Antifungal Activity of Medicinal Plants Used Traditionally for the Treatment of Fungal Infections and Related Ailments in South Africa

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Abstract : The current study investigates the antifungal properties of crude plant extracts from selected medicinal plant species. Eight plant species used by the traditional healers and local people to treat fungal infections were selected for further phytochemical analysis and biological assay. The selected plant species were extracted with solvent of various polarities such as acetone, methanol, ethanol, hexane, dichloromethane, ethyl acetate and water. Leaf, roots and bark extracts of Maerua juncea Pax, Albuca seineri (Engl & K. Krause) J.C Manning & Goldblatt, Senna italica Mill., Elephantorrhiza elephantina (Burch.) Skeels, Indigofera circinata Benth., Schinus molle L., Asparagus buchananii Bak., were screened for antifungal activity against three animal fungal pathogens (Candida albicans, Aspergillus fumigatus had excellent activity against Candida albican and Elephantorrhiza elephantorrhiza elephantorrhiza elephantine had excellent activity against Candida albican and Elephantorrhiza elephantorrhiza elephantorrhiza elephantine had excellent activity against Candida albican and Elephantorrhiza elephantorrhiza elephantine had excellent activity against Candida albican sand A. fumigatus with the lowest MIC value of 0.02 mg/ml. Bioautography assay was used to determine the number of antifungal compounds presence in the plant extracts. No active compounds were observed in plant extracts of Indigofera circinnata, Schinus molle and Pentarrhinum insipidum with good antifungal activity against C. albicans and A. fumigatus indicating possible synergism between separated metabolites.

Keywords : antifungal activity, bioautography, ethnobotanical survey, minimum inhibitory concentration

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