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Título	The effect of Guarana (<i>Paullinia cupana</i>) on metabolic and inflammatory parameters in adult male mice programmed by maternal obesity
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Resumo	<p>Purpose: Maternal obesity can program the offspring, increasing the risk of overweight and obesity in adult life. Guarana (<i>Paullinia cupana</i>) is a Brazilian plant that has weight-reducing effects. Thus, this study aimed to evaluate the effects of Guarana on metabolic and inflammatory parameters in mice programmed by maternal obesity.</p> <p>Methods: Swiss female mice were divided into two groups: control and high fat (HF), who received a standard diet or a high-fat diet (HFD), respectively, for 8 weeks prior to mating, gestation, and lactation. After post-natal day (PN) 21, the offspring of the HF group were subdivided into three groups: HF without treatment; HF early treatment, offspring treated with Guarana (1 g/kg bodyweight) in PN25–PN30; HF late treatment, offspring treated with Guarana (1 g/kg bodyweight) in PN65–PN75. Basal energy expenditure, the lipid profile and fasting glucose levels were determined. Body composition was evaluated by dissecting adipose tissue depots. Gene expression was analyzed using real-time PCR.</p> <p>Results: During mating, the weight of HF females increased; after lactation, their adipose tissue depots and fasting glycemic levels also increased. The offspring of the HF group showed an increased body weight at PN21. At PN80, in the mice treated with Guarana (with both treatments), VO₂ and energy expenditure increased, adipose tissue depots decreased, and the expression of leptin, IL-6, TNF-α, and MCP-1 decreased compared with that in the HF group.</p> <p>Conclusions: Guarana treatment at both stages of life reversed some of the alterations developed by the offspring of HF animals in adult life.</p>
Fomento	