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## ABSTRACTS

"Empowering Innovation: Bridging Theory and Practice in Applied Sciences and Technology"

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## In vitro-Antifungal Potential of, Pityranthe verrucosa, Pterospermum suberfolium, and Chloroxylon swietenia Against Human Pathogenic Fungi

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This study was carried out to investigate the in vitro antifungal potential of leaves of three dry zone tree species found in Sri Lanka, Pituranthe verrucosa, Pterospermum suberfolium and Chloroxylon swietenia. The study aimed to assess the antifungal activity and to determine the zone of inhibition of crude extracts on Aspergillus niger (both human and plant pathogen) and human pathogenic fungus, Candida albicans. Plant materials were extracted using the sequential method of extraction using increasing order of polarity with n-hexane, dichloromethane, methanol, and water. The agar well diffusion method was used to evaluate the antifungal activity. The zones of inhibition against crude extracts were measured. Standard antibiotic drugs Nystatin and Itraconazole were used as the positive controllers for C. albicans and A. niger, respectively. 2% DMSO was used as the negative controller. The hexane extractions of all three plant species were active against *Candida albicans* and *Aspergillus niger*. The dichloromethane extractions of C. swietenia and P. verrucosa were active against C. albicans, and all the Dichloromethane crude extracts were active against A.niger. The methanol extract of P. verrucosa was active against both C. albicans and A.niger. The methanol extraction of C. swietenia also active against A niger. According to the results obtained, P. verrucosa has the highest antifungal activity against both C. albicans (zone of inhibition, Nystatin  $17.67 \pm 2.31 \text{ mm} < 25.00 \pm 3.61 \text{ mm}$  Dikwenna ) and A. niger (zone of inhibition  $21.33 \pm 4.16$  mm). The results obtained suggest that the bioactive compounds in the leaves of these plants possess antifungal properties and may serve as a source of antifungal ingredients for the drug production for human diseases Candida infections and aspergillosis.

**Keywords**: Pityranthe Verrucosa, Pterospermum Suberfolium, Chloroxylon Swietenia, In Virto Antifungal Activity, Human Pathogens