

STUDY OF GENOTIPE AND FILOGENETIC *Infectious myonecrosis virus* (IMNV) ON WHITE SHRIMP (*Litopenaeus vannamei*) IN INDONESIA

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ABSTRACT

The general objective of the study are: to characterize genotypes IMNV on white shrimp (*Litopenaeus vannamei*) from several regions in Indonesia that can be detected the geographic strains and determine the relationship of kinship or their filogenetic. The specific objectives are: Determining the genotype of IMNV on vannamei shrimp from several regions in Indonesia; Determining geographic strain of IMNV in Indonesia; Determining the relationships orIMNV phylogenetic among regions in Indonesia. The sample of the research was taken from the shrimp farmings of various regions in Indonesia, such as: East Java, West Java, Lampung, North Sumatra, Bangka Belitung, Bali, Nusa Tenggara and West Kalimantan. The study is divided into two stages: Stage One study include: Collection of vannamei shrimps which are indicated with IMNV infection with the technique of RT-PCR. The second phase includes: amplification using specific primers c-protein, cDNA Sequencing and homology analysis with *Genetyx 9.0* and phylogenetic trees with *Mega 5.1* program, and epitope profile with *BcePred* program. From this study showed a point mutation at nucleotide base pairs and amino acid composition of the sample when compared to the standard Gen Bank (Gen Bank EF061744 and Gen Bank AY570982). The Changing of the peptide composition of IMNV epitopes allegedly has an important role in pathogenicity. From this study showed a point mutation at nucleotide base pairs and amino acid composition of the sample when compared to the standard Gen Bank (Gen Bank EF061744 and Gen Bank AY570982). Analysis of homology based on nucleotide composition and amino acid composition of the entire sample has a good homology ranged from 98.59% -100% for nucleotide and 98.05% -100% for amino acids, both among regions and with Gen Bank EF061744 and AY570982. Based on the analysis of the epitope profiles of 308 amino acid protein IMNV kapsit showed that isolates from various regions in Indonesia all have 13 epitope peptides composed of 6-23. The Changing of the composition of peptide occur in the range of epitopes 28-50 and 165-176.

Key words : IMNV, *Litopenaeus vannamei*, Indonesia

*Kesuksesan adalah sebuah peluang
Itku harus dapat meraihnya*

