# CONCLUSIONS

1. Hemocyte from *P. merguiensis* has three main populations, hyaline small-granular and large-granular under light microscope like other crustaceans. Hemolymph serum and hemocyte lysate supernatant from *P. merguiensis* agglutinate erythrocytes of different vertebrate species. The lectin from serum of *P. merguiensis* was stabilized at pH 7-10 and 4-35 °C and required calcium ion. The lectin was specific for mucin and fetuin.

2. A fraction containing hemagglutinating activity was isolated by affinity chromatography, mucin-CNBr-activated Sepharose 4B. The corresponding protein showed a molecular weight of 112 kDa and consisted of 30.09 and 28.01 KDa subunits by SDS-PAGE. The internal amino acid sequence of purified lectin by gel filtration using LC-MS/MS was identified to be DAELLLLR DAEALEVGR and DTDVTTVRSR.

3. Proteins in serum hemolymph and hemocyte lysate supernatant exhibited antibacterial activity against gram-negative bacteria. The expression of lectin was in response to the *Vibrio harveyi* infection.

4. For further study, we should investigate the relationship between lectin and hemocyanin with antimicrobial activity.