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SEROTYPE IDENTIFICATION OF GROUP B STREPTOCOCCOCI ISOLATED FROM MALAYSIAN RED TILAPIA (*Oreochromis sp.*)

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Streptococcosis is a wide-spread disease infecting cultured red tilapia (*Oreochromis sp.*) in Malaysia and globally. Infection triggered by *S. agalactiae* in tilapia caused high mortality rate. Treatment using antibiotics has been practiced by both farmers, locally and internationally. However, antibiotics usage even though might be effective could lead to negative environmental impact unfavourable to the aquaculture industry. Molecular characterization of local *S. agalactiae* isolates confirm the true causal pathogen strain infecting tilapia culture, needed for development of recombinant vaccine. A number of 104 local isolates were obtained for this study, isolated from different waterbody in Kedah and Terengganu, Malaysia. All of the isolates were identified using API 20STREP Kit (Biomerieux, France) and further re-confirmed through 16S rRNA PCR method. Biochemical studies were done to determine the serotype and the Lancefield Group. The Group B Streptococcus (GBS) can be sub-divided into ten serotypes (Ia, Ib and II to IX) (Imperi *et. al.*, 2010) based on the polysaccharide composition. From the test using Strep-B-Latex kits (Statens Serum Institute, SSI, Sweden), the results indicated that all local isolates belong to Group B Type III respectively. Group B Streptococcus (GBS) type III is found worldwide as it is associated with invasive disease in non-pregnant adult in France. GBS with molecular serotype III-4 is found in non-pregnant adult in Hong Kong with the same serotype affecting the fish in the Southeast Asian region. This serotype has been reported to be the major factor causing high mortality rate of Tilapia (*Oreochromis sp.*) farming. Thus a better understanding of the specificity of the strains serotype will results in the development of improved vaccine against the local *S. agalactiae* strains infecting tilapia.

Key words: Streptococcosis, serotypes, Red Tilapia (*Oreochomis sp.*)