CHAPTER V
CONCLUSIONS

1. In primary hemocyte cultures, *Pm*VRP15 mRNA expression was highestly up-regulated at 48 hour post WSSV infection.

2. Quantitative RT-PCR showed that silencing of *Pm*VRP15 gene resulted in a reduction of WSSV replication.

3. Confocal laser scanning microscopy showed that *Pm*VRP15 localized at nuclear membrane of all cell types (granular, semigranular and hyaline cells). In addition, kn*Pm*VRP15 hemocytes had lower amounts of VP28, compared to knGFP hemocytes, indicating that *Pm*VRP15 affected on WSSV propagation.

4. Nuclear import/export experiment suggested that *Pm*VRP15 may involve in nuclear entry of WSSV.

5. Low amount of r*Pm*VRP15 was produced in *S. cerevisiae* expression system.

6. Soluble parts of *Pm*VRP15 (N-terminal and C-terminal truncated *Pm*VRP15) were cloned into pGEX4T-3 and expressed in *E. coli* C43 (DE3). The truncated proteins were found in inclusion fractions.

7. r*Pm*VRP15 was successfully expressed in *E. coli* C43 (DE3) and purified by Ni-NTA and DEAE-FF^{TM} sepharose columns.

8. Molecular Mass of *Pm*VRP15 protein is 15.899 kDa by MALDI-TOF MS.

9. Circular dichroism analysis indicated that *Pm*VRP15 protein contains 48.45% α-helix and 13.57% β-sheet.

10. Crystallization screening gave crystals in 6 different conditions. Crystals from Index^{TM} D12 condition gave close spots in diffraction image, suggesting the presence of proteins.