

Developments of lactic acid bacteria as probiotic for bacterial diseases control in aquaculture

ABSTRACT

In the recent decades, lactic acid bacteria (LAB) in aquatic organism have been one of the major interesting research subjects due to their various existence strains in fish microbiota. Moreover, LABs are sometimes abundant in the intestine of several fish species. Many recent papers indicated that several LAB strains are harmless and have been reported for beneficial effects on fish health. There was also converging evidence that led us for more research and findings regarding LAB as a promising probiotics in aquaculture. This article provides an overview of the variability of LAB in gastrointestinal (GI) tract of fish and the development of this species as probiotics. LAB was known able to colonise the gut, and has antagonistic activity against some fish pathogens. This harmless bacteriocin-producing strain may confer benefits in increasing disease resistance, improving nutrient digestibility and growth of the host animals. In addition, these strains may reduce the need of antibiotics usage in future aquaculture industry.

Keyword: Fish; Gastrointestinal microbiota; Lactic acid bacteria; Probiotic