PubMed ▾

Display Settings:▽ Abstract

Rhodiola rosea L. extract reduces stress- and CRF-induced anorexia in rats.

Mattioli L, Perfumi M.

Department of Experimental Medicine and Public Health, University of Camerino, Camerino, Italy.

Abstract

Rhodiola rosea L. is one of the most popular adaptogen and anti-stress plants in European and Asiatic traditional medicine. Its pharmacological properties appear to depend on its ability to modulate the activation of several components of the complex stress-response system. Exposure to both physical and psychological stress reduces feeding in rodents. The aim of this work was thus to determine whether in rats an hydroalcoholic R. **rosea** extract standardized in 3% rosavin and 1% salidroside (RHO) reverses hypophagia induced by (1) physical stress due to 60 min immobilization; (2) intracerebroventricular injection of corticotrophin-releasing factor (CRF, 0.2 microg/rat), the major mediator of stress responses in mammals; (3) intraperitoneal injection of Escherichia coli Lipopolysaccharide (LPS, 100 microg/kg); (4) intraperitoneal administration of fluoxetine (FLU, 8 mg/kg). The effect of the same doses of the plant extract was also tested in freely-feeding and in 20 h food-deprived rats. RHO was administered acutely by gavage to male Wistar rats 1 h before the experiments. The results show that at 15 and 20 mg/kg, RHO reversed the anorectic effects induced both by immobilization and by intracerebroventricular CRF injection. Moreover, at the same doses, RHO failed to reduce the anorectic effect induced both by LPS and FLU, and did not modify food intake in both freely-feeding and food-deprived rats. These findings strongly demonstrated that RHO is able selectively to attenuate stress-induced anorexia, providing functional evidence of claimed adaptogen and anti-stress properties of **Rhodiola rosea** L.

MeSH Terms, Substances

LinkOut - more resources