

UNIVERSITI TEKNOLOGI MARA

**ANTIMICROBIAL ACTIVITY OF DIFFERENT
FUNGAL STRAINS**

(Big frt, B 23, NW 22) EXTRACTS

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ABSTRACT

Nowadays, there are so many diseases are developing resistance to current treatments. Nature has been a source of several medicines for treating various types of diseases in human. In recent years a renewed interesting in obtaining biologically active compounds from natural sources has been observed. Fungi are one of the valuable resources for the discovery of novel beneficial natural products. Thus, the major objective of this study is to determine antimicrobial activity of fungal strains Big Frt, B 23 and NW 22 in three different conditions, which are solid agar, static broth and shaken broth. In order to accomplish this objective, few steps were taken accordingly. First step was growing the fungal strains on solid agar, static broth and shaken broth media. This was followed by extraction of the cultures with several solvents and apparatus. This resulting extracts were then used in the antimicrobial activity testing against selected bacteria and fungi by disc diffusion method. The fungi were observed macroscopically and microscopically. The observations were recorded and shall be included into the database developed by Faculty of Pharmacy, UiTM.

CHAPTER 1

INTRODUCTION

1.1 The influence of natural products upon drug discovery

For thousands of years, natural products have played an important role throughout the world in treating and preventing human diseases. Natural products are naturally derived metabolites and/or byproducts from microorganisms, plants, or animals (Newman et al., 2000). Since secondary metabolites from natural sources have been elaborated within living systems, they are often perceived as showing more “drug-likeness and biological friendliness than totally synthetic molecules, making them good candidates for further drug development” (Chin et al., 2006).

1.2 Fungi: a source of biologically active secondary metabolites

Fungi are a diverse and valuable resource for the discovery of novel beneficial natural products. The chemical potential of fungi is enormous and new approaches need to be devised to efficiently access this genetic and chemical diversity for the development of new medicines. The search for new drugs from fungi started with the discovery of penicillin. Penicillin is a potent antibiotic active against Gram-positive bacteria, discovered by Fleming from *Penicillium notatum* in 1928 and reported in the British medical literature in 1929 (Berdy, 2005).