

Pathogenicity of *Streptococcus agalactiae* isolated from a fish farm in Selangor to Juvenile Red Tilapia (*Oreochromis* sp.)

ABSTRACT

The rapid increases in global aquaculture industry have exposed many diseases that were not known in aquaculture fields. *Streptococcus agalactiae*, one of *Streptococci* species that infecting both terrestrial and aquatic animals. The organisms have been isolated from numerous fish species in natural disease outbreaks and showed to be pathogenic to several fish species. Recently, few streptococcosis outbreaks affecting cultured Red tilapia in Selangor were investigated and the *S. agalactiae* isolate was used to study its pathogenicity on juvenile Red tilapia. The 120 h 50% endpoint (LD50) value in juvenile tilapia injected Intraperitoneally (IP) was 1.56×10^5 cfu mL⁻¹. Experimental infections were carried out by bathing the fish for 30 min in water containing the bacteria and by IP injection. It was observed that IP route was more potent to cause mortality to juvenile Red tilapia and produced clear clinical signs within 5 days. It was noted that the mortality started to reduce after 5 days and fish recovered after 9 days post inoculation. In contrast, immersion route did not induce mortality but produced moderate clinical signs such as lethargy and loss of appetite and fish started to recover after 6 days. The findings of the current study would enable us to formulate a suitable measure to prevent and control future disease outbreaks

Keyword: Injection; Measure; Mortality; Pathogenicity; Red tilapia; *Streptococcus agalactiae*.