

Pornchai Sincharoenpokai 2009: Study on Effects of Turmeric (*Curcuma longa* Linn.) Extract on Pathogenics *Vibrio* spp. in White Shrimp (*Litopenaeus vannamei*). Master of Science (Veterinary Microbiology), Major Field: Veterinary Microbiology, Department of Veterinary Microbiology and Immunology. Thesis Advisor: Associate Professor Ong-ard Lawhavinit, Ph.D. 90 pages.

Effects of turmeric (*Curcuma longa* Linn.) extract on pathogenics *Vibrio* spp. in white shrimp (*Litopenaeus vannamei*) were investigated. The results showed that the ethanol turmeric extract was the most effective to inhibit the tested *Vibrio* spp. The MICs of the ethanol turmeric extract on *V. harveyi*, *V. cholerae*, *V. parahaemolyticus*, *V. alginolyticus*, *V. vulnificus* and *V. fluvialis* was 0.47, 0.47, 0.94, 0.47, 3.75 and 0.47 mg/disc, respectively. Effects of turmeric extract on survival and growth rate of white shrimp were examined by using differential levels of turmeric extract in feed. The results showed that there was no significantly different in survival rate and water quality ($p>0.05$). However, the percentage of average diary growth and weight gained were significantly higher with feed contained turmeric at 7.5 and 15 grams per kilogram of feed when compared with control ($p<0.05$). Efficacy of turmeric extract as an immunostimulant for white shrimp was studied. The results showed that total hemocyte, phenoloxidase activity and bactericidal activity were increase follow with the levels of turmeric extract in feed and the highest ratio of tumeric extract was 15 g/kg of feed. It was found that the effect of turmeric extract at the ratio of 15 g/kg of feed on survival rate of white shrimp challenged with *V. harveyi* was significantly different, it was higher than the control group ($p<0.05$).

Student's signature

Thesis Advisor's signature

____ / ____ / ____