

**ISOLATION AND MORPHOLOGICAL
IDENTIFICATION OF ENDOPHYTE FUNGAL ON
Pandanus sp. AND *Alpinia sp.* FROM RESERVE FOREST
UiTM NEGERI SEMBILAN**

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ABSTRACT

ISOLATION AND MORPHOLOGICAL IDENTIFICATION OF ENDOPHYTE FUNGAL ON *Pandanus sp.* AND *Alpinia sp.* FROM RESERVE FOREST UiTM NEGERI SEMBILAN

Endophytes are ubiquitous organisms that colonize internal of plant tissue without causing any harm to host tissue. Leaves of *Pandanus sp.* and *Alpinia sp.* are hosts of endophytes; nevertheless there is little information of endophytes on these plants. This study aims to isolate the endophytic fungi from *Pandanus sp.* and *Alpinia sp.* and to identify the characteristics of endophytic fungi by using morphological method. Present study showed three endophytic fungi were successfully isolated from *Pandanus sp.* and *Alpinia sp.* namely P1, P2 and A1. *Pandanus sp.* showed the highest frequency of endophytes isolated with two species successfully isolated compared to *Alpinia sp.* with only one species isolated. There were obvious differences in morphological characteristics among the three isolates. Microscopic analysis showed the P2 and A1 consists of aseptate hyphae whereas P1 demonstrated septate hyphae. The pigmentation of the fungi showed that the colony in sample P1 demonstrated dark greyish-green in the centre, cottony aerial mycelium and white concentric rings on PDA media. The colony in sample P2 showed white cottony texture on PDA whereas the colony in sample A1 showed aerial and velvety mycelium, white and slightly pigmented texture on PDA. Based on microscopic analysis colonies of P1 showed cylindrical with bluntly rounded ends shaped conidia and slightly constricted at the middle, P2 showed almost circular sporangia and A2 demonstrated cylindrical and subglobose conidia. P1 was identified as *Colletotrichum sp.*, P2 was identified as fungi under Phylum Zygomycota whereas A1 was identified as *Lentinus sp.* Overall, the new discoveries of isolated endophytic fungi in *Pandanus sp.* and *Alpinia sp.* can be a potential antibacterial and antifungal agents. Molecular analysis is recommended to confirm the species identification of isolated endophytes based on DNA sequences.