



**DETERMINATION OF ANTIFUNGAL ACTIVITY OF METHANOLIC  
EXTRACT OF *Adrographis paniculata* (HEMPEDU BUMI) AGAINST  
FUNGUS ISOLATED AND IDENTIFIED FROM *Allium cepa* (ONION)**

**By**

**NUR ATHIRAH BINTI AMINUDDIN**

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Laboratory Technology (Hons), Faculty of Health Sciences; Universiti  
Teknologi MARA**

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## **DECLARATION**

“I hereby declare that this thesis is based on my original work and has not has been submitted previously or currently for any other degree at UiTM or any other institutions.”

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**NUR ATHIRAH BINTI AMINUDDIN**

931125-08-5024

2014466952

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## ABSTRACT

### **Determination of Antifungal Activity of Methanolic Extract of *Andrographis paniculata* (Hempedu Bumi) Against Fungus Isolated and Identified from *Allium cepa* (Onion)**

*Andrographis paniculata* (*A. paniculata*) is an herbaceous plant from the family *Acanthaceae* which commonly known as “king of bitters”. A methanolic extract of *A. paniculata* has been shown to have antifungal properties which can inhibit the growth of fungus. The aim of this study is to determine the antifungal activity of *A. paniculata* against the growth of a fungus isolated from *Allium cepa*. Fungal sample was collected from rotten surface of *Allium cepa* and only one type of fungal was chosen to be identified and tested. Colony morphology of isolated fungus was observed on Sabouraud Dextrose Agar and microscopic examination was done for identification. Methanolic extracts of *A. paniculata* at different concentrations (1000, 500, 250, 125, 62.5, and 31.25 mg/mL), respectively were screened for antifungal activity by using disc diffusion method against the identified fungus. Identified fungal characteristics suggested the isolate as *Aspergillus* species based on its colony morphology and microscopic characterizations. Methanol extracts of *A. paniculata* at all concentrations tested revealed absence of inhibition zones against the isolated fungus compared to Voriconazole (1 µg) which is the positive control that showed zones of inhibition of 19, 20 and 22 mm.. In conclusion, the isolated fungus was identified as *Aspergillus* species and the *A. paniculata* methanolic extract used in this study cannot be justified to have an antifungal properties against the isolated fungus in this study. Further study is needed for confirmation of the *Aspergillus* species and fresh sample of plant extract is recommended for future test with fungi for a better and reliable result.

**KEYWORDS:** *Andrographis paniculata*, antifungal activity, fungal, disc diffusion, methanolic extracts, *Aspergillus spp.*