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BIOLOGICAL STUDIES AND ANTIOXIDANT ACTIVITY OF MORINGA OLEIFERA LEAVES

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ABSTRACT

The present study aimed to evaluate the antioxidant activities and effects on lysosomal enzymes by the ethanolic extract of *Moringa oleifera* (leaves) *In-vitro*. The antioxidant activity was determined by using hydroxyl radical scavenging (OH•), Ferric reducing antioxidant power (FRAP), Total antioxidant capacity (TAC), The total Phenolic (TP); total Flavonoids (TF) and total soluble protein (TSP) contents were determined. The effect on lysosomal enzymes by two doses of extract and *Rutin hydrate* (as standard) on the four marker lysosomal enzymatic activities: Acid phosphatase "ACP"; β -galactosidase " β -GAL"; β -N-acetyl glucosaminidase " β -NAG", and β -Glucuronidase " β -GLU" as compared to control group after 60 and 120 minutes of incubation in rat liver were investigated. The results showed that the most potent inhibitory effect was observed for *Moringa oleifera* (leaves) as compared to *Rutin hydrate*, these inhibitory effects were dose- and enzyme type-dependent. *It was concluded that*, the ethanolic extract of *Moringa oleifera* (leaves) have potent antioxidant and effects on lysosomal enzymes.

Key words: antioxidant activity, FRAP, lysosomal enzymes, *Moringa oleifera*, OH content, TAC, total phenolic, total flavonoids, total soluble protein.