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MONOCROTOPHOS INDUCED NEUROTOXIC AND GENOTOXIC EFFECTS ON BRAIN AND LIVER TISSUES OF *RATTUS NORVEGICUS*

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ABSTRACT : Monocrotophos (MCP) is a widely used organophosphorus pesticide which controls a wide spectrum of chewing, sucking and boring insects. The aim of this study was to evaluate neurotoxicity and genotoxicity of Monocrotophos on rats. The acetylcholinesterase activity was measured in both brain and liver as a biomarker of toxicity. The results show that it is highly toxic cholinesterase inhibiting pesticides. Comet assay study was used to assess the possibility of monocrotophos induction of DNA damage where the increase in comet tail length relates to the extent of DNA single strand breaks. The results also indicated that exposure to Monocrotophos is associated with increased DNA damage.

Key words: Monocrotophos, acetylcholinesterase, Comet assay, DNA damage, *Rattus norvegicus*.