

Histomorphological and metabolic effects of *Caralluma fimbriata* in female rats

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Caralluma fimbriata (Apocynaceae) is mainly employed as nutritional supplement to reduce body weight (Dutt et al, 2012) due to the presence of pregnane glycosides, also contained in other plants, all used as “natural” slimming essences. Nowadays, there is only few scientific evidence over the efficacy and safety of *C. fimbriata*. (Odendaal et al, 2013) The aim of this study is to investigate the effects of a standardized extract of *C. fimbriata* (Slimaluma ®) for a prolonged treatment (58 days). 18 normal weight female Wistar rats were randomly assigned to a control and a *C. fimbriata* treated groups. Animal body weight, food and water consumption were recorded three times a week. Blood, liver, intestine and brain (hypothalamus and cerebral cortex) samples were collected and used for clinical chemical tests, histomorphological and ultrastructural investigations and also immunohistochemical evaluation of NPY expression. The results have not highlighted any significant effect in control and treated rats on body weight, haematic and metabolic parameters (insulin, glycaemia, HOMA-IR, AST, ALT, GGT, ALP, LDH, HDL, total cholesterol, triglycerides, amylase, lipase, total proteins), liver and gut structure and ultrastructure. A significant increase in food and water consumption was found in treated rats without any increase of animal body weight; moreover an increase of NPY was found in the cerebral cortex and hypothalamic arcuate nucleus. The *C. fimbriata* administration seems related to a modified distribution of NPY, as orexigenic neuromediator, in CNS.

References

- [1] Dutt et al. (2012): Pharmacological review of *Caralluma R.Br.* with special reference to appetite suppression and anti-obesity. *J Med Food*. 2012 Feb;15(2):108-19.
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