

## Extracts of *Ocimum gratissimum* Leaves Inhibits Fe<sup>2+</sup> and Sodium Nitroprusside Induced Oxidative Stress in Rat Liver

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**Abstract :** This study seeks to investigate the antioxidative properties and the ability of aqueous, ethanolic and ethyl acetate extracts from *Ocimum gratissimum* (OG) leaves to inhibit some pro-oxidants (Fe<sup>2+</sup> and sodium nitroprusside) induced lipid peroxidation in rat's liver homogenates in vitro. The ability of the extracts to inhibit 25 µM FeSO<sub>4</sub> and 7.0 µM sodium nitroprusside induced lipid peroxidation in isolated rat's liver was determined. The results of the study revealed that both pro-oxidants caused a significantly decrease in ( $p < 0.05$ ) accumulation of lipid peroxides. However, aqueous extract of OG shows a high ability to inhibit lipid production in the liver induced with SNP than Fe<sup>2+</sup>. Ethanolic and ethyl acetate extract of OG which shows a high ability to inhibit lipid production more when induced with Fe<sup>2+</sup> than SNP. However, ethyl acetate fraction of OG shows a higher inhibitory effect on both Fe<sup>2+</sup> and SNP induced lipid peroxidation in rat's liver. This applies to its significantly higher extractable phytochemicals. Therefore, Fe II and sodium nitroprusside induced oxidative stress could be managed by dietary intake of *Ocimum gratissimum* leaves.

**Keywords :** antioxidative, pro-oxidants, lipid peroxidation, *Ocimum gratissimum*

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