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Evaluation of Changes in Erythropoietin Hormone Levels and Renal Pathological Lesion in Epaulet Grouper (*Epinephelus stoliczkae*) in Response to Chromium

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Abstract

Biochemical, physiological and histological responses are used for contaminants detection in the environment. In this study, changes of erythropoietin and renal lesions of *Epinephelus stoliczkae* were investigated under chromium exposure in vitro. *Epinephelus stoliczkae* were exposed under three different concentrations of chromium (3.6; 7.31 and 14.6 mg/L) for 21 days and blood and kidney tissue samples were taken in days 0.5, 1, 7, 14 and 21. Two Phases of increase and decrease in erythropoietin levels were recorded in experimental samples compared with the control group ($P<0.05$). There were significant differences for chromium accumulation in kidney at all times compared with control group ($P<0.05$). Various histopathological lesions were observed in the kidney and significant differences were recorded in histopathological alternation index at all times in three different concentrations of chromium ($P<0.05$).

Keywords: *Erythropoietin, Histology, Chromium, Kidney, Epinephelus stoliczkae.*