

B165 Anti-stress activity of *Lepidium peruvianum* ChaconM.P. Gómez-Serranillos^a, A. López-Fando^a, I. Iglesias^a, O.R. Lock^b, U.P. Upamayta^b and M.E. Carretero^a^a Dept. de Farmacología, Facultad de Farmacia UCM. Ciudad Universitaria s/n, 28040- Madrid, Spain. ^b Dept. de Ciencias. Pontificia Universidad Católica de Perú. Lima, Peru.

The *Lepidium peruvianum* (Maca) root has been traditionally utilized by Peruvian natives, since the Inca period, for both nutritional and ethnical medicinal purposes as an adaptogen and to enhance human and animal fertility. The aim of the present research was designed to evaluate the anti-stress activity of the methanolic extract of *L. peruvianum* roots (125 and 250 mg/kg, i.p. route) in Swiss mice using a diverse spectrum of stress-induced paradigms (determination of free fatty acids, corticosterone, glucose levels and adrenal glands weigh), gastric ulcer and forced swimming test (1-2). The drug is capable of attenuating or even eliminating variations in homeostasis produced by stress in the studied parameters (Figure 1). Reduction of glucose levels was observed too. The extract decreased the stress-induced ulcers (between 78 and 87 %) and a significant positive result has been observed in the forced-swimming test.

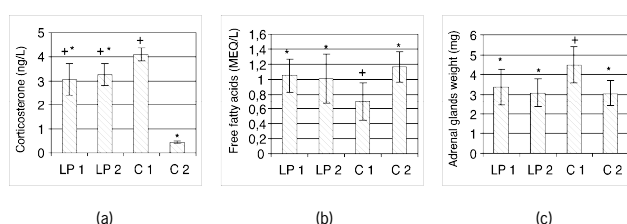


Figure 1. a) Plasma corticosterone, b) plasma free fatty acids, c) adrenal glands weight. Dose: LP 125 (LP 1), LP 250 (LP 2); Stressed control (C 1) and non-stressed control (C 2). *P<0.05 vs C 1; +P<0.05 vs C 2

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B166 Neuropharmacological activity of *Byrsonima crassifolia* (L.) KunthM.C. Fernández^a, M.P. Gómez-Serranillos^a, I. Iglesias^a, A. Cáceres^b and A. Villar^a^a Pharmacology Department of Pharmacy, UCM, Madrid, Spain. ^b Faculty of Chemical Science, University of San Carlos, Guatemala.

The bark of *Byrsonima crassifolia* (L.) Kunth has been traditionally used in South America for the treatment of digestive system disease (1) and in the treatment of dermatophytic infections (2); antifungal activity has been demonstrated (3).

Grossly observable behavioural effects after i.p. injection of the test material including autonomic, neurological and toxic reactions were observed and quantified as described by Irwin (4). The Central Nervous System (CNS) was evaluated by performing assays of its effects on spontaneous motor activity, exploratory conduct (hole-board test), body temperature (as rectal temperature) and sodium pentobarbital-induced hypnosis.

Pharmacological studies have been conducted with the dichloromethanic and hydroalcoholic extracts of *Byrsonima crassifolia* (L.) Kunth (1.25 and 0.46 g dried plant/kg weight respectively) to evaluate their effects on the CNS. The observations suggest that the hydroalcoholic extract of *B. crassifolia* produces alteration on the CNS, particularly in the general behaviour patterns; a significant reduction of spontaneous motility (60.9 % at 90 min); decrease in normal body temperature (2.54 °C at 90 min) and in the exploratory conduct in the animals (97.1 % at 90 min) and a decreasing effect on motor coordination (93.4 % at 90 min). The dichloromethane extract did not produce activity on the CNS.

All of the above findings suggest the extract produces potent effects in CNS (depressant action) especially in the case of hydroalcoholic extract.

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