
Abstract
This work focused on the effect of maca on lipid, anti-oxidative, and glucose parameters in hereditary hypertriglyceridemic (HHTg) rat. Maca (1%) was administered to rats as a part of a high-sucrose diet (HSD) for 2 weeks. Rosiglitazone (0.02%) was used as a positive control. Maca significantly decreased the levels of VLDL (very low density lipoproteins), LDL (low density lipoproteins), and total cholesterol, and also the level of TAG (triacylglycerols) in the plasma, VLDL, and liver. Maca, as well as rosiglitazone, significantly improved glucose tolerance, as the decrease of AUC (area under the curve) of glucose showed, and lowered levels of glucose in blood. The activity of SOD (superoxide dismutase) in the liver, the GPX (glutathione peroxidase) in the blood, and the level of GSH (glutathione) in liver increased in all cases significantly. Results demonstrate that maca seems to be promising for a positive influence on chronic human diseases (characterized by atherogenous lipoprotein profile, aggravated antioxidative status, and impaired glucose tolerance), and their prevention.