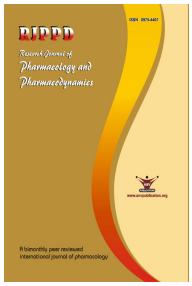

ISSN 0975-4407
Research J. Pharmacology and Pharmacodynamics 2009; 1(3): 150-151

Research Article

www.anvpublication.org

Screening of Some Indigenous Plants for Their Antipyretic Activity

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ABSTRACT

In the present study, aqueous extract of leaves of *Capparis zeylanica* Linn*,* *Annona reticulata* Linn and *Clerodendron phlomidis* Linn were given at a dose of 200mg/kg, 400mg/kg (p.o.).

The antipyretic activity was done after inducing hyperpyrexia by injecting subcutaneously 20% aqueous suspension of Brewer's yeast in rats. Rats developing 0.5^{O} C-1^{o}C or more rises in rectal temperature 18 h after injection were taken for study.

The results proved that the aqueous extract of leaves of *Clerodendron phlomidis* Linn and *Annona reticulata* Linn has significant antipyretic activity and were compared with paracetamol (150 mg/kg body weight, p.o.), a standard antipyretic agent. Aqueous extract of leaves of *Capparis zeylanica* Linn has not reduced elevated fever in experimental rats.

KEY WORDS: *Capparis zeylanica* Linn*, Clerodendron phlomides* Linn*, Annona reticulata* Linn, antipyretic activity

INTRODUCTION

Plants have been used as source of medicinal agents for the treatment of many diseases as these are frequently considered to be less toxic and free from side effects than synthetic ones.

There are number of plants known today which are used as antipyretic in traditional system of medicines. So that four plants viz. *Capparis zeylanica* Linn*, Clerodendron phlomidis* Linn*, Annona reticulata* Linn, were screened for their antipyretic activity. Traditionally these plants are used for treating the various disease ailments such as swellings, piles, fever, boils etc[1, 2, 3].

MATERIALS AND METHODS:

In the present study, aqueous extraction of leaves of *Capparis zelaynica* Linn*, Annona reticulata* Linn and *Clerodendron phlomidis* Linn were obtained from Sangli district which is authenticated by Dr. S. S. Sathe Head of Botany Department at Padmabhushan Dr.Vasantdada Patil Mahavidyalaya, Tasgaon. The aqueous extract was carried out by maceration method.

***Animals*:**

Adult albino rats of either sex weighing 180-200g were used. The animals were used under suitable nutritional and environmental conditions through experiment. The animals were maintained under standard laboratory condition for an acclimatization period of seven days prior to performing the experiments. The experimental protocol was approved by Institutional Animal Ethical Committee.

Experimental:

For the antipyretic activity, the rats of either sex were divided into eight groups comprising six rats in each group. The normal body temperature of each rat was recorded rectally at one hour interval using a thermometer.

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Received on 20.04.2009
Accepted on 15.06.2009

Table 1: Antipyretic activity of indigenous plant

Treatment	Dose	Intial temp. in °c	Temp.after 18 hrs.of yeast admin.in °c	Reduction in temperature in °C				Reduction in temp in °c
				½ hr	1hr	2hr	3hr	
Control	5ml/kg	36.3±0.50	37.62±0.33	37.57±0.23	37.56±0.23	37.6±0.23	37.55±0.23	-
Paracetamol	150mg/kg	36.77±0.25	38.32±0.53	37.8±0.10	37.5±0.20	36.8±0.18	36.4±0.22	1.5
A.E.of *Capparis zeylanica Linn*	200mg/kg	37.2 ± 0.10	38.0 ± 0.17	38.0 ± 0.17	37.7± 0.17	37.5 ± 0.18	37.2 ± 0.15	0.70
	400mg/kg	37.3± 0.09	38.2± 0.17	38.0 ± 0.15	37.8 ± 0.10	37.6± 0.09	37.5± 0.10	0.70
A.E. of *Clerodendron phlomidis Linn*	200mg/kg	37.5 ± 0.09	38.3± 0.10	37.6± 0.05	37.3 ± 0.04	37.2± 0.06	37.2± 0.06	0.80
	400mg/kg	37.6±0.32	38.65±0.12	38.22±0.29	37.9±0.22	37.5±0.19	37.1±0.20	1.05
A.E.of *Annona reticulata Linn*	200mg/kg	37.2 ± 0.16	38.4± 0.12	37.7 ± 0.13	37.4± 0.13	37.4± 0.15	37.2± 0.12	0.90
	400mg/kg	37.6±0.27	38.72±0.11	38.5±0.22	37.6±0.15	36.9±0.17	36.7±0.20	1.02

A.E. : Aqueous extract n=6 # P< 0.01 as compared with initial rectal temp. (**°C**) *P< 0.05, ** P< 0.001, as compared with temp. of respective group at 18 hrs after yeast treatment by Dunnett's test.

Fever was induced by a subcutaneous injection of 20 ml/kg 15% w/v Brewers yeast suspended in 0.5% w/v methyl cellulose solution.

After 18 hr of yeast injection elevated body temperature of each rat was measured rectally and the Rats developing 0.5^{O} C or more rises in rectal temperature 18 h after injection were taken for study[4]. Then aqueous extract of leaves of *Capparis zelaynica* Linn*, aqueous* extract of leaves of Annona *reticulata* Linn and *Clerodendron phlomidis* Linn, were given at a dose of 200 and 400mg/kg (P.O.)[5,6]

Distilled water and paracetamol (150 mg/kg body weight, P.O.) was administered orally to control group and standard group of animals respectively and rectal temperature was measured at different time intervals.

Statistical Analysis:-

Data was expressed as mean ± standard error of mean (SEM). Statistical Analysis was made by using Dunnet's test at different time intervals.[7,8,9]

RESULT AND DISCUSSION:

The results proved that the aqueous extract of leaves of *Clerodendron phlomidis Linn* and aqueous extract of leaves of *Annona reticulata Linn* has significant antipyretic activity and was comparable to that of paracetamol (150 mg/kg body weight, p.o.), a standard antipyretic agent. Aqueous extract of leaves of *Capparis zeylanica Linn* has not reduced elevated fever in experimental animals so they don't possess the antipyretic activity.

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