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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JANUARY 2016

ACKNOWLEDGEMENTS

First and foremost, I would like to express my sincere gratitude to my supervisor, Mdm. Farnidah binti Jasnie for her continuous support, for her patience, motivation and immense knowledge regarding my research project. Her guidance had helped me a lot in my laboratory works and in my writing of this research project report.

Besides, I would like to extend my appreciation to the rest of the research project committee, Mr. Ajimi bin Jawan, Mr. Abdul Manap bin Mahmud, Dr. Hendry Joseph, Mdm. Siti Sarayati binti Abdul Mawah, Ms. Patricia Natin and Dr. Lo Chor Wai for their insightful comments and encouragement, which had incented me to widen my knowledge about my research.

My sincere thank also goes to the laboratory staffs of Science and Agro-technology Laboratory Complex (KOMSAT) UiTM Cawangan Sabah for their assistance during my laboratory works, as well as, for their generosity in giving access to the laboratory facilities necessary for my research project.

Moreover, I would like to express my gratitude to the staffs of Microbiology Laboratory of Queen Elizabeth Hospital, Kota Kinabalu, especially Dr. Ahneez, for their kindness in providing me the test organisms, as well as, Ms. Nurul of Borneo Mushroom Kundasang, Ranau and Lady Mushroom of Riveria Square, Kuching, for providing me the macrofungal materials for my research project.

Lastly, I would like to thank my family, especially my mother for supporting me morally and financially throughout a worthy completion of my research project.

TABLE OF CONTENTS

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.