**Goji Berry juice has pro-oxidant effects in subchronic toxicological tests in rats**

RODRIGUES, Cristiane de Freitas\*¹, BOLDORI, Jean Ramos¹, MUNIEWEG, Felix Roman¹, SOARES,Marcell Valandro², DENARDIN, Cristiane Casagrande¹

¹Federal University of Pampa (Unipampa), Uruguaiana/RS, Brazil; ²Federal University of Santa Maria/RS, Brazil

\*Doctoral student - cristianedfr@gmail.com

Goji Berry consumption is related to several beneficial health effects, but very little is known about its possible toxicological and pro-oxidant effects. Therefore, the aim of this study was to evaluate the subchronic oral toxicity of Goji Berry juice (GBJ) for 28 days in female Wistar rats (OECD 407). GBJ was prepared by grinding the dehydrated fruit in a blender with filtered water and then passing it through a sieve. The content of total phenolic compounds was evaluated by the *Folin* method (μg equivalent of gallic acid/mL juice - μg EAG/mL). We used 40 female Wistar rats, with 90 days old, divided into four groups of 10 animals. The control group received oral saline solution 1mL/100g of animal and the treatments received doses of 1.89; 5.68 and 11.36 μg EAG/g of animal for 28 days. The protocol used was approved by the animal ethics committee of the Unipampa University at number CEUA 043/2018. The results demonstrate that juice does not alter body weight and food intake of animals. In relation to the biochemical analysis of the blood, an increase in the levels of AST and ALT was observed in animals treated with GBJ, as well as an increase in the generation of reactive species in the liver, promoting an imbalance in the antioxidant defenses. This oxidative damage generated by the consumption of GBJ was observed in the kidneys by an increase in lipid peroxidation and in the concentration of 11.36 µg EAG/g and an increase in protein carbonylation in all GBJ concentrations. Thus, we can suggest that GBJ, at the concentrations tested in this study, has pro-oxidant effects. Histological evaluations of the kidneys evidenced an increase in the diameter of the Bowman's capsule and the bowman's space. We concluded that GBJ has pro-oxidant effects and its use as a supplement may lead to a high level of oxidative stress and unbalance of antioxidant defenses.

**Keywords**: pro-oxidant; food supplement; oxidative stress

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