

**ABSTRACT**

**NAME OF INSTITUTION:** De La Salle University-Dasmarinas

**ADDRESS:** Dasmarinas, Cavite

**TITLE:** The Effect of *Curcuma longa* (Luyang dilaw) on the Central Nervous System of the Female Albino Rats

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**COST:** P 10,000

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**OBJECTIVES OF STUDY:**

**A. General**

To test if *Curcuma longa* has an analgesic effect on the female albino rats.

**B. Specific**

To know which concentration of the *C. longa* (ginger) extracts (25%, 50%, 75% & 100%) will be most significantly effective.

**SCOPE AND COVERAGE:**

✓ Different concentrations of the ginger extracts were used in the experiment to test their analgesic effect on the rats. The rats underwent a series of CNS testings -- toe-pinch, tail flick and puncture tests. The positive control was that treated with Ponstan (Mefenamic acid). Administration was done orally through gavage method. ✓ They were fed for 3 days. ✓ Effect was tabulated by its positive (+) and negative

(-) responses. <sup>2/</sup>

#### **METHODOLOGY:**

##### **Research Design:**

In this study, experimental method was used.

##### **Research Setting:**

The experiment was conducted at the Natural Sciences Specimen Room in De La Salle University, Dasmariñas, Cavite.

##### **Research Procedure:**

Extracts from ginger (25%, 50%, 75% & 100%) were prepared through boiling (water bath). Ponstan was removed from its capsules and was dissolved in distilled water, 300mg/mL was used. Eighteen rats were obtained and kept in wire cages, three rats per control. The extract, Ponstan and distilled water (placebo) were administered to the rats through gavage method and the respective treatments were based on the body weights (1mL/3g). The administration was done for 3 days and the effects were tabulated on the last day of administration through tail flick, toe-pinch and puncture tests. Withdrawal reflex was the positive response. The CNS tests were done after resting the rats for 15-30 minutes.

#### **FINDINGS:**

<sup>3/</sup> The ginger extract showed significant analgesic effect and this were seen in the different responses on the CNS of the female albino rats which were given the Standard Pharmacological Test. <sup>3/</sup>

#### **CONCLUSION:**

The following were the conclusions gathered by the researchers:

1. The *Curcuma longa* extract exhibited analgesic effect on the female albino rats.

2. The analgesic effect of the extract depended on the concentration. The 75% concentration was the most highly significant as seen on the different responses of the rats.

3. No two consecutive concentrations of the extract had significant differences.

4. The lower the mean, the slower the time of response.

5. The main component responsible for the analgesic response of the rats is nonsteroidal, antiinflammatory agent curcumin, found in the turmeric *C. longa*.

#### RECOMMENDATIONS:

The researchers duly recommend the following:

1. Try other methods of extraction other than the method used.
2. Try other analgesics other than Ponstan.
3. Use other parts of the ginger plant.
4. Administer a more systematic procedure in using the test organisms.
5. Use other means of testing the effect of the extract.
6. Use other organisms other than rodents