



Conference Abstract

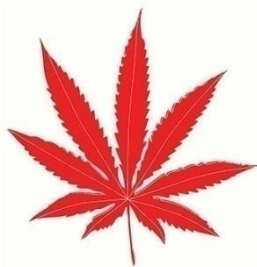
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Conference Abstract

STUDY OF PROXIMATE COMPOSITION AND *IN VITRO* EVALUATION OF BIOLOGICAL ACTIVITIES (ANTI-INFLAMMATORY AND XANTHINE OXIDASE INHIBITION EFFECTS) OF BRYOPHYLLUM PINNATUM ROOT EXTRACTS.

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ABSTRACT

Around the globe, *Bryophyllum pinnatum* is widely used to cure various ailments in traditional medicine. It is enriched with a diverse range of chemical ingredients which are responsible for its substantial therapeutic effects such as anti-pyretic, analgesic, anti-inflammatory, anti-oxidant, tocolysis, hepatoprotective, wound healing, nephroprotective, urolithic, anti-microbial, anti-tumour, and anti-diabetic. The study aims at proximate analysis and biological studies of root extracts of *Bryophyllum pinnatum*, with previously little work done on roots. Standard methods were applied for the phytochemical analysis of powder and extracts. *In vitro* anti-inflammatory effect was evaluated by protein denaturation method. Also, assay for xanthine oxidase inhibition was done to confirm anti-gout potential. Sequential extraction procedure was used to prepare the extracts. Findings of phytochemical analysis have exposed the presence of primary metabolites (%w/w); carbohydrates (48.54±0.6) > lipids (1.32) > proteins (21.06±0.6). Secondary metabolites (mg/g) maximum found in methanol extract (flavonoids 95.81±0.026, glycosaponins 39.9±0.103) and aqueous extract (polyphenols 114.93±0.0234). UV Visible and FTIR scanning results have demonstrated the presence of various important functional groups. *In vitro* anti-inflammatory studies have revealed that aqueous extract (87.46%) was found to be most active and IC₅₀ of aqueous extract (IC₅₀ 570.24 µg/ml) was found to be more effective than reference drug, diclofenac sodium. *In vitro* xanthine oxidase inhibition activity was also performed and methanol extract (88.24%) was found to be most effective. Outcomes of this study have confirmed the rationale behind use of plant under investigation for treatment of inflammation and gout. However, more studies are required to ensure its safety and efficacy as prospective drug candidate.

Keywords: Medicinal plant, *Bryophyllum pinnatum*, standardization, gout.