4-Nonylphenol induced morphological and histopathological malformations in Bufo regularis tadpoles

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Abstract:

Global decline in frog populations is thought to indicate environmental damage caused by human activity. Pollution especially chemicals are found to contaminate aquatic ecosystems and their animals including fish and amphibians during their adult life and sensitive stages of development. Nonylphenol ethoxylate (NPE) is one of the most dangerous chemicals that are recorded in aquatic environments, bacterial degradation of nonylphenol ethoxylates produces more toxic nonylphenol (NP) which is estrogenic both on vitro and vivo assays. In present work, the exposure of embryos of Egyptian toad Bufo regularis to different sublethal doses of 4-nonylphenol (1.5, 2.5, and 3.5 gl-1) resulted in mortality rate increase and as a result some morphological malformations with histopathological changes in some organs were revealed. This study indicated the destructive effects of 4-Nonylphenol on the tadpoles of Egyptian toad.

Keywords:

4-Nonylphenol; malformations; histopathology, tadpoles; Bufo regularis

Published In:

Global Advanced Research Journal of Environmental Science and Toxicology , 6(1) , 143-151