SEDATIVE AND HYPNOTIC ACTIVITY OF Passiflora Incarnata L.

S. Madhumathi* and A. Rajendran

*Department of Herbal and environmental science, Tamil University Thanjavur Dist, TamilNadu India, Department of Botany, Barathiyar University Coimbatore, TamilNadu India.

ABSTRACT: Ethanolic extract of leaves of Passiflora incarnata L (Passifloraceae) (200 mg/kg, p.o) exhibited significant Hypnotic activity (3.5 mg/kg i.p) being comparable to that of lorazepam (0.5 mg/kg) respectively.

Keywords: Passiflora incarnata; Hypnotic activity.

INTRODUCTION
Passiflora incarnata L. (Passifloraceae) leaves were collected from a cultivated source Udagamandalam (Ooty), and identified with the help of Regional flora (Gamble J.S.,1967). Specimen was further confirmed with reference to Herbarium sheets available in the Rapinat Herbarium, St.Joseph College, Thiruchirappalli.

Uses in traditional medicine and reported activities
Aerial parts of P. incarnata have been used as sedative, anxiolytic, antispasmodic, analgesic, anticonvulsant, and wormicidal (James EF.,1996, Bergner P.,1995, The Wealth of India., 1966, Rawat P.S.,1987) and also in whooping cough, bronchitis, asthma, and other tough coughs (Taylor L.,1996, Raintree Nutrition.,1999, British Herbal pharmacopia.,1983). The ethanolic extracts of the leaves at 200 mg/kg (Dhavan K et al.,2001) showed significant hypnotic activity in mice.

Previously isolated classes of constituents
Flavonoids(Gavasheli NM et al.,1974, Lutomski J et al.,1981) glycoside(Rahman K et al.,1997), alkaloids(Poethke VW et al.,1970), cyanogenic glycosides(Spencer KC et al.,1984), carbohydratesGavasheli NM et al.,1975), aminoacid(Gavasheli NM et al.,1974), benzopyrones(Aoyagi N et al.,1974), and volatile constituents(Buchbauer G et al.,1992). Tested material Ethanol Soxhlet extracts (yield: 4.10% on dried wt :), obtained and characterized.

Animals
Swiss mice of either sex, weighing (20-25 g) procured from the disease free from Periyar College of Pharmaceutical Sciences, Thiruchirappalli, TamilNadu, India, were allowed standard laboratory feed and water.
MATERIALS AND METHOD
Barbituric narcosis (P.B.Dewas et al., 1953) was used to evaluate the sedative and hypnotic activity. Swiss albino mice (20-25 g) were divided into three groups each of consisting of six animals. Group 2 received test sample 200 mg/kg i.p for 30 min before a hypnotic dose of (35 mg/kg i.p). The parameter quantified was the sleeping time to abolition of the righting reflex when the mice were placed on their back. One group received standard lorazepam 0.5 mg/kg and is group received vehicle normal saline 5 ml/kg i.p

RESULT AND DISCUSSION
Barbituric narcosis (S.S Kadam et al., 2003) was employed to determine the sedative and hypnotic activity of compound and results are shown in Table-1. Test compound induced a significant enhancing effect on pentobarbital induced narcosis with an increase in sleeping time when compared to the standard drug Lorazepam. Compound produced less significant effect with a slight increase in sleeping time. Test sample had a depressive central effect and hypnotic effect.

Table-1: Effect of extract on Pentobarbitone induced sleeping.

<table>
<thead>
<tr>
<th>Component</th>
<th>Duration of sleeping min</th>
<th>%increase in sleeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>69.8 ± 5.64</td>
<td></td>
</tr>
<tr>
<td>Test sample</td>
<td>88.14 ± 10.08</td>
<td>26.27</td>
</tr>
<tr>
<td>Standard</td>
<td>201.50 ± 22.90</td>
<td>188.68</td>
</tr>
</tbody>
</table>

P<0.001, P Vs Standard  
Control: normal Saline 5 ml/kg  
Standard: Lorazepam 0.5 mg/kg

Fig. 1 : Effect of extract on Pentobarbitone induced sleeping.

Acknowledgements
The author grateful to Dr. A. Rajendran for his encouragement and guidance throughout this work.
REFERENCES

15. Raintree Nutrition, Incorporation, Maracuja, Austin, Texas; Copyright of Raintree Nutrition, Inc 1999:1.