

SOLUTION AND IDENTIFICATION OF FUNGI ASSOCIATED  
WITH *Clomocarpus* species III UNIVERSITI  
MELAYU TERENGGANU

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2007

CM 4277

1100051117

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LP 4 FST 2 2007



1100051117  
Isolation and identification of fungi associated with *Sonneratia caseolaris* in Universiti Malaysia Terengganu, Terengganu /  
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ISOLATION AND IDENTIFICATION OF FUNGI ASSOCIATED WITH  
*Sonneratia caseolaris* IN UNIVERSITI MALAYSIA TERENGGANU,  
TERENGGANU.

By

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Research reports submitted in partial fulfillment of  
the requirements for the degree of  
Bachelor of Science (Biological Sciences)

Department of Biological Sciences  
Faculty of Science and Technology  
UNIVERSITI MALAYSIA TERENGGANU  
2007

1100051117

This project should be cited as:

Atiqah, A. S. 2007. Isolation and Identification of Fungi Associated with *Sonneratia caseolaris* in Universiti Malaysia Terengganu, Terengganu. Undergraduate thesis. Bachelor of Science (Biological Sciences), Faculty of Science and Technology, Universiti Malaysia Terengganu. 50 p.

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**JABATAN SAINS BIOLOGI  
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PROJEK PENYELIDIKAN I DAN II  
RESEARCH REPORT VERIFICATION**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: ISOLATION AND IDENTIFICATION OF FUNGI ASSOCIATED WITH *Sonneratia caseolaris* IN UNIVERSITI MALAYSIA TERENGGANU, TERENGGANU oleh Atiqah binti Abdul Safi, no. matrik: UK10561 telah diperiksa dan semua pembedahan 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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## ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr. Mariam Taib and my co-supervisor, Miss Jamilah Mohd. Salim @ Halim for their advices and guidance throughout the Final Year Project.

My gratitude goes to microbiology lab assistants, Mdm. Zarina and Madam Mahidawati for helping me in the lab and providing some guidance during the identification of fungi.

To my friends, who helped and taught me with some new methods; and all the people involved in my final year project, whether directly or indirectly, thank you. Without all of you, this project cannot be successfully done.

Lastly, I would like thank the most important people, my family, for their moral and financial supports.

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## LIST OF ABBREVIATIONS

°C	-	Celsius
cm	-	centimeter
ml	-	milliliter
mm	-	milimeter
PDA	-	potato dextrose agar
PDB	-	potato dextrose broth
SWA	-	sea water agar
UMT	-	Universiti Malaysia Terengganu.

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## ABSTRACT

Mangrove is one of the most productive plants that produce natural products. However, it is not known whether they are produced by the plant themselves or by the microorganism associated with them. In this study, fungi associated with *Sonneratia caseolaris* were isolated and identified based on their morphology using the microscope. The sampling site of the mangrove is in the zone 1, UMT. In order to isolate the fungi, fragments of leaves, roots and branches were cultured using two techniques, direct plating and damp incubation technique. Slide cultures technique was used in the identification process. In direct plating technique, two ascomycetes, 13 deuteromycetes and one from basidiomycete had been isolated. On the other hand, in damp incubation technique, only two from ascomycetes and 17 deuteromycetes have been identified. In both techniques, three marine fungi and 32 terrestrial fungi have been obtained. One isolates, *Carbosphaerella leptosphaerioides* was selected to test any antibacterial activity, however none was observed. Other fungal isolates can be used further to investigate any productions of bioactive compounds by these fungi.

**PEMENCILAN DAN IDENTIFIKASI FUNGI YANG BERASOSIASI  
DENGAN *Sonneratia caseolaris* DI UNIVERSITI MALAYSIA TERENGGANU  
(UMT), TERENGGANU.**

**ABSTRAK**

Paya bakau merupakan salah satu tumbuhan yang sangat produktif, dimana ianya dapat menghasilkan produk semulajadi. Walaubagaimana pun, tidak diketahui sama ada produk tersebut di hasilkan oleh pokok itu sendiri atau mikroorganisma yang berasosiasi dengan pokok tersebut. Dalam kajian ini, fungi yang berasosiasi pada *Sonneratia caseolaris* telah dipencil dan dikenalpasti menggunakan mikroskop. Lokasi paya bakau untuk kajian terletak di zon 1, UMT. Untuk memencilkan fungi, bahagian daun, akar dan batang telah dikulturkan menggunakan dua teknik, 'direct plating' dan 'damp incubation'. Teknik 'slide culture' telah digunakan untuk proses identifikasi. Untuk teknik 'direct plating', sebanyak dua ascomycetes, 13 deuteromycetes dan satu dari basidiomycete dapat dipencilkan. Untuk teknik 'damp incubation', hanya dua dari ascomycetes dan 17 dari deuteromycetes berjaya dipencilkan. Untuk kedua-dua teknik, tiga fungi marin dan 32 fungi daratan telah dipencilkan. *Carbosphaerella leptosphaerioides* dipilih untuk diuji aktiviti antibakteria, walaubagaimana pun, tiada sebarang aktiviti ditunjukkan. Pencilan fungi yang lain boleh digunakan untuk dikaji sebarang penghasilan bahan bioaktif oleh fungi tersebut.