemical analysis of *Napoleonaea imperialis* P. Beauv. (Lecythidiaceae) was done using aqueous, ethanol, methanol and chloroform leaf extracts to determine its antimicrobial and phytochemical constituents. The antimicrobial activities of the extracts were tested against bacteria and fungi isolates using the agar well diffusion method. Commercial antibiotics were used as positive reference standards to determine the sensitivity of the isolates. The leaf extract was subjected to phytochemical analysis using standard experimental procedures. The extracts showed significant inhibitory activity against the bacterial and fungal isolate (Bacterial isolates- *Escherichia coli*, *Bacillus subtilis*, *Staphylococcus aureus*, *Klebsiella pneumonia*, *Proteus mirabilis*, *Pseudomonas aeruginosa*; fungal isolates- *Penicillium notatum*, *Aspergillus niger*, *Fusarium oxysporum*, *Saccharomyces cerevisiae*, and *Candida albicans*). The MIC values obtained using the Agar-dilution test ranged from 0.5-10mg/ml. The results showed that the extract of *N. imperialis* plant leaves have broad spectrum of antimicrobial activity. These results suggest that it will be useful in the treatment of microbial infections.

Keywords: Aqueous extract, antimicrobial activity, chloroform extract, ethanol extract, methanol extract, *Napoleonaea imperialis*, phytochemical analysis

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