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Título	Guarana (<i>Paullinia cupana</i>) Stimulates Mitochondrial Biogenesis in Mice Fed High-Fat Diet
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Resumo	<p>The aim of this study was to evaluate the effects of guarana on mitochondrial biogenesis in a high-fat diet (HFD)-fed mice. C57BL6J mice were divided in two groups: high-fat diet HFD and high-fat diet + guarana (HFD-GUA). Both groups received HFD and water ad libitum and the HFD-GUA group also received a daily gavage of guarana (1 g/kg weight). Body weight and food intake was measured weekly. Glycemic, triglyceride, and cholesterol levels were determined. VO₂ and energy expenditure (EE) were determined by indirect calorimetry. Gene expression was evaluated by real-time PCR and protein content by western blotting. The HFD-GUA group presented lower body weight, subcutaneous, retroperitoneal, visceral, and epididymal adipose tissue depots, and glycemic and triglyceride levels, with no change in food intake and cholesterol levels. Furthermore, the HFD-GUA group presented an increase in VO₂ and basal energy expenditure (EE), as well as <i>Pgc1α</i>, <i>Creb1</i>, <i>Ampka1</i>, <i>Nrf1</i>, <i>Nrf2</i>, and <i>Sirt1</i> expression in the muscle and brown adipose tissue. In addition, the HFD-GUA group presented an increase in mtDNA (mitochondrial deoxyribonucleic acid) content in the muscle when compared to the HFD group. Thus, our data showed that guarana leads to an increase in energetic metabolism and stimulates mitochondrial biogenesis, contributing to control of weight gain, even when associated with high-fat diet.</p>
Fomento	