



## Antinociceptive and antiinflammatory effects of *Teucrium hyrcanicum* aqueous extract in male mice and rats

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### Abstract

**Introduction:** The aim of this study was to investigate the antinociceptive and antiinflammatory effects of *Teucrium hyrcanicum* aqueous extract in male mice and rats.

**Methods:** To assess the antiinflammatory effect, we used carrageenan- and dextran-induced paw oedema and for determination of the antinociceptive effect, acetic acid-induced writhing, tail flick and formalin pain tests were used.

**Results:** The extract of *T. hyrcanicum* (50–200 mg/kg) and acetylsalicylic acid (100 mg/kg) produced a significant inhibition of the second phase response in the formalin pain model ( $P < 0.01$ ), while only the high dose of the extract (200 mg/kg) showed an analgesic effect in the first phase. The extract also inhibited acetic acid-induced abdominal writhes in a dose-dependent manner. The tail flick latency was dose dependently enhanced by the extract but this was significantly lower than that produced by morphine 10 mg/kg ( $P < 0.05$ ). The extract (25–250 mg/kg) administered 1 h before carrageenan-induced paw swelling produced a dose dependent inhibition of the oedema. No effect was observed with the dextran-induced oedema model.

**Conclusion:** The obtained data suggest antiinflammatory and analgesic effects for the aqueous extract of *Teucrium hyrcanicum*, which may be mediated via both peripheral and central mechanisms. The presence of alkaloids, flavonoids and triterpenoids might be responsible for the antiinflammatory activity of this plant.

**Key words:** *Teucrium hyrcanicum*, Antinociceptive, Anti-inflammatory, Writhing test, Formalin test, Tail flick.

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