



Cytotoxic and hemotoxic effects of silver nanoparticles on the African Catfish, *Clarias gariepinus* (Burchell, 1822)

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Abstract:

The present study investigates the hemotoxic and cytotoxic impacts of two acute doses of silver nanoparticles (AgNPs) on the African catfish, *Clarias gariepinus* in comparison to the impact of AgNO₃ and the control fish. AgNPs-induced impacts were recorded on some biological and hematological indices of that species on the bases of their size (20 and 40 nm) and concentration (10 and 100 µg) but no significant interaction. AgNO₃ had very low impact on these indices in comparison to AgNPs. Recovery period for 15 days was found to be valid to remove AgNPs and AgNO₃ toxicity for most indices. The condition factor exhibited stability under stress whereas the hepatosomatic index was more sensitive to AgNPs. The AgNPs-induced hematological changes recorded were corresponding with different blood cell alterations which increased in frequency from the control and AgNO₃ to 40 nm/100 µg; such blood cell alterations disappeared to great extent after recovery period of 15-days in a reverse order

Keywords:

AgNPs *Clarias gariepinus* Hematology Cytotoxicity

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