

Phytochemical Properties of *Acalypha indica* (L), and its Antimicrobial Potential against Human Pathogens

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Abstract

The present work has been investigated for important medicinal properties of *Acalypha indica* (L). *A. indica* crude extract was obtained, significant phytochemicals and antibacterial activity substance for the control of numerous antibiotic resistance bacteria such as *Escherichia coli*, *Salmonella typhi*, *Staphylococcus epidermidis*, *Bacillus cereus*, *Staphylococcus marcescens*, *Staphylococcus aureus*, *Streptococcus agalactiae*, *Streptococcus pyogenes* and *Streptococcus dysgalactiae*. Antibacterial activity of *A. indica* was performed using the crude extract on Muller- Hinton agar with and without 5% sheep blood by the well diffusion method. We found Ethanol is the most favorable solvent for maximum amount of *A. indica* extract followed by Acetone, however acetone has more antimicrobial activity. Furthermore, we found Benzene and Diethyl ether are low yielding solvent for *A. indica* extract. *A. indica* extract on antimicrobial activity showed remarkable activity in *S. typhi*, *B. cereus* followed by *S. epidermidis*. Eight, phytochemicals tested in *A. indica* extract showed the existence of tannin, saponin, alkaloid, flavonoid and phenol. Petroleum ether and ethyl acetate solvent (4.2:0.8), was most optimum for the separation of more compounds by TLC analysis. In *A. indica* four major spots were detected, of these, two major spots were scrapped from the TLC plates and checked for antimicrobial activity against *B. cereus* pathogen. *B. cereus* was selected based on our preliminary results, which showed significant activity among other pathogens.

Keywords: *A. indica*, antimicrobial activity, crude extract, human pathogens, phytochemicals

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