

Article Abstract

Title:	Inhibition ability of probiotic, <i>Lactococcus lactis</i> , against <i>A. hydrophila</i> and study of its immunostimulatory effect in tilapia (<i>Oreochromis niloticus</i>)
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Abstract:	The present study was designed to investigate the inhibition ability of probiotic, <i>Lactococcus lactis</i> RQ516, against <i>A. hydrophila in vitro</i> and its immunostimulatory effect in tilapia, <i>Oreochromis niloticus</i> as growth promoter. Six tanks were used (T-1 and control treated with and without RQ516, respectively) and three replicates per treatment. The inhibition ability assay <i>in vitro</i> showed that the minimum diameter of the inhibition zone ($P < 0.05$) was 7.43 ± 0.47 mm at 6 h and the final diameter at 24 h was 14.77 ± 1.17 mm. After 40 days, probiotic treatment as water additives significantly improved the final weight and daily weight gain (DWG) ($P < 0.05$). A significant increase ($P < 0.05$) in the total protein and globulin concentration of tilapia blood serum could be found in T-1 compared with the control. These immune responses were generally more pronounced with probiotic-treated tilapia. As for immune responses, the higher respiratory burst activity (RBA), lysozyme content (LC), myeloperoxidase (MPO) and superoxide dismutase (SOD) activities were observed in T-1 ($P < 0.05$) than the control. It indicated that probiotic <i>Lactococcus lactis</i> RQ516 was beneficial for tilapia in terms of increasing final weight, DWG and the concentrations of serum protein and globulin and enhancing immune responses.
Keywords:	Probiotic; <i>Lactococcus lactis</i> ; Tilapia; <i>Oreochromis niloticus</i> ; immune response