

SOLUTION AND IDENTIFICATION OF FUNGAL ASSOCIATED
WITH *ATIGESIA ALBA* IN UNIVERSITI
MALAYSIA TERENGGANU

STI PORIAH BINTI SHARAF © SHAFIE

FAKULTI SAINS DAN TEKNOLOGI
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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the requirements for the degree of
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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	v
LIST OF FIGURES	vi
LIST OF ABBREVIATIONS	vii
LIST OF APPENDICES	viii
ABSTRACT	ix
ABSTRAK	x
CHAPTER 1 INTRODUCTION	
1.1 Study Background	1
1.2 Objectives	4
CHAPTER 2 LITERATURE REVIEW	
2.1 Mangroves	5
2.1.1 Groups of mangroves	7
2.1.2 Importance of mangroves	10
2.2 Fungi	11
2.2.2 Marine fungi	15
2.2.3 Fungi associated with mangrove	16
2.3 Bioactive Compounds of Marine Fungi	22
2.4 Identification of Fungi Associated with Mangrove	24
CHAPTER 3 METHODOLOGY	
3.1 Collection of samples	27
3.2 Isolation Methods	27
3.2.1 Direct culture technique	27
3.2.2 Damp incubation technique	27
3.3 Identification of Fungi	28

CHAPTER 4 RESULTS	
4.1 Fungi Isolated by Direct Culture Technique	29
4.1.1. Fungal isolates from leaf substrates	29
4.1.2. Fungal isolates from branch substrates	31
4.1.3. Fungal isolates from root substrates	33
4.2 Fungi Isolated by Damp Incubation Technique	35
4.2.1. Fungi isolated from leaf substrates	35
4.2.2. Fungi isolated from branch substrates	37
4.2.3. Fungi isolated from root substrates	39
4.3 Comparison of Fungi Isolated from <i>A. alba</i> Between Both Techniques	41
CHAPTER 5 DISCUSSION	42
CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS	47
REFERENCES	48
APPENDICES	58
CURRICULUM VITAE	64

LIST OF TABLES

Tables		Page
2.1	<i>Avicennia</i> species, their taxonomic authorities and global distributions	8
2.2	Host-specific mangrove fungi	18
2.3	Number of fungi reported from mangroves substrates	19
2.4	The division of fungal phyla	26
4.1	Occurrence of fungi on leaf substrates collected from <i>A. alba</i> using direct culture technique.	29
4.2	Occurrence of fungi on branch substrates collected from <i>A. alba</i> using direct culture technique	31
4.3	Occurrence of fungi on root substrates collected from <i>A. alba</i> using direct culture technique	33
4.4	Occurrence of fungi on leaf substrates collected from <i>A. alba</i> using damp incubation technique.	35
4.5	Occurrence of fungi on branch substrates collected from <i>A. alba</i> using damp incubation technique.	37
4.6	Occurrence of fungi on root substrates collected from <i>A. alba</i> using damp incubation technique.	39
4.7	Comparison of fungal species isolated from <i>A. alba</i> between both isolation techniques	41
5.1	Fungal dynamics during decomposition of a macrophyte	45

LIST OF FIGURES

Figure		Page
2.1	<i>A. alba</i> tree and three parts of the tree used as samples	9
2.2	The structure of yeast and hyphae formation.	13
4.1	Fungi isolated from <i>A. alba</i> leaves using direct culture technique (400x magnifications for microscopic view).	30
4.2	Fungi isolated from <i>A. alba</i> branches using direct culture technique (400x magnifications for microscopic view).	32
4.3	Fungi isolated from <i>A. alba</i> roots using direct culture technique (400x magnifications for microscopic view).	34
4.4	Fungi isolated from leaf substrates of <i>A. alba</i> using damp incubation technique (400x magnifications for microscopic view).	36
4.5	Fungi isolated from branch substrates of <i>A. alba</i> using damp incubation technique (400x magnifications for microscopic view).	38
4.6	Fungi isolated from root substrates using damp incubation technique (400x magnifications for microscopic view).	40

LIST OF ABBREVIATIONS

%	- percent
°C	- 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

LIST OF APPENDICES

Appendix		Page
1	The Sampling Site of Study	58
2	Summary of Methodology Applied in This Study	59
3	Methodology of Study	60
4	Incubation and Isolation Techniques	61
5	Media Preparation	62
6	List of Fungi Associated with <i>A. alba</i>	63

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.