

Antifatigue Studies of *Panax ginseng* and *Panax quinquefolius*

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Panax ginseng has been reported to have antifatigue activity. The antifatigue activity of *P. quinquefolius* has not been studied previously. The present study investigated the antifatigue effect of *P. quinquefolius*; *P. ginseng* was studied in parallel for comparison. The antifatigue activity of water and 1-butanol extracts of both *P. ginseng* and *P. quinquefolius* were evaluated in rats using Omni-Stress Modified Activity Wheel, Model XP (Omnitech Electronics, Inc.; Columbus, Ohio). At a dose of 400 mg/kg, water extracts of both species were found to have antifatigue activity similar to that of 10 mg/kg caffeine; 1-butanol extracts of both species

were found inactive. The antistress effect of ginseng was demonstrated during the treadmill antifatigue experiments by virtue of a decreased fecal boli count for rats receiving ginseng. Further studies showed that the decrease in fecal boli was not due to an anticholinergic effect of the ginseng. The antifatigue-active water extracts and caffeine were tested further on rats using locomotor activity cages. No CNS stimulating effects were observed with the former. Thus, ginseng water extracts exhibit an antifatigue effect; unlike caffeine, however, they do not appear to produce CNS stimulation.