

CHAPTER VI

CONCLUSIONS

1. The full-length cDNA of PmLoqs is 1,464 bp, encoding 323 amino acids. It contains three dsRBD. Analysis of the amino acid sequence of PmLoqs revealed that PmLoqs showed the domain arrangement and sequence identity approximately 100 % amino acid sequence identity to the TRBP isoform 2 of *Fenneropenaeus chinensis*. Moreover, phylogenetic analysis revealed that PmLoqs is closely related to the invertebrate dsRBP.

2. Both dsRNA-PmLoqs that were produced by *in vitro* transcription and *in vivo* bacterial expression showed the silencing of PmLoqs mRNA expression at 1 day post dsRNA injection approximately 85% and this effect also lasted for 5 days.

3. Suppression of PmLoqs mRNA by dsRNA-PmLoqs showed an increase in the RNAi efficiency to inhibit an endogenous PmRab7 by dsRNA-PmRab7 after 2 days post-injection.

4. Inhibitory effect of PmLoqs illustrated to an increase the ability of dsRNA-YHV (pro) in inhibition of YHV replication after 48 and 72 hours post YHV challenge. This data indicated that the increase of the ability of dsRNA-YHV (pro) is the result of inhibition of PmLoqs. These results suggested that PmLoqs involved in dsRNA-mediated gene silencing in shrimp.

Taken together, an increase in the ability of dsRNAs (dsRNA-PmRab7 or dsRNA-YHV) to suppress either an endogenous PmRab7 or YHV gene after PmLoqs was knockdown suggesting the possible function of PmLoqs in dsRNA mediated gene silencing in shrimp.