MEDICAL THERAPIES AND PHARMACOLOGY

EXPERIMENTAL STUDY OF THE ANTIFUNGAL ACTIVITY OF 2 VARIETIES OF A TRADITIONAL AFRICAN PLANT, ACALYPHA WILKESIANA: A POTENTIAL TOPICAL TREATMENT

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Background: Superficial fungal skin disease is a common health problem particularly in tropical countries like Nigeria. In recent years, the use of traditional medicinal plants has become increasingly popular worldwide. In Africa, it is culturally acceptable to use these plants as first line in the treatment of various ailments despite availability of orthodox medical care. Acalypha wilkesiana (AW), a popular medicinal plant has been used by herbal doctors to treat a variety of skin disorders including pityriasis versicolor and seborrheic dermatitis. As a prelude to clinical trials in humans, an experimental study was carried out.

Objectives: To determine the spectrum of antifungal activity of 2 variants of the Acalypha wilkesiana plant.

Materials & Methods: The ethanol extract of the dried leaves of 2 varieties (Macrophylla & Hoffmanii) of Acalypha wilkesiana were investigated for in-vitro antifungal activity by disc diffusion and micro-broth dilution techniques. Organisms tested were typed cultures of Malassezia furfur ATCC 14521, Candida albicans ATCC 2876 and Trichophyton rubrum ATCC 28188; and clinical strains of Microsporum canis and Epidermophyton floccosum.

Results: Both varieties of the plant showed good activity against all the fungi tested except Microsporum canis. The greatest activity was seen against Trichophyton rubrum (22.0±0.00; 24.00±0.00 mm) while Candida albicans showed the least activity (15.0±0.00; 18.00±0.57 mm). The Minimum Inhibitory Concentration (MIC) ranged between 0.25 and 8 mg/ml for all organisms. The lowest MIC was seen with Candida albicans for both varieties of the plant. The AW Hoffmanii appears to have a greater activity against Candida albicans than the AW Macrophylla.

Conclusion This study reveals that the ethanolic extract of the 2 varieties of Acalypha wilkesiana possesses good activity against a variety of fungi except Microsporum canis and

can form a basis for its development as a lead compound.