ANTIVIRAL ACTIVITY OF *Cryptocoryne ciliata*
CULTURES

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ANTIVIBRIO ACTIVITY OF *Cryptocoryne elliptica* CULTURES.

By

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A	Absorbance
$CFUml^{-1}$	colony forming units per milliliter
DMSO	dimethyl sulfoxida
°C	degree Celcius
g	gram
g/L	gram per liter
KNO_3	Kalium nitrate
L	Liter
µl	microliter
µg	microgram
µg/ml	microgram per millililer
ml	milliliter
mg	milligram
mm	millimeter
mg/l	milligram per liter
mg/ml	milligram per milliliter
MIC	Minimal Inhibition Concentration
MH	Muller-Hinton
NA	nutrient agar
$(NH_4)_2SO_4$	Ammonium sulfate
nm	nanometer
%	Percent

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ABSTRACT

This research was conducted on an aquatic plant, *Cryptocoryne elliptica* that grow through in-vitro culture. The main purpose of this research was to investigate antivibrio activity of methanol and aqueous extracts of *C.elliptica*. Beside that, the minimal inhibitory concentration (MIC) of extracts for antivibrio and the age of plant with highest antivibrio were determined. The grinded dried leaves and petioles with 30, 50 and 70 cultivation days were used in extraction. The antivibrio activity was evaluated using Kirby-Bauer method against *Vibrio alginolyticus, Vibrio parahaemolyticus* and *Vibrio vulnificus*. The 500µg/ml of extracts concentration were resulted in negative reaction of antivibrio activity with absence of inhibition zones to all 30,50 and 70 cultivation days of plant extracts. Overally, the result showed of the low antivibrio compound produce by in-vitro plantlet of *C.elliptica*. Through this research suggesting that, *C.elliptica* is not suitable as a good control toward *Vibrio spp*.

AKTIVITI ANTIVIBRIO BAGI TUMBUHAN KULTUR, *Cryptocoryne elliptica* .

ABSTRAK

Kajian ini dijalankan keatas tumbuhan akuatik iaitu *Cryptocoryne elliptica* yang ditumbuhkan melalui teknik kultur sel. Tujuan utama kajian ini dijalankan adalah untuk mengkaji aktiviti antivibrio ekstrak metanol dan air bagi tumbuhan *C.elliptica*. Selain itu, kepekatan penyekatan minima oleh ekstrak terhadap antivibrio dan umur tumbuhan yang mempunyai antivibrio tertinggi juga dikenalpasti.Daun dan batang tumbuhan kering yang masing-masing berumur 30, 50 dan 70 hari serta telah dikisar digunakan untuk proses pengekstrakan. Penyaringan aktiviti antivibrio dijalankan dengan menggunakan kaedah Kirby-Bauer terhadap tiga jenis bakteria *Vibrio* iaitu *Vibrio alginolyticus, Vibrio parahaemolayticus* dan *Vibrio vulnificus*. Ekstak yang berkepekatan 500µg/ml telah menghasilkan keputusan reaksi yang negatif terhadap aktiviti antivibrio dan tidak menghasilkan sebarang kawasan zon perencatan bagi ketiga-tiga ekstrak tumbuhan yang berumur 30, 50 dan 70 hari. Secara keseluruhannya, keputusan yang diperolehi menunjukkan penghasilan komponen antivibrio yang rendah oleh tumbuhan kultur *C.elliptica*. Melalui kajian ini adalah dicadangkan bahawa tumbuhan *C.elliptica* tidak sesuai sebagai pengawal yang baik terhadap *Vibrio spp*.