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## [5] Diseases Caused By Viral Pathogens

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Oral administration of recombinant proteins, rVP28 or rVP26, were effective for prophylaxis of this disease. Although the duration of the vaccine is relatively short (within 55-75 days in this experiments), the booster administration of the homologous vaccine could extend its duration (Satoh et al, 2009, 2008; Ning et al, 2011).

An application of RNA interference technology against WSSV are promising and effective antiviral strategy. Sequence-specific viral inhibition in shrimp by long synthetic dsRNAs or siRNAs was highly efficient in inhibiting WSSV gene expression (Sarathi et al, 2008; Shekhar and Lu, 2009; Xu et al, 2007; Kim et al, 2007; Sudhakaran et al, 2010) and YHV gene expression (Tirasophon et al, 2007).

Since 2009, a newly emerging disease has been occurring in China, Vietnam (estimated loss: 75 million US dollar) and Thailand. This disease is characterized by massive degeneration of the hepatopancreas but the causative agent has not been identified yet. D.V. Lightner (University of Arizona) has named this condition acute hepatopancreatic necrosis syndrome (AHPNS). Close attention should be paid on the spread and impact of this disease on shrimp culture production (Flegel, 2012).

## Glossary

|                         |  |
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| <b>WSSV</b>             | : White spot syndrome virus                                    |
| <b>YHV</b>              | : Yellow head virus  |
| <b>IHHNV</b>            | : Infectious hypodermal and hematopoietic necrosis virus       |
| <b>TSV</b>              | : Taura syndrome virus   |
| <b>WTD</b>              | : White tail disease   |
| <b>MrNV</b>             | : <i>Macrobrachium rosenbergii</i> nodavirus                   |
| <b>XSV</b>              | : Extra small virus  |
| <b>IMNV</b>             | : Infectious myonecrosis virus                                 |
| <b>RT-PCR</b>           | : Reverse transcription polymerase chain reaction              |
| <b>LAMP</b>             | : Loop mediated isothermal amplification                       |
| <b>RT-LAMP</b>          | : Reverse transcription loop mediated isothermal amplification |
| <b>H&amp;E staining</b> | : Hemotoxylin and eosin staining                               |

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