

ANTIBIOTIC ACTIVITY OF *Homalomena* sp  
CULTURES

ERNYAH DAJUNIN

FACULTAS SAINS DAN TEKNOLOGI  
UNIVERSITAS ANGLIA RUSSELLIA  
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Perpustakaan Sultanah Nur Zahirah (UMT)  
Universiti Malaysia Terengganu



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PERPUSTAKAAN  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU

1100051125		

Lihat sebelah

HAK MILIK  
PERPUSTAKAAN UMT

ANTIVIBRIO ACTIVITY OF *Homalomena* sp. CULTURES

By

Ernnah Daunin

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**JABATAN SAINS BIOLOGI  
FAKULTI SAINS DAN TEKNOLOGI  
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II  
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: .....  
.....**ANTIVIBRIO ACTIVITY OF *Homalomena sp.* CULTURES**.....  
oleh ...ERNNAH DAUNIN..., no. matrik: .....UK10850..... telah diperiksa dan semua  
pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan  
Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah  
...SARJANA MUDA SAINS (SAINS BIOLOGI)....., Fakulti Sains dan Teknologi, Universiti  
Terengganu Malaysia.

Disahkan oleh: *Verified by:*

Penyelia Utama/*Main Supervisor*

Nama: Dr. Aziz Bin Ahmad

Cop Rasmi: **DR. AZIZ AHMAD**  
Pensyarah  
Jabatan Sains Biologi  
Fakulti Sains dan Teknologi  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu.

Tarikh: 7/5/2007

Penyelia Kedua (jika ada)/*Co-Supervisor (if applicable)*

Nama: Dr. Najiah Musa **NAJIAH MUSA @ ZAKARIA**

Cop Rasmi: Pensyarah  
Jabatan Sains Perikanan dan Akuakultur  
Fakulti Agroteknologi dan Sains Makmal  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu.

Tarikh: 7/5/07

Ketua Jabatan Sains Biologi/*Head, Department of Biological Sciences*

Nama: Dr. Aziz Bin Ahmad

Cop Rasmi: **DR. AZIZ BIN AHMAD**  
Ketua  
Jabatan Sains Biologi  
Fakulti Sains dan Teknologi  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu

Tarikh: 7/5/2007

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## LIST OF ABBREVIATIONS / SYMBOLS

<i>A</i>	=	absorbance
CFU	=	Colony Forming Unit
CFU mL <sup>-1</sup>	=	Colony Forming Unit per milliliter
DMSO	=	Dimethyl Sulfoxide
g	=	gram
g/L	=	gram per liter
h	=	hour
kg	=	kilogram
L	=	liter
MeOH	=	Methanol
mg	=	milligram
mg/L	=	milligram per liter
mg/ml	=	milligram per milliliter
MHA	=	Mueller Hinton Agar
ml	=	milliliter
mm	=	millimeter
MS Media	=	Murashige and Skoog Media
nm	=	nanometer
ppt	=	part per thousand
TSA	=	Tryptic Soy Agar
TSB	=	Tryptic Soy Broth
v/v	=	volume per volume
μl	=	microliter
μm	=	micrometer
μg	=	microgram
%	=	percentage
°C	=	degree Celcius
2 IP	=	isopentenyladenin

## ABSTRACT

*Homalomena species* belongs to Araceae family. It is an aquatic plant that can be found in the humid climate of South America and Tropical Asia. The goal of this work was to test the antivibrio activity of the methanol extracts of *Homalomena sp.* cultures at three different cultivation time (30, 50 and 70 day). The whole part of plant materials (leaves, petioles and rhizomes) was investigated for its antibacterial activities against *Vibrio vulnificus*, *V.alginolyticus* and *V.parahaemolyticus*. The antivibrio bacteria activity of the methanolic crude extracts were tested by the disc diffusion technique. Results show that no activity against the tested bacteria. *V.vulnificus*, *V.alginolyticus* and *V.parahaemolyticus* were resistance to methanol extracts of *Homalomena sp.* cultures. Methanol extracts of plant with difference cultivation time did not gave any influence on antivibrio activity. Further study need to be done to determine the antibacterial activity of *Homalomena sp.* cultures against other bacteria.

## AKTIVITI ANTIVIBRIO OLEH KULTUR *Homalomena sp.*

### ABSTRAK

*Homalomena spesies* tergolong dalam famili Araceae. Ia merupakan tumbuhan akuatik yang boleh didapati di iklim yang lembap di Amerika Selatan dan Asia Tropika. Tujuan projek ini adalah untuk mengesan aktiviti anti vibrio oleh ekstrak metanol kultur *Homalomena sp.* pada tiga tempoh yang berlainan (30, 50 dan 70 hari). Keseluruhan bahagian tumbuhan (daun, cabang, dan umbi) telah dikenalpasti aktiviti anti vibrionya terhadap *Vibrio vulnificus*, *V. alginolyticus* dan *V. parahaemolyticus*. Aktiviti anti vibrio oleh ekstrak metanol diuji melalui kaedah serapan disk. Keputusan menunjukkan bahawa tiada aktiviti terhadap bakteria yang diuji. *V. vulnificus*, *V. alginolyticus* dan *V. parahaemolyticus* adalah rentan terhadap ekstrak metanol oleh kultur *Homalomena sp.* Ekstrak metanol oleh tumbuhan pada tempoh yang berlainan tidak mempengaruhi aktiviti anti vibrio. Lebih banyak kajian perlu dilakukan pada kultur *Homalomena sp.* bagi menentukan aktiviti anti bakteria tumbuhan ini terhadap bakteria lain.