

Anti Pyretic Activity Of Aristolochia Bracteata

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Citation

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Abstract

Pet ether and acetone extracts of the plant *Aristolochia Bracteata* were prepared using Soxhlet extraction. phytochemical analysis of *Aristolochia Bracteata* showed the presence of alkaloids, carbohydrates, flavones, triterpenoids and phytosterols in the crude extracts. In the present study, Pet.ether and acetone extracts of *Aristolochia Bracteata* was investigated for their anti pyretic activity. Injection of 20 ml/kg (s.c) of 20% aqueous suspension of Brewer's yeast suspension produced pyrexia in rats. Extracts at 250 mg/kg exhibited significant anti pyretic activity. Aspirin (300mg/kg) was included as standard. Pet. Ether extracts was found to be more effective than acetone extract.

INTRODUCTION

Aristolochia bracteata Linn. (Aaduthinnapalai – Tamil; Worm killer - English; Gadaparku – Telugu; Bhringi-Hindi), is a shrub distributed through out India. It belongs to the family Aristolochiaceae. In the indigenous system of medicine, the plant was used for the treatment of skin diseases, inflammation and purgative^{1,2}. Root extract was reported to have anti bacterial activity³ and also Toxicity of *Aristolochia bracteata* was reported⁴. The present study was aimed to evaluate antipyretic efficacy of Acetone and Pet.ether extract of *Aristolochia bracteata*.

MATERIALS AND METHODS

PLANT COLLECTION AND AUTHENTICATION

The plant material was collected in the Tirunelveli district, Tamilnadu, India. It was authenticated by Dr.V.Chelladurai, Govt. Research officer, Botany C.C.R.A.S. Govt. of India, (Retired), Tirunelveli. A voucher specimen has been kept in our laboratory for future reference

PREPARATION OF EXTRACT

Aristolochia bracteata was collected dried under shade, coarsely powdered and passed through sieve no.22 to get particle of uniform size. Then extracted exhaustively with Pet. Ether and Acetone using Soxhlet apparatus⁵. The solvent was removed under reduced pressure to obtain a solid mass. It was then preserved in a desiccators until further use.

ANIMALS

Male Wister Albino rats (100-150gm) were procured from

animal house of our institute, maintained under room temperature (20±10C) and relative humidity 55±10C with 12 h light / dark cycle. The animals were provided with standard pellet diet (M/s Hindustan Lever Ltd, Mumbai, India.) with free access to water ad libidum. The present study was approved by institutional animal ethics committee (Approval no. 509/02/C/CPCSEA).

ANTI-PYRETIC ACTIVITY

The antipyretic activity of Pet.etheric and Acetone extracts were screened by using yeast-induced hyperpyrexia method^{6,7}. The selected animals were divided into four groups, each having six animals. They were maintained at constant temperature of 24-25° for 24 h before pyrexia was induced by subcutaneous injection of 1 ml of 15% brewer's yeast suspension in saline solution¹⁰. After 18 h of yeast injection, the extracts at a dose of 250 mg/kg were administered orally to each group as a suspension in tween 80. Paracetamol i.p. (200 mg/kg) was used as standard for comparison of antipyretic activity, and all control animals received tween 80. Rectal temperatures were noted at 60 min intervals.

Figure 1

Time (h)	Control	Standard	Pet. ether	Acetone
0	38.3 ± 0.27	38.1 ± 0.20	38.6 ± 0.21	38.6 ± 0.31
1	37.5 ± 0.22	37.2 ± 0.26*	37.7 ± 0.25*	37.4 ± 0.32*
2	37.6 ± 0.23	36.5 ± 0.25*	36.6 ± 0.33*	36.7 ± 0.39*
3	37.2 ± 0.25	36.7 ± 0.27*	36.3 ± 0.20*	36.6 ± 0.34*

Antipyretic effect of *Aristolochia bracteata* Linn

Values are reported as Mean ± S.E.M, n= 6, *P<0.05 (Compared to control) were considered significant

STATISTICAL ANALYSIS

The statistical analysis were carried out by student 't' test, $P > 0.05$ was considered significant. All the values are reported as Mean \pm SEM.

RESULT AND DISCUSSION

The phytochemical analysis showed the presence of steroids, carbohydrates, flavanoids and saponins.

Both Pet. Ether and acetone extracts of Aristalochia bracteata at 250 mg/kg exhibited significant $P < 0.05$ antipyretic activity. The activity was comparable to the standard drug aspirin (300 mg/kg). Pet. Ether extract was found to be more potent than acetone extract. The present

study provided scientific evidence for anti pyretic efficacy of Aristalochia bracteata. Isolation of phytoconstituent responsible for the antipyretic activity of Aristalochia bracteata was under study.

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