

SUSCEPTIBILITY OF ZOONOTIC DERMATOPHYTES TO ETHANOLIC EXTRACT OF *PIPER BETLE* LEAVES

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Abstract

The antifungal effect of ethanolic extract of *Piper betle* (Piperaceae) was tested against selected zoonotic dermatophytes, namely *Trichophyton mentagrophyte*, *Microsporum canis* and *Microsporum gypseum*. A broth dilution method was employed to determine the inhibitory effect of the extract, as well as those of ketoconazole and griseofluvin, which were included for a comparative purpose. The *Piper betle* extract suppressed the growth of dermatophytes in a concentration-dependent manner. The IC₅₀ values were ranging from 110 to 119 µg/ml with an average E_{max} (at 512 µg/ml) of 94.12%. Meanwhile, the average IC₅₀ & E_{max} (at 64 µg/ml) of ketoconazole and griseofluvin were 3.90 µg/ml & 100.00% and 9.10 µg/ml & 95.37%, respectively. Although the *Piper betle* extract appeared to possess less potency than ketoconazole and griseofluvin, ten times of its maximal concentration studied did not cause any significant irritation when applied directly on the abdominal region of the canine skin. Based on the current findings, it is suggested that the ethanolic extract of *Piper betle* leaves represents potentially useful anti-dermatophytes and is worthy of further investigation.

Key words: *Piper betle*, dermatophytes, antifungal effect