ANTIMICROBIAL ACTIVITY OF *Thermoformera* sp CULTURES

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ANTIVIBRIO ACTIVITY OF *Homalomena sp.* CULTURES

By

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LIST OF ABBREVIATIONS / SYMBOLS

A	=	absorbance
CFU	=	Colony Forming Unit
CFU mL^{-1}	=	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	=	mililiter
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 vulnifucus*, *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.vulnifucus*, *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. la 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 vulnifucus*, *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. vulnifucus*, *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.