

Immunostimulant from Biodiversity to Enhance Shrimp Survival against Vibriosis

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Abstract : The shrimp industry has increased in the last years to the point of becoming one of the most dynamic industries. However, the appearance of diseases that significantly affect the production of shrimps has been an obstacle for the shrimp industry. We hypothesized that natural fibers from biodiversity can stimulate the immune system to prevent shrimp diseases like vibriosis. In this project, we extracted the fibers from vegetal sources in Ecuador and characterized them using common techniques like XRD, SEM, and then we tested the effect of fibers as immunostimulants for shrimps in-vitro and in-vivo using small aquarium and large pools. Our results demonstrate that vegetal fibers can significantly increase the survival of shrimps. Moreover, the production of shrimps in a large pool was significantly increased. Lastly, the test of color and taste successfully surpass the control group of shrimps not treated with fiber food supplements.

Keywords : fibers, immunostimulant, shrimp, vibriosis

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