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BOOK OF ABSTRACTS

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Distinctive responses of ethanolic and aqueous plant extract against *Vibrio alginolyticus*

Nur Amalin Nadia Mat Nasir¹, Nur Nazifah Mansor^{1*}, and Nik Haiha, Nik Yusoff²

¹Kulliyah of Science, International Islamic University Malaysia, Kuantan Pahang, 25200, Malaysia

²Marine Aquaculture Breeding Technology Centre, FRI Tanjung Demong, Besut, Terengganu, 22200, Malaysia

* Corresponding author, Email address: nurnazifah@iium.edu.my

Abstract

Uses of plant derived product are widely known as more compatible and ecological to the environment compared to the antibiotics. The uses are still new in aquaculture and its phytochemical action against disease outbreak is still in research. *Vibrio alginolyticus* is a major bacterial pathogen that can cause high lost in aquaculture. A screening test was conducted using ethanolic and aqueous plant extract. *Melastoma malabathricum*, *Phaleria macrocarpa* and *Phyllanthus niruri* were tested against *Vibrio alginolyticus*. The modified disc diffusion method were used in this study. Six mm of sterile discs were loaded with the plant extract and placed on the inoculated plate and incubate for 24 hours. Highest zone of inhibition were shown by *Melastoma malabathricum*. Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) also tested in this study.

Keywords: antimicrobial activity, plant extracts, *Vibrio alginolyticus*, zone of inhibition, minimum inhibitory concentration



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Keywords: *Penaeus vannamei*,
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Channel catfish virus (CCV) replication in brown bullhead (BB) and channel catfish ovary (CCO) cell lines isolated from *Pangasius hypophthalmus*

Nik Nadiah Nik Abdul Khalid¹, Nur Nazifah Mansor^{1*}, Hazreen Nita Mohd Khalid²,
and Rimatulhana Ramli³

¹International Islamic University Malaysia, Kulliyah of Science, Kuantan Campus, Malaysia

²University Malaysia Kelantan, Faculty of Agro Based Industry, Jeli Campus, Malaysia

³National Fish Health Research Centre, Department of Fisheries Malaysia, Batu Maung,
Penang, Malaysia

* Corresponding author, Email address: nurnazifah@iiium.edu.my

Abstract

The numbers of viral infection detected in fish are relentlessly increasing due to the development and improvement of new diagnostic techniques. Viral infection in fish can cause approximately 100% mortality of cage-cultured farm. Thus, both consumer and producer felt the burden of hike in price and production loss respectively. In this study, cell culture and PCR were applied to describe channel catfish virus (CCV) isolated from *Pangasius hypophthalmus*. The objective of this study is to investigate cytopathic effect (CPE) after CCV inoculation on brown bullhead (BB) and channel catfish ovary (CCO) cell lines followed by PCR confirmation. *P. hypophthalmus* were sampled every two weeks for three different organs, liver, spleen and kidney. As the results, the normal fibroblast-like morphology of both BB and CCO cells were rounding and granulated after the inoculation of CCV samples. This study shows CPE formation occurs more rapidly in CCO cells compared to BB cells. In conclusion, CCO was shown to have the potential to be a model system for biological mechanisms of CCV isolated from *P. hypophthalmus*.

Keywords: channel catfish virus (CCV), *Pangasius hypophthalmus*, brown bullhead cell lines (BB), channel catfish ovary cell lines (CCO)