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**MOLECULAR SCREENING OF INFECTIOUS SPLEEN AND**

**KIDNEY NECROSIS VIRUS IN FOUR SPECIES OF**

**MALAYSIAN FARMED ORNAMENTAL FISH**

SANDRA CATHERINE ZAINATHAN<sup>1,2\*</sup>, DINESWARY BALARAMAN<sup>1</sup>,

LOGAJOTHISWARAN AMBALAVANAN<sup>1</sup>, PONNARASI KRISHNA MOORTHY<sup>1</sup>,

SURRIN KUMAR PALAKRISHNAN<sup>1</sup> and NURSHUHADA ARIFF<sup>1,2</sup>

*<sup>1</sup>School of Fisheries and Aquaculture Sciences, Universiti Malaysia Terengganu,*

*21030, Kuala Nerus, Terengganu, Malaysia*

*<sup>2</sup>Institute of Marine Biotechnology, Universiti Malaysia Terengganu,*

*21030, Kuala Nerus, Terengganu, Malaysia*

*\*E-mail: [sandra@umt.edu.my](mailto:sandra@umt.edu.my)*

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## **ABSTRACT**

Malaysia is the 8<sup>th</sup> largest world producer of freshwater ornamental fish. Ornamental fish are commonly associated with *Megalocyttiviruses* infection, which has led to severe diseases and economic loss. The purpose of this study was to detect the presence or absence of Infectious Spleen and Kidney Necrosis Virus (ISKNV) in four ornamental fish species namely *Xiphophorus maculatus*, *Poecilia reticulata*, *Trichogaster leeri* and *Apistogramma ramirezi* from Malaysia. A total of 175 samples were analysed using PCR analysis for detection of ISKNV. The PCR analysis demonstrated 22 positive pooled samples (n = 110) for the presence of ISKNV. No clinical signs were observed in positive samples except darkened body in *X. maculatus*. Sequencing analysis of *Megalocyttivirus* major capsid protein (MCP) revealed that the ISKNV strains in this study demonstrated high nucleotide identity to each other and reference ISKNV (96% to 100%). Based on the phylogenetic tree, the ISKNV strains were closely related to reference ISKNV and can be classified into *Megalocyttivirus* genotype I.

**Key words:** *Megalocyttivirus*, ISKNV, genotype I, ornamental fish, Malaysia