Induction of apoptosis and DNA damage by 4-nonylphenol in African catfish (Clarias gariepinus) and the antioxidant role of Cydonia oblonga

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Abstract:

In this study, we assessed the toxic effects of sub lethal concentration (0.1 mg l[1]) 4-nonylphenol (4-NP) on serum biochemical parameters, liver lipid peroxidation (LPO) and antioxidant enzymes of the African catfish Clarias gariepinus for 14 days and the ability of the quince leaf extract to alleviate the effects of (4-NP). Fish were categorized into four groups: control, exposure to 0.1 mg l[1] 4-NP, exposure to 0.1 mg l[1] 4-NP with quince leaf extract (10 ml/30 L water), and exposure to 0.1 mg l[1] 4-NP with quince leaf extract (20 ml/30 L water). 4-NP exposure induced a significant (p

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