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Effect of *Curcuma longa* on non-specific immunological profile of Indian snakehead *Channa punctatus* infected with *Aeromonas hydrophila*

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Curcumin an orange yellow phytochemical hydrophobic and polyphenolic compound of turmeric (*Curcuma longa*, Linn.) has been known to be a potent immunomodulatory agent in many animal species. The aim of our study is to evaluate the immunomodulatory properties and disease resistance against the opportunistic pathogen *Aeromonas hydrophila* in *Channa punctatus*. Fishes were challenged intraperitoneally with a dose of *Aeromonas hydrophila* (1×10^8 cells/ml). Control and Immuno-compromised fishes were given three different doses of curcumin viz., 0.5 mg, 1.0 mg and 1.5 mg/100 gm of body weight respectively. Treated fishes were sacrificed on 3rd, 5th, 7th and 10th day after the dose was given and various non specific immune parameters were assessed viz., Percentage Phagocytosis, Phagocytic index, lysozyme assay, Bactericidal activity and Superoxide anion production. All the non-specific immune parameters were enhanced significantly but the maximum enhancement was seen on the fifth day with the dose of 1.0 mg/100 gm body weight and the same dose also showed maximum disease resistance as compared to other two doses.

Biography

Seema Jain is currently working in Chaudhary Charan Singh University, India.

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