ISOLATION AND CHARACTERIZATION OF ENDOPHYTIC FUNGI FROM *Acacia mangium*

MUHAMMAD HARIS BIN HUSSIN

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This Final Year Project Report entitled "**Isolation and Characterization of Endophytic Fungi from *Acacia mangium***" was submitted by Muhammad Haris bin Hussin, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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Sarini Binti Ahmad Wakid
Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA (UiTM)
Negeri Sembilan, Kampus Kuala Pilah
Pekan Parit Tinggi, 72000, Kuala Pilah
Negeri Sembilan

_____

Siti Norazura Binti Jamal
Coordinator FSG661 AS201
Faculty of Applied Science
Universiti Teknologi MARA
72000 Kuala Pilah,
Negeri Sembilan

_____

Dr. Aslizah Binti Mohd Aris
Head School of Biology
Faculty of Applied Science
Universiti Teknologi MARA
72000 Kuala Pilah,
Negeri Sembilan

Date: _____

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ABSTRACT

ISOLATION AND CHARACTERIZATION OF ENDOPHYTIC FUNGI FROM *Acacia mangium*

Acacia mangium is the most common plantation tree species that are widely planted mainly in Malaysia, Vietnam, Indonesia, Philippines and Thailand. Endophytic fungi are essential microorganism that are presents within the plants tissues, including a broad range of plants in various ecosystems, and thus play an essential role in the natural environment. There are more than one million species of endophytes and are estimated to exist based on a ratio of vascular plants to fungal species of 1:4 or 1:5. Furthermore, the study of the endophytic fungi from the *Acacia mangium* might deliver a new knowledge and understanding. The project will be helpful to identify which endophytic fungi associated with the plant. Therefore, the purpose of the research are to isolate endophytic and identify the endophytic fungi from *Acacia mangium* by using the morphological characteristics. Based on the result obtained, all the endophytic fungi observed under the light microscope were conidia and the division of endophytic fungi were *Ascomycota* except AM20 is in categorized as *Zygomycota*. It can be concluded that most of the fungi isolated were belonged to Ascomycota consist of septate hyphae and some were belonged to Zygomycota which consist of aseptate hyphae and it is recommended for future researcher to study about endophytic fungi because of its important and gain new knowledge and understanding.