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Universiti Malaysia Terengganu (UMT)

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Cloning and characterization of 300bp partial expressed gene fragment from muscle tissue of freshwater cultured hybrid tilapia, *Oreochromis* sp. / 'Abdah Azzuhdina Amin.

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Lihat sebab-sabah

HAK MILIK
PERPUSTAKAAN SULTANAH NUR ZAHRAH BINT

CLOTHING AND CHARACTERIZATION OF 300bp PARTIAL EXPRESSED GENE
FRAGMENT FROM MUSCLE TISSUE OF FRESHWATER CULTURED HYBRID
TILAPIA, *Oreochromis* sp.

By
‘Abdah Azzuhdina Bt.Amin

Research Report submitted in partial fulfillment of
the requirement for the degree of
Bachelor of Agrotechnology Science (Aquaculture)

Department of Fisheries and Aquaculture
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2009

This project report should be cited as:

'Abdah Azzuhdina Bt. Amin. Cloning and characterization 300bp partial expressed gene fragment from muscle tissue of freshwater cultured hybrid tilapia (*Oreochromis* sp.). Undergraduate thesis, Bachelor of Agrotechnology (Aquaculture), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu, Terengganu. 34p.

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**FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK ILMIAH I DAN II**

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:

Cloning and identification of 300bp partial gene fragments amplified from muscle tissue of freshwater cultured hybrid tilapia (*Oreochromis* sp.) oleh 'Abdah Azzuhdina Bt. Amin, no.matrik UK13500 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Perikanan dan Akuakultur sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Agrotekologi (Akuakultur), Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

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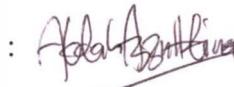
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DECLARATION

I hereby declare that the work in this thesis is my own except
For quotations and summaries which have been duly
acknowledged.

Signature : 

Name : 'Abdah Azzuhdina Bt. Amin

Matric No : UK13500

Date : 8th May 2009

ACKNOWLEDGEMENT

I would like to express heartfelt appreciation to my supervisor, Dr. Shahreza bin Md. Sheriff for their never endless concern, assistance, guidance and supports that enable this project to successfully completed. I would like to thank him for his attention and painstaking in reviewing and correcting this thesis. This special appreciation extended to Mr. Shahrol, Mr. Hizat, Mr. Idham, Mrs. Faridah and staff of Anatomy and Physiology Laboratory, Institute of Marine Biotechnology and AKUATROP, University Malaysia Terengganu for allowing me to use the facilities there. My heartfelt gratitude also goes to my parents, Mr. Amin and Mrs Asnah and my siblings for keeping me company and comforting me during my hard time; my friends from Bachelor of Agrotecnology (Aquaculture) for helping me to run this project smoothly. Thanks to them for helping me in completing this project. Thank you very much and may Allah bless all of you.

ABSTRACT

This study was done to clone and characterized a 300bp partial gene fragment from muscle tissue of freshwater cultured hybrid tilapia, *Oreochromis* sp. This study was conducted in Anatomy and Physiology Laboratory of University Malaysia Terengganu. RNA was extracted from fish muscle tissue of freshwater cultured hybrid tilapia, *Oreochromis* sp. The RNA was subjected to DD RT-PCR to transcribe into cDNA and was amplified using arbitrary primer 5. The result of the amplification produced three fragments with a size of 150bp, 300bp and 400bp. Fragment from sample A2 (300bp) was successfully cloned into pTZ57R/T vector and the fragment was sequenced. Analysis of fragment A2 showed that there was no significant match with any genes available in GenBank. Due to this, it can be concluded that fragment A2 is a novel gene or an unknown gene which has not been reported yet. This study has enable researcher to identify new genes in muscle tissue of *Oreochromis* sp. As a suggestion, more study is needed to obtain the full length of the gene fragment and characterize the expressed gene.

ABSTRAK

Kajian ini dijalankan untuk mengklon dan mencirikan 300 pasangan bes sebahagian pengekspresan gen daripada tisu otot ikan tilapia air tawar hibrid, *Oreochromis* sp. Kajian ini dijalankan di Makmal Anatomi dan Fisiologi, Universiti Malaysia Terengganu. RNA diekstrak daripada tisu otot ikan tilapia air tawar hybrid, *Oreochromis* sp. Kemudian, RNA yang diperolehi digunakan di dalam teknik DD RT-PCR untuk ditranskrip kepada cDNA dan bilangannya diperbanyak menggunakan oligonukleotida arbitrari nombor 5. Keputusan daripada amplifikasi cDNA menghasilkan tiga fragmen yang bersaiz 150 pasang bes, 300 pasang bes dan 400 pasang bes. Fragmen daripada sampel A2 (300 pasang bes) telah berjaya diklon ke dalam vector pTZ57R/T dan fragment tersebut diantar untuk dijujukan. Analisis bagi sampel A2 menunjukkan tiada persamaan yang nyata dengan gen yang terkumpul di dalam GenBank. Oleh itu, kesimpulan dapat dibuat bahawa fragmen A2 adalah gen novel atau gen yang tidak diketahui yang belum dilaporkan lagi. Kajian ini membolehkan penyelidik untuk mengenalpasti gen-gen baru di dalam tisu otot bagi *Oreochromis* sp. Sebagai cadangan, kajian lanjut perlu dilakukan untuk mendapatkan jujukan penuh bagi fragmen gen dan mencirikan pengekspresan gen tersebut.