

Conclusions: Our data show that increased levels of Ang-(1-7) induces a reduction in body weight and adiposity, by inhibiting lipid accumulation processes, which could represent an attractive therapeutic tool for management of obesity and related disorders.

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24. Pterostilbene Reduces Fat Deposition in Liver and Epididymal Adipose Tissue of Obese Rats **(Carolina Campos Lima Moreira)**

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Objective: Obesity is a chronic disease associated with disorders like insulin resistance, diabetes, nonalcoholic fatty liver disease (NAFLD) and dyslipidemias. Our aim was to investigate the role of pterostilbene, a phytoalexin found in blueberries and grapes, in the metabolism of a rodent obesity model.

Methods: The obesity was induced by subcutaneous injection of monosodium glutamate (MSG) during the first ten days of life. At 70 days of age, control (C) and MSG (M) animals were divided into groups that received by gavage pterostilbene (P) (40 mg.kg⁻¹.day⁻¹) or vehicle (V) during 20 days. P<0.05 was considered statistically significant.

Results: The results showed increase in the Lee index and in the weight of epididymal adipose tissue in MSG group (MV) compared to control (CV). Treatment of obese rats with pterostilbene (MP) decreased these parameters compared to MV. Serum triacylglycerols (TAG) levels increased in MV group when compared to CV and pterostilbene in obese rats decreased these parameters compared to MV. Regarding epididymal adipose tissue, the results showed that the obese group treated with vehicle presented increased lipogenic activity, lipoprotein lipase activity and adipocyte area. The treatment of the obese group with pterostilbene reduced lipogenic activity (29%), lipoprotein lipase activity (22%) and adipocyte area. Regarding liver, there was a marked increase in the percentage of lipid deposition in the MV group compared to CV and reduction (82%) in the MP group compared to MV. It was observed a decrease in TAG-hydrolytic activity in the MV (31%) compared to CV and an increase in the MP (27%) compared to MV.

Conclusions: Our data clearly established that the treatment of obese rats with pterostilbene has beneficial effects on the reduction of obesity and NAFLD.

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