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In vivo anxiolytic and in vitro anti-inflammatory activities of water-soluble extract (WSE) of Nigella sativa (L.) seeds

(Article in press)

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Abstract

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The WSE is a highly polar, gummy and mucilaginous bioactive content of the Nigella sativa (L.) seeds. This study reports the anxiolytic and anti-inflammatory effects of WSE investigated using Elevated Plus Maze (EPM) and Hole-Board Test (HBT) in adult mice and human RBCs haemolysis inhibition and protein denaturation respectively. The oral WSE treatment (100 & 200 mg/kg b.w/day) for 72 hours has exhibited slightly better anxiolytic effect ($p < 0.05$) through the time span (92.33 & 93.33 s) spent in the opened arms of EPM vs. diazepam (1 mg/kg b.w i.p/day; 69.33 s). In HBT, only WSE (200 mg/kg b.w/day) has shown a promising number of mean head pokes (13.27 times/min) vs. diazepam (12.87 times/min). The WSE (62.5-500 µg/mL) exposure has exhibited 40.14-72.18% protection against lysis of RBCs vs. aspirin (57.04-71.48%) whilst 62.67-67.66% inhibition of protein denaturation vs. diclofenac sodium (43.11-80.64%). The current findings suggested WSE has promising anxiolytic and anti-inflammatory activities. © 2019, © 2019 Informa UK Limited, trading as Taylor & Francis Group.

SciVal Topic Prominence

Topic: Nigella sativa | Seeds | Thymoquinone TQ

Prominence percentile: 97.393

Chemistry database information

Substances

extract of Nigella sativa (L.), seeds

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