

## Blood Lipid Profile and Liver Lipid Peroxidation in Normal Rat Fed with Different Concentrations of *Acacia senegal* and *Acacia seyal*

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**Abstract :** The aim of the present study was to evaluate the blood lipid profile and liver lipid peroxidation in normal rat fed with different concentrations of *Acacia senegal* and *Acacia seyal*. Thirty six Sprague Dawley male rats each weighing between 180-200g were randomly divided into two groups. Each group contains eighteen rats and were divided into three groups of 6 rats per group. The rats were fed *ad libitum* with commercial rat's feed and tap water containing different concentrations of *Acacia senegal* and *Acacia seyal* (3% and 6%) for 4 weeks. The results at 4 weeks showed that there was no significant difference ( $p \leq 0.05$ ) in the total cholesterol (TC) and triglycerides (TG) between the control group and treated groups while the results for the high density lipoprotein (HDL-C) showed a significant decrease ( $P \geq 0.05$ ) at the 3% and 6% of gum arabic treated groups compared to control group. There was a significant increase ( $P \geq 0.05$ ) in low density lipoprotein (LDL-C) with 3% and 6% of gum Arabic (GA) groups compared to the control group. The study indicated that there was no significant ( $p \leq 0.05$ ) effect on TC and TG but there was significant effect ( $P \geq 0.05$ ) on HDL-C and LDL-C in blood lipid profile of normal rat. The results showed that after 4 weeks of treatment the malondialdehyde (MDA) value in rat fed with 6% of *A. seyal* group was significantly higher ( $P \geq 0.05$ ) than control or other treated groups of *A. seyal* and *A. senegal* studied. Thus, the two species of gum arabic did not have beneficial effect on blood lipid profile and lipid peroxidation.

**Keywords :** *Acacia senegal*, *Acacia seyal*, lipid profile, lipid peroxidation, malondialdehyde (MDA)

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