



ORIGINAL RESEARCH

Antimicrobial activities of *Dillenia indica* Linn. (Dilleniaceae) and *Spondias mombin* Linn. (Anacardiaceae) extracts on selected pathogenic organisms

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ABSTRACT

Background: The prevalence of increasing bacterial resistance against antibacterial agents in the past decade has spurred the search for substitutes. This necessitates the need to identify new compounds as alternatives to common synthetic antimicrobial compounds.

Objectives: To establish and evaluate the antimicrobial potentials of *Dillenia indica* and *Spondias mombin* against strains of some selected pathogens.

Method: Concentrations of the extract (methanol and dichloromethane) were prepared and the susceptibility of the test organisms to the antimicrobial effect of the plant extracts was determined using the agar well diffusion method. Standard antibiotics were used as positive control. Various culture media were used for this experiment and the minimum inhibitory concentration (MIC) was determined using the agar dilution method.

Results: Extracts of *D. indica* fruit, leaves and stembark as well as *S. mombin* leaf and stembark showed significant antimicrobial activity. Activity was dose dependent and the methanol extracts had better and wider activity than the dichloromethane extracts. *Spondias mombin* bark had the greatest activity against most of the test organisms while the positive control drugs had better activity than the extracts.

Conclusion: The leaves and stembark of *Spondias mombin* and the leaves, fruit and stembark of *Dillenia indica* have antimicrobial properties thus justifying their ethnopharmacological use in prevention and treatment of infections.

Keywords: Antimicrobial, *Dillenia indica*, *Spondias mombin*, *Helicobacter pylori*, plant extracts, pathogens