

Garlic Extracts Stimulating Innate Immune System in Marble Goby (*Oxyeleotris marmoratus*)

Authors : Jiraporn Rojtinnakorn, Mallika Supa-Aksorn, Sudaporn Tongsiiri, Prachaub Chaibu

Abstract : Marble goby is one of high demand consuming in Southeast Asia. However, the product was from riparian fisheries because of low yield in aquaculture, especially in nursery stage. Therefore, we studied for herb supplement in pellet feed of marble goby fingerling. Garlic, a common herb and illustrated novel pharmaceutical and medical effectiveness, was considered. Garlic extracts with water (DW), 50% EtOH (50E), 95% EtOH (95E) and diethyl ether (DE) were subjected for feed additive to induce immune response in marble goby fingerling for 0 (control), 0.3, 0.5, 1.0, 3.0 and 5.0 % (w/w). After seven days of feeding, blood was collected for analysis of blood composition; i.e. haematocrit (HCT), red blood cells (RBC), white blood cells (WBC) and humoral immune responses; i.e. lysozyme activity (Lys). It was resulted that values of HCT, WBC and Lys in all garlic fed group were significantly different from control ($p < 0.05$). For HCT, the highest values belonged to 5% DW and 0.5% 95E. For WBC and Lys, the highest values were 5% DW. For RBC, there was not obviously significant ($p < 0.05$). There were only 3 groups; 0.5% 95E, 1% and 5% DW, showed distinct statistical significance from the other groups. It was concluded that garlic extracts showed satisfy bioactivity to enhancing innate immune response in marble goby fingerling. This result will be valuable for specific feed formula of marble goby nursery.

Keywords : garlic extract, innate immune, marble goby, *Oxyeleotris marmoratus*

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