FREEZE-DRIED JABOTICABA PEEL INCREASED THE LEVEL OF PLASMA ANTIOXIDANT ENZYMES IN OBESE RATS

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The anthocyanins, present in jaboticaba peel, have a potent antioxidant capacity. The aim of this study was to verify the effect of freeze-dried jaboticaba peel (FJP) addition in high-fat diets on the enzymatic antioxidant activity in plasma of rats. For 70 days, 35 weaned Sprague Dawley rats, divided in 5 groups of 7 animals each, received the following diets: Normal (N) - AIN93-G diet; High-fat (HF) - AIN93-G diet with 35% of lipids, (31% lard and 4% soybean oil) ; HJ1 - HF diet + 1% FJP ; HJ2 - HF diet + 2% FJP; HJ4 - HF diet + 4% FJP. The jaboticaba treated groups were fed HF diet for 28 days and FJP diets after this period. The animals were fasted for 12 hours and decapitated. The blood was collected to obtain plasma. Plasma levels of total glutathione (GSH), glutathione reductase (GSH-Rd), glutathione peroxidase (GSH-Px), catalase (CAT) and superoxide dismutase (SOD) were determined by ELISA kit. The results were submitted to ANOVA and Tukey's test, with significance level of 0.05. There was no significant change in GSH and GSH-Px. CAT levels were higher in HJ2 (82%), GSH-Rd (61%) and SOD (43%) had the highest levels in group HJ4 and tended to show this same result in HJ2 group compared to the CH group. Thus, the consumption of 2 to 4% of FJP increased significantly plasma levels of the enzymes with antioxidant activity in animals. FJP is a Brazilian ingredient that could be more extensively used to promote health.