

**ANTIFUNGAL ACTIVITY OF DRIED AND FRESH  
*Pleurotus ostreatus* (Fr.) P. Kumm. AGAINST  
*Trichophyton rubrum* (Castell.) Sabour. AND  
*Epidermophyton floccosum* (Harz.) Longeron and Miloch**

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## ABSTRACT

### **ANTIFUNGAL ACTIVITY OF DRIED AND FRESH *Pleurotus ostreatus* (Fr.) P. Kumm. AGAINST *Trichophyton rubrum* (Castell.) Sabour. AND *Epidermophyton floccosum* (Harz.) Longeron and Miloch**

*P. ostreatus* or oyster mushroom is an edible mushroom that is acknowledged as functional food since its fruiting body bears nutritional, as well as, medicinal values. In previous studies, *P. ostreatus* fruiting bodies were extracted with antifungal protein namely pleurostrin that contributes to one of its medicinal properties, which is antifungal. *P. ostreatus* extracts are reported to exhibit antifungal activities against both nuisance and pathogenic fungi, including dermatophytes. Dermatophytes are responsible for the etiology of skin infections, commonly known as *tinea* or ringworm skin infections. Thus, the main objective of this study is to evaluate in vitro antifungal activity of dried and fresh *P. ostreatus* extracts against two dermatophytic fungi, *Trichophyton rubrum* and *Epidermophyton floccosum*. Disk diffusion assay was carried out to evaluate the antifungal activity of *P. ostreatus* extracts, followed by microdilution assay to determine the minimum inhibitory concentration (MIC) of *P. ostreatus* extracts against test organisms. Dried and fresh *P. ostreatus* extracts demonstrated antifungal activity against *T. rubrum* and *E. floccosum* with no significant difference at 95% confident interval. Stronger inhibition activity against *T. rubrum* and *E. floccosum* was observed with dried *P. ostreatus* extracts at lower concentrations with MICs of 0.44 mg/ml and 0.88 mg/ml, respectively. However, *P. ostreatus* extract in this study is only characterized as fungistatic antifungal since it did not revealed fungicidal properties against test organisms after further incubation. This study, consequently, recommends increased concentration of dried *P. ostreatus* crude extracts to enhance its antifungal potency. Nevertheless, *P. ostreatus* crude extracts are recommended to form synergy with fluconazole, a conventional antifungal to decrease dosage of fluconazole used in treatment of dermatophytoses since fluconazole is featured with potential side effects.