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Department of Biochemistry and Chemistry of Nutrition

Biochemical studies on some natural hypolipidemic agents in rats

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Abstract

Fats are important constituent of any diet and play an important role in both health and disease. Excessive consumption of fats in diet, especially those derived from animals sources, elevates of blood triacylglycerol and cholesterol, which is then responsible for fatty liver, atherosclerosis and other related disorders. The present work has been planned to investigate the role of *Morus alba* extract and *Cinnamon zeylanicum* bark extract against non-alcoholic fatty liver disease induced by mutton fat. The experimental design was divided into two phases (induction phase and treatment phase). The first phase (induction Period) induction of non-alcoholic fatty liver disease in rats by feeding mutton fat. In this phase rats resulting a significant elevation of body weight, Total cholesterol, TAG, HDL and LDL with marked changes in the levels of ALT, AST aminotransferases activities. The second phase (treatment period) the groups of rats maintained on high-fat diet with administration of *Morus alba* extract (1000 mg/kg b.wt) and *Cinnamon* bark extract (200 mg/kg b.wt).

The obtained result revealed that, lipid peroxidation is resulting from lipid accumulation and oxidative stress, in the current study HFD group showed a disturbance in lipid peroxidation (MAD) and antioxidant potentials (GSH, GSH-PX and SOD). The result showed significant improvement in *Morus alba* group and *Cinnamon* group of the examined biochemical parameters especially by *Morus alba* leaf extract.

Key Words: *Morus alba*, *Cinnamon zeylanicum*, mutton fat, non-alcoholic fatty liver.

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