ISOLATION AND IDENTIFICATION OF FUNGI ASSOCIATED WITH [illegible] IN UNIVERSITI MALAYSIA TERENGGANU

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ISOLATION AND IDENTIFICATION OF FUNGI ASSOCIATED WITH *AVICENNIA ALBA* IN UNIVERSITI MALAYSIA TERENGGANU

By

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **ISOLATION AND IDENTIFICATION OF FUNGI ASSOCIATED WITH** *AVICENNIA ALBA* **IN UNIVERSITI MALAYSIA TERENGGANU** oleh **SITI ROPIAH BINTI SHAPAI @ SHAFIE,** no. matrik: **UK10413** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains (Sains Biologi), Fakulti Sains dan Teknologi, Universiti Malaysia Terengganu.

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%	- percent
^0C	- degree Celcius
cm	- centimeter
cm^2	- centimeter square
DCT	- Direct Culture Technique
DIT	- Damp Incubation Technique
ml	- milliliter
mm	- millimeter
PDA	- Potato Dextrose Agar
SEM	- Scanning Electron Microscope
SWA	- Sea Water Agar
UV	- Ultra Violet

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ABSTRACT

Mangrove plants have great potentials in the production of bioactive compounds that can be used for medicinal purposes. However, it is not certain whether the compounds are produced by mangrove plant itself or by microbes associated with the plant. In this study, fungi associated with *Avicennia alba* were isolated and identified. The sampling site of *A. alba* tree is in Zone 2, UMT, Terengganu. In order to isolate and identify the fungus, fragments of leaves, branches and roots were cultured using three techniques which are the direct culture technique, damp incubation technique and slide culture technique. A total of 15 species of fungi were isolated using direct culture technique while seven species were isolated from damp incubation technique. Overall, there were 19 species of fungi being isolated and identified: three Zygomycetes, six Ascomycetes, one Basidiomycete and nine Deuteromycetes. Out of 19 species, 12 of them belong to terrestrial fungi while seven were marine fungi. These fungal isolates can be used further to investigate the potential bioactive compound(s) produced by the fungi.

PEMENCILAN DAN IDENTIFIKASI FUNGI YANG BERASOSIASI DENGAN *AVICENNIA ALBA* DI UNIVERSITI MALAYSIA TERENGGANU

ABSTRAK

Pokok bakau mempunyai potensi yang tinggi dalam penghasilan sebatian bioaktif yang boleh digunakan bagi tujuan perubatan. Walaubagaimana pun, tidak diketahui sama ada sebatian bioaktif itu dihasilkan oleh pokok bakau itu sendiri ataupun oleh mikrob yang berasosiasi dengannya. Bagi kajian yang dijalankan ini, fungi yang berasosiasi dengan *A. alba* telah dipencil dan diidentifikasi. Tapak persampelan pokok *A. alba* ini adalah di Zon 2, UMT, Terengganu. Bagi memencilkan fungi ini, fragmen-fragmen daun, ranting dan juga akar *A. alba* telah dikulturkan menggunakan tiga teknik iaitu teknik 'direct plating', teknik 'damp incubation' dan teknik kultur slaid. Sejumlah 15 spesis fungi telah dipencilkan dengan menggunakan teknik 'direct plating' manakala tujuh spesis daripada teknik 'damp incubation.' Secara keseluruhannya, terdapat 19 spesis fungi telah dipencilkan dan diidentifikasi: tiga Zygomycetes, enam Ascomycetes, satu Basidiomycete dan sembilan Deuteromycetes. Daripada 19 spesis fungi itu, 12 daripadanya tergolong dalam kumpulan fungi daratan manakala tujuh daripadanya adalah fungi marin. Fungi yang dipencilkan ini boleh digunakan selanjutnya bagi mengesan sebatian bioaktif yang berpotensi dihasilkan oleh fungi tersebut.