Abstract

Geraniol (GR) is an acyclic monoterpene alcohol present in essential oils of aromatic plant species used in Brazilian folk medicine for the treatment of epilepsy. The present study was designed to evaluate the anticonvulsant effect of GR and of the inclusion complex geraniol: β-cyclodextrin (GR: β-CD). Mice were treated with GR or with GR: β-CD (50, 100 and 200 mg/kg) 30 min before pentylenetetrazole (PTZ) or strychnine (STN). GR at 200 mg/kg and GR: β-CD at the doses of 100 and 200 mg/kg significantly increased the latency for the first PTZ-induced convulsion and reduced the percentage of animals that convulsed. The pretreatment of flumazenil did not revert the anticonvulsant effect of GR in the PTZ-induced convulsion model. In the STN-induced convulsion model, the effects of GR were investigated and no difference was found against control. The results demonstrated an anticonvulsant activity of GR in the PTZ-model, which was potentiated by the complexation with β-CD.

Keywords
Epilepsy, Monoterpene, Pentylenetetrazole, Neuroprotective effect.