Analgesic Activity of Ethanolic Extract of The Flowers of Tagetes Erectus

Sudip Pal[1], Ranjan Kumar Maji[2], Sambit Maiti[3]
[1, 2, 3] Bharat Technology, Uluberia, Howrah-711316, India

Abstract- *The aim of the present research work is to determine the analgesic activity of ethanolic extract of the flowers of Tagetes erectus on male Wister rats. The medication property of the flowers of Tagetes erectusis study on Eddy's hot plate method. 18 male Wister rats used for the study. Animal are divided into 3 groups each group contained 6 Wister rats which weight is about 150-180gm. Group1 is normal control and received Saline (1mg/kg), Group 2 is standard control and received Diclofenac Sodium(10mg/kg),Group 3 is test control and received ethanolic extract of the flowers of Tagetes erectus(200mg/kg).*

Keywords- Tagetes erectus, Analgesic, Diclofenac sodium.

I. INTRODUCTION

An analgesic is a member of the group of drugs used to active analgesia and relief from the pain.*Tagetes erectus* is commonly known as marigold plant. The plant is contained flavonoids, carotinoids, glycosides, phenols, lutein esters, and steroids. It is use for treatment various types of disorders like age-related macular degeneration (ADM), cancer, cardiovascular diseases, podiatric condition, skin disorders and alleviating muscular pain. The flowers of *Tagetes erectus* is also used in anti-bacterial activity, antimicrobial activity, anti-oxidant activity, hepatoprotective activity, insecticidal activity, mosquitocidal activity, nematicidal activity, wound healing activity, analgesic activity. It is regularly used in household medicines and therefore, it was thought worthwhile to explore the plant for its potent biological activity. The study of analgesic activity of the ethanolic extract of the flowers of *Tagetes erectus* on male Wister rats with view to relating the result of the activity.

II. METERIALS AND METHOD

- **Collection of plant Materials;**

The flowers of *Tagetes erectus* collected from *Tagetes erectus* plant from the rural belt of Itaberia, Purba Medinipur, West Bengal, India.

- **Chemicals;**

Petroleum ether, Ethanol is collected from the New chemical lab, Rajarhat, Kolkata, Diclofenac sodium injection is collected from the Pal Medical Store, Itaberia, Purba Medinipur, West Bengal, India.

- **Animals;**

Healthy male Wistar albino rats of approximately the same age, weighing about 180-200gm were used for the study. They were fed with common place diet and water and libitum. They were house in polypropylene cages maintained under common place conditions (12/12 hr unit light/dark cycle; 25ºC ± 30ºC, 35- 60% RH). All works were approved by the Institutional Animal Ethical Committee, Bharat Technology, Uluberia, Howrah.

- **Preparation of Ethanolic Extract of the flowers of *Tagetes erectus*;**

Shadeddried and coarsely powdered (600gm) of theflowers of *Tagetes erectus* is placed Soxhlet's apparatus separately, using petroleum ether and then successively with ethanol. The extract is concentrated to dryness in a rotary evaporator under reduced pressure at the constant temperature40 . The dried mass is stored in a refrigerator and considered as extract.

- **Selection of dose;**

For analgesic activity the dose is chosen during acute toxicity studies(200mg/kg).

- **Grouping of the animals;**

Animal are divided into 3 groups each group contained 6 rats.

Group1; Normal controlled and received Saline.
Group 2; Standard controlled and received Diclofenac sodium injection.
Group3; Test controlled and received test drug(*Tagetes erectus*).

- **Eddy's hot plate method (paw licking);**

Eaddy's hot plate method is used for the study of analgesic activity, Group 1 is normal controlled received Saline, group 2 is standard controlled received Diclofenac injection, Group 3 is test controlled and received test drug (*Tagetes erectus*). The analgesic activity is determined on the minutes 0min, 15min, 30min, 45min, 60min, 90minutes.

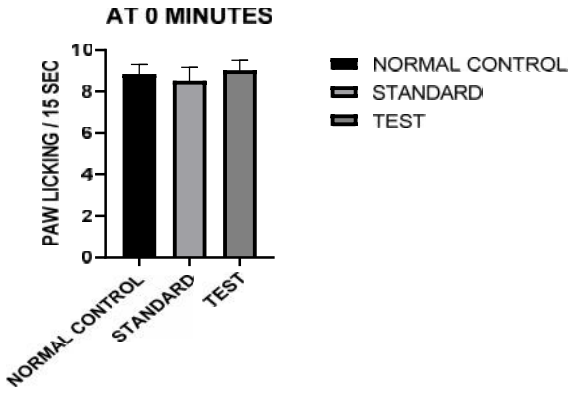
III. RESULT AND DISCUSSION

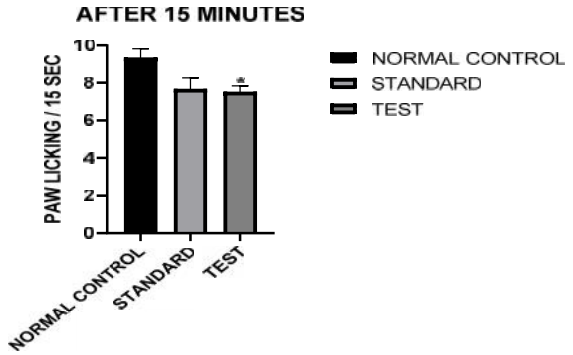
In the study of analgesic activity of the Wister rats following result is obtained.

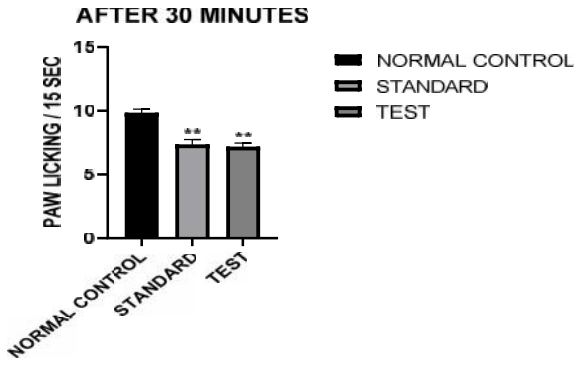
Table-1; Analgesic activity of the ethanolic extract of the flowers of *Tagetes erectus* on Eddy's hot plate method (paw licking) in male Wister rats.

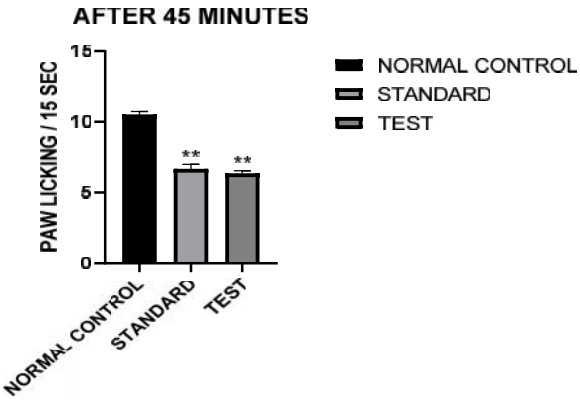
Group	Treatment	Dose	Reaction (paw licking)/15 sec after drug administration in different time					
			0 min	15 min	30 min	45 min	60 min	90 min
1.	Control	Saline 1mg/kg, ip	8.8±0.4	9.3±0.4	9.8±0.3	10.5±0.2	10.8±0.3	11±0.2
2.	Standard	Diclofenac sodium 10mg/kg, ip	8.5±0.6	7.6±0.6	7.3±0.4**	5.6±0.3**	6.3±0.3**	6±0.2**
3.	Test	Extracted drug 200mg/kg, ip	9±0.5	7.5±0.3*	7.1±0.3**	5.3±0.2**	5.6±0.2**	5.3±0.2**

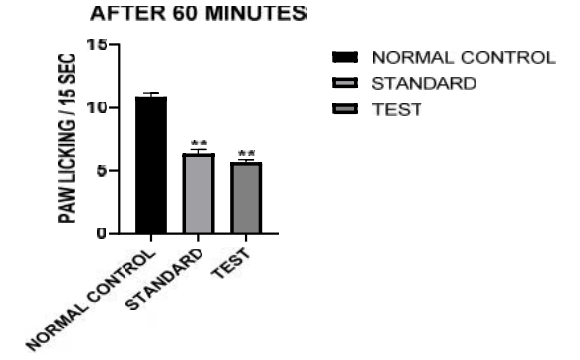
Values are express as mean± SEM (n=6), *p<0.1considered statistically significant as compare to normalgroup.

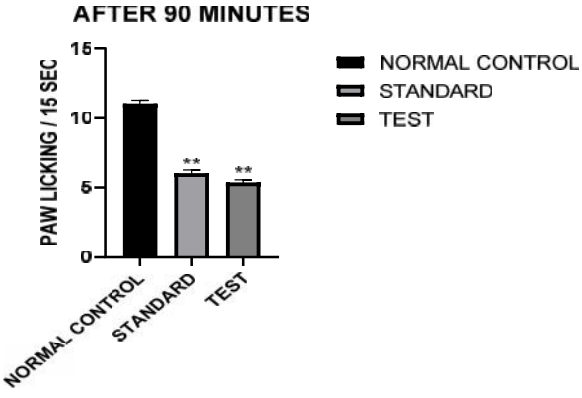












IV. CONCLUSION

The analgesic activity of theethanolic extract of the flowers of *Tagetes erectus*is studied by using Eaddy's hot plate method (paw licking) in male Wister rats is showed the significant analgesic activity as like as a standard drug Diclofenac sodium.

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