



**DETERMINATION OF POTENTIAL ANTIFUNGAL ACTIVITY OF  
METHANOLIC EXTRACT OF *Andrographis paniculata* LEAVES AGAINST  
ISOLATED FUNGUS FROM MOLDY BREAD**

**By**

**NUR NABILAH BT TAN**

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## DECLARATION

I declare that this thesis entitled “DETERMINATION OF POTENTIAL ANTIFUNGAL ACTIVITY OF METHANOLIC EXTRACT OF *Andrographis paniculata* LEAVES AGAINST ISOLATED FUNGUS FROM MOLDY BREAD” is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature : .....

Name : NUR NABILAH BT TAN

IC Number : 930705-08-5616

Student ID : 2014222914

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## ABSTRACT

*Andrographis paniculata* which is also known as “Kind of Bitter” (English) or Hempedu Bumi (Malay) belongs to the family Acanthaceae which is an important medical plant that has been widely used in southern Asia to treat infections and other diseases. *A. paniculata* has been used as antibiotic, antiviral, antimicrobial, anti-inflammatory, anticancer, anti-HIV and anti-allergic agent. *A. paniculata* leaves was collected and authentication was performed. Leaves were extracted with methanol. The fungus samples was collected from moldy bread and cultured on Sabouraud Dextrose agar (SDA). The fungal isolated was identified through macroscopic and microscopic characteristics. The antifungal assay was performed using the disc diffusion method by tested the isolated against different concentration of methanolic extract of *Andrographis paniculata* leaves at 1000, 500, 250, 125, 62.5 and 31.25 mg/ml respectively. Based on the macroscopic and microscopic characteristics, it was suggested that the isolated fungus is presumptively identified as *Penicillium* species. There was no inhibition zone observed when different concentrations of methanolic extract of *Andrograophis paniculata* leaves were used within study tested against the isolated fungus. Based on this study, the isolated fungus from moldy bread was presumptively identified as *Penicillium* specices and all the different concentrations of methanolic extracts of *Andrographis paniculata* did not show any inhibitory effects towards isolated fungus.

Keywords: *Andrographis paniculata*, methanol, antifungal, *Penicillium*, Voriconazole