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RESEARCH ARTICLE

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Phytochemical Screening, Antioxidant and Antibacterial Properties of Alcoholic Extract of *Saussurea costus* Roots

ABSTRACT

Background: Diseases in their essence are non-curable and the underlying pathogenesis is bidirectional of inflammation and oxidative stress. Fighting oxidative stress and inflammation should be the target for any first-line therapy, perhaps *via* chemical or herbal therapy. In the present study, we aimed to identify the antioxidant and antibacterial activities of *Saussurea costus* roots. The study aimed to harness *S. costus* plant as antimicrobial *via* assessment of its antibacterial efficacy against pathogens by disc

Methods: Alcoholic extract of *S. costus* roots was tested for antioxidant activity using diphenyl picrylhydrazyl (DPPH) and antibacterial effects on a few common bacterial species (*Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Proteus spp.*).

Result: The contents of *S. costus* extracts revealed of the presence of therapeutic principle components with variety of medicinal effects, including alkaloids, terpenoid, phenols and others. Different concentration of extracts have comparable antioxidant activity to ascorbic acid (81.96%). Similarly, different concentrations of the extract have confirmed antibacterial activity against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli* with no impacts on *Proteus spp.*