

PLASMA LIPID PROFILES OF RATS FED SEED OILS OF MORINGA PEREGRINA AND SALICORNIA

Abdullah A. Ai-Othman, Hassan A. Al-Kahtani
Fawzy M. Hewedy and Abdulrahman S. AJ-Khaiifa.

Abstract: The present study was designed to examine the effect of two new oils extracted from *Moringa peregrina* and *Salicornia (bigelovii)* seeds on growth performance and plasma lipid profiles of rats. Growing male Wistar rats were fed purified diets containing 7% added dietary fat (Corn oil, CO or *M.peregrina* oil, MO or *Saiicornia* oil, SO or butter fat, BF). Diets were fed for 5 weeks. Final body weight and weight gain showed no significant differences ($P<0.05$) between the dietary treatments. Plasma triglyceride (TG) concentration did not differ between groups fed the diets containing MO and SO. Rats fed diets containing CO, MO and SO had significantly lower ($P<0.05$) total cholesterol (TC) content in plasma (85.77, 67.00 and 83.39 mg/dL, respectively) compared to those fed the BF diet (120.33 mg/dL). The high density lipoprotein cholesterol (HDL-C) concentrations were comparable in the rats that consumed CO and SO and were higher than that in rats consuming MO. The level of plasma low density lipoprotein cholesterol (LDL-C) ranged from 23.74 ± 3.96 to 56.44 ± 1.96 mg/dL. The proportion of (LDL-C) was significantly lower ($P<0.05$) in rats fed CO, MO or SO diets (32.99, 23.74 and 32.06 mg/dL, respectively) compared with those fed the BF diet (56.44 mg/dL). The concentration of the TC in the liver of CO, MO, SO and BF groups was found to be 1.04 ± 0.05 ; 0.76 ± 0.02 ; 0.55 ± 0.03 and 1.86 ± 0.05 mg/g tissue respectively.

Key Words: Seeds oil, *Moringa peregrina*, *Saiicornia*, Cholesterol, Lipids.