

The disruptive effect of mercury chloride (HgCl) on gene expression of gonadotrophin hormones and testosterone level in male silver sharkminnow (*Osteochilus hasseltii* C.V.) (Teleostei: Cyprinidae) (vol 84, pg 436, 2017)

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<b>Title</b>	The disruptive effect of mercury chloride (HgCl) on gene expression of gonadotrophin hormones and testosterone level in male silver sharkminnow ( <i>Osteochilus hasseltii</i> C.V.) (Teleostei: Cyprinidae) (vol 84, pg 436, 2017)
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<b>Abstract</b>	Endocrine-disrupting compounds in water affect reproductive activities in fish. Mercury is a toxic and persistent pollutant, which bioaccumulates in the food chain. To investigate the effect of mercury chloride (HgCl) on fish reproduction, animals were kept in four aquaria containing increasing levels of HgCl (0 mg/L [control]; 0.025 mg/L [ low]; 0.05 mg/L [medium]; 0.1 mg/L [high]) for 60 days. The effects of HgCl on reproduction performance of male silver sharkminnow were evaluated by GtH-Ia, GtH-IIa and GtH-IIb gene expression, testosterone levels, and GSI levels. A significant decrease in Gonadotrophin Hormone type I sub unit alpha (GtH-Ia), Gonadotrophin Hormone type II sub unit alpha (GtH-IIa) and Gonadotrophin Hormone type II sub unit beta (GtH-IIb) gene expression, testosterone levels, and Gonado Somatic Index (GSI) levels was detected in fish receiving the high mercury dose compared to controls after 2, 4, 6 and 8 weeks ( $P < 0.05$ ). After 4, 6 and 8 weeks, all treatment groups had significantly lower GtH-Ia, GtH-IIa and GtH-IIb gene expression, testosterone levels and GSI levels compared to the control group ( $P < 0.05$ ). These findings demonstrate a disruptive role of mercury on reproductive performance in male silver sharkminnow.
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