

EFFECT OF *Ocimum sanctum* LEAF EXTRACT ON DROSOPHILA**SUDHA AGRAWAL^{a1} AND RENUKA YADAV^b**^{ab}Department of Zoology, Bhilai Mahila Mahavidyaya, Hospital Sector Bhilai, Chhattisgarh, India

ABSTRACT

The chemical composition of Tulsi is highly complex, containing many nutrients and other biologically active compounds, the proportions of which may vary considerably between strains and even among plants within the same field. In the present investigation the effect of *Ocimum sanctum* leaf extract in the culture medium and study the morphological changes of *Drosophila*.

KEYWORDS: Leaf Extract, *Ocimum sanctum*, *Drosophila*

Tulsi (*Ocimum sanctum*) is a holy basil, is an aromatic plant that is native to the tropics of Asia and Africa, and is widespread as a cultivated plant and weed. belonging to the family Lamiaceae. This medicinal plants are widely used by the traditional medicinal practitioners for curing various diseases in their day to day practice. In traditional system of medicine, different parts (leaves, stem, flower, root, seeds and even whole plant) of *Ocimum sanctum* Linn. have been recommended for the treatment of bronchitis, malaria, diarrhea, dysentery, skin disease, . *Ocimum sanctum* L. (also known as *Ocimum tenuiflorum*, Tulsi) has been used for thousands of years in Ayurveda for its diverse healing properties. *O.sanctum* leaves showed spermicidal activity and anti androgenic properties respectively (Ahmed *et al.*,2002, Ahmed *et al.*. 2011)

METHODOLOGY

Ocimum sanctum leaves were collected and dried in shade place. About 20 g of leaves are immersed in 200 ml of 50% alcohol Soxhleted for 8 hours to make extract. The extract was filtered & dried in room temperature. The extract is weighed 50 & 100 mg & dissolved separately in 1 ml of 50% alcohol. Take 4 beakers & 50 gm Banana pulp in each beaker. 1st beaker as control. 2nd beaker contain vehicle only ,Take 50 & 100 mg/ml extract in 3, 4 beakers respectively. Open for 1 day, cover the beaker with cloth & culture the drosophila in it. Count the Drophilla and measure the length, width and wing size with the help of ocular disc. Values are Mean± SD.

RESULT

Increase in body length & wing length in both the doses was seen & width sizes decrease with the increasing concentration of leaf extract (Table -1) There is no male drosophila was found in both treatment groups.

Table 1: Effect of *Ocimum sanctum* leaves on *Drosophila* (Values are Mean± SD.)

GROUP	TREATMENT OF PERIOD	NO. OF DROSOPHILA		BODY SIZE (µm)		
		MALE	FEMALE	BODY LENGTH	BODY WIDTH	WING LENGTH
CONTROL	7 Days	3	32	204±24.97	115.2±10.55	163.6±12.19
VEHICLE	7 Days	3	81	222±26	100±17.8	146±23.74
50mg	7 Days	-	36	206±29.73	92±15.62	162±22.71
100mg	7 Days	-	40	232±28.56	98±10.77	172±16

DISCUSSION

In the present study body length & wing length increases with the increasing *Ocimum sanctum* leaf extract concentration but body width decreases after the treatment of 50 mg & 100 mg/ml *Ocimum sanctum* leaves extract. No male were found in both the doses, it may be possible that *Ocimum sanctum* leaves shows anti androgenic activity (Ahmed *et al.* 2011).

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