

Analgesic, Toxicity and Anti-Pyretic Activities of Methanolic Extract from Hyoscyamus albus Leaves in Albinos Rats

Authors : Yahia Massinissa, Henhouda Affaf, Yahia Mouloud

Abstract : The aim of this study was to investigate the toxicity; analgesic and anti-pyretic properties of standardized HA methanolic extract (HAmEOH) in vivo. The acute toxicity study was performed on rats while adopting the OECD-420 Guidelines (fixed dose procedure). Assessment of analgesic activity was performed in rats with two analgesic models. One was acetic acid induced writhing response and the other formalin-induced paw licking. The anti-pyretic effect was tested by brewer's yeast induced fever in rats. For the acute toxicity test, the higher dose administration of 2000 mg/kg bw. of Hyoscyamus albus did not produce any toxic signs or deaths in rats. There were no significant differences ($p>0.05$) in the body and organ weights between control and treated groups. The (LD50) of Hyoscyamus albus was higher than 2000 g/kg bw. In subacute toxicity study, no mortality and toxic signs were observed with the doses of 100 and 200 mg/kg bw. of extracts of for 28 consecutive days. These analgesic experimental results indicated that HAmEOH (100 mg/kg and 200 mg/kg) decreased the acetic acid-induced writhing responses and HAmEOH (100 mg/kg and 200 mg/kg) decreased the licking time in the second phase of the formalin test. Moreover, in the model of yeast induced elevation of the body temperature HAmEOH showed dose-dependent lowering of the body temperature up to 3h at both the doses these results obtained, were comparable to that of paracetamol. The present findings indicate that the leaves of Hyoscyamus albus L. possess potent analgesic and antipyretic activity.

Keywords : Hyoscyamus albus, methanolic extract, toxicity, analgesic activity, antipyretic activity, formalin test

Conference Title : ICBCELS 2014 : International Conference on Biotechnology, Chemical Engineering and Life Science

Conference Location : Barcelona, Spain

Conference Dates : August 18-19, 2014