

ABSTRACT

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Title of diploma thesis: Cytokine estimation in liver homogenate supernatant in rats with liver steatosis

The aim of this work was the determination of cytokines - interleukin 6, tumor necrosis factor-alpha and leptin levels in liver homogenate supernatant in rats with hepatic steatosis. These tests were performed within extensive experimental work intended on the ability of liver regeneration after induction of steatosis. The determination was performed using enzyme-linked immunosorbent assay. The results were compared with cytokine concentrations of Wistar and PHHP control groups, who were fed a standard laboratory diet.

The concentrations of IL-6, leptin and TNF-alpha in liver tissue supernatant were higher in the control group of Wistar rats than in PHHP rats control group. Receiving steatosis diets led to a decrease in IL-6 for all rat files. Leptin concentrations were significant lower in Wistar rats than Wistar rats controls were. Orotic acid administration statistically significant increased leptin level in rats PHHP. The consumption of diets causing steatosis reduced TNF-alpha concentrations in liver tissue for both types of rats, especially in PHHP rats.

Determination in homogenate of liver tissue is not usual. Presumption that cytokines in liver homogenate supernatant in rats with liver steatosis will be in sufficient concentrations, was also confirmed, the obtained values were in calibration ranges.