

## Influence of Immunogenic Prebiotic on Biochemical Parameters of Blood Serum of SHIRBOT fish (*Tor grypus*)

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### Abstract

There are many reports about the effects of immune stimulation and growth of the immunogenic Prebiotics in fish and lack of information about its effects on SHIRBOT fish. In this study, the addition of different levels of SHIRBOT fish this material and its effect on biochemical parameters were evaluated. The 360 pieces of fish with an average weight of 35 grams randomly assigned to four treatments, they divided three replicates per treatment, and prebiotic treatments, respectively, with the fairly immunogenic concentrations of feed containing 0, .5/0, 1 and 1.5 grams immunogenic kg Hg, were fed for 84 days. At the beginning, middle and end of each treatment period, the fish were anesthetized by the anesthetic MS222, The caudal vein blood samples were taken and serum was separated after centrifugation, and biochemical parameters (glucose, triglycerides, cholesterol, urea, uric acid, Keratinize, total protein and albumin) between treatments were measured and analyzed. The results showed that the biochemical parameters (glucose, cholesterol, uric acid, urea, albumin and total protein) were significantly different between treatment group compared to controls ( $P>0.05$ ), But factors (Keratinize and triglycerides) were not significantly different between treatment group compared to controls ( $P>0.05$ ).

**Keywords:** Shirbot fish (*Barbus grypus*), Prebiotic, Immunogenic, Biochemical factors.