

## Antibacterial Activity of Leaf of *Cassia angustifolia* Against Skin Pathogens

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*Cassia angustifolia* is a medicinal plant used in Siddha Ayurvedic drugs to treat skin diseases. Leaves are ground as a paste and applied to various skin diseases. Antimicrobial activity of n-butanol, methanol and water extracts of leaves of this plant has been evaluated previously against *Staphylococcus* species, *Salmonella* species and *Klebsiella pneumoniae* and fungal species namely *Aspergillus terreus*, *A. flavus* and *A. niger*. In the present study, antibacterial activity and Minimum Inhibitory Concentration (MIC) of decoction and methanolic extract of *C. angustifolia* against *Staphylococcus aureus* NCTC 6571, *Escherichia coli* NCTC10418, *Pseudomonas aeruginosa* NCTC 10662 and five wild strains of Methicillin resistant *S. aureus* (MRSA). Leaves of the plant were used to prepare decoction (boiled with water) and methanolic extract using Soxhlet extractor. Antibacterial activity of the extracts was carried out using cut well method and MIC was determined using agar dilution method. Three replicates were carried out. Decoction and methanolic extract of *C. angustifolia* showed activity against *S. aureus* and all five tested MRSA in both methods. Mean  $\pm$  SD of the diameter of inhibition zone of decoction of *C. angustifolia* against these organisms (range: 18.5 $\pm$ 0.3 mm, 27.0 $\pm$ 0.0 mm) was greater than the diameter of the inhibition zone of methanolic extract (range: 16.0 $\pm$ 0.0 mm, 18.0 $\pm$ 0.0 mm) of this plant. In agar dilution method decoction showed activity against *S. aureus* NCTC 6571 and five strains MRSA in 1/80 dilutions. The decoction of this plant did not show activity against *E. coli* and *P. aeruginosa* using both methods, although methanolic extract demonstrated activity against *E. coli* and *P. aeruginosa* in agar dilution method. The MIC for methanolic extract of *S. aureus* NCTC 6571 and five strains MRSA was 0.75 mg/ml. The MIC for *E. coli* and *P. aeruginosa* was 1.5 mg/ml. The demonstration of antibacterial activity by *C. angustifolia* leaf may help to discover new antibiotic substances that could serve as agents for skin infectious diseases.