**ABSTRACT**

**Background:** To evaluate the anxiolytic and antiepileptic effects of Asafoetida oleogum resin.

**Materials and methods:** Swiss albino mice were grouped and treated with either distilled water or diazepam (3 mg/kg p.o.) as standard or Asafoetida (286 or 667 mg/kg p.o.) 1 h before to evaluate anxiolytic activity by using Elevated Plus Maze(EPM) test, Light & dark test, Locomotor activity test and Rota rod test whereas Maximal electroshock (MES- 42 mA, 0.2 s) induced convulsion test and pentylenetetrazole (PTZ- 80 mg/kg i.p.) induced convulsion test were used for the assessment of the antiepileptic activity where phenytoin (25 mg/kg p.o.) or diazepam (5 mg/kg p.o.) was administered as reference standard respectively.

**Results:** Both the doses of Asafoetida did not show statistically significant anxiolytic effect in EPM Test and Light & Dark Test but showed significant (P<0.001) CNS depression/ sedation by reducing locomotor activity in mice. Asafoetida did not showeffect on motor co-ordination. 286 mg/kg dose of Asafoetida was more effective as anxiolytic (54%). The same dose also showed statistically significant sedative activity (91%) even after 2 h of treatment. Both the doses of Asafoetida showed antiepileptic effect against PTZ induced Seizures but the dose 286 mg/kg of Asafoetida caused 67% mortality in MES model which was not observed in control as well as 667 mg/kg dose of Asafoetida treated group.

**Conclusion:** Asafoetida did not show significant anxiolytic effect but possesses significant sedative effect. It may be useful in myoclonic and petitmal epilepsy but not in grandmal epilepsy. The effect of Asafoetida is probably by acting through GABAA receptor. Vanillin is probably one of the phytoconstituent responsible for anxiolytic and antiepileptic effects of Asafoetida, in addition to other phytoconstituents.

**KEY WORDS:** Anxiolytic, Elevated plus maze, Light and dark, PTZ, GABA.