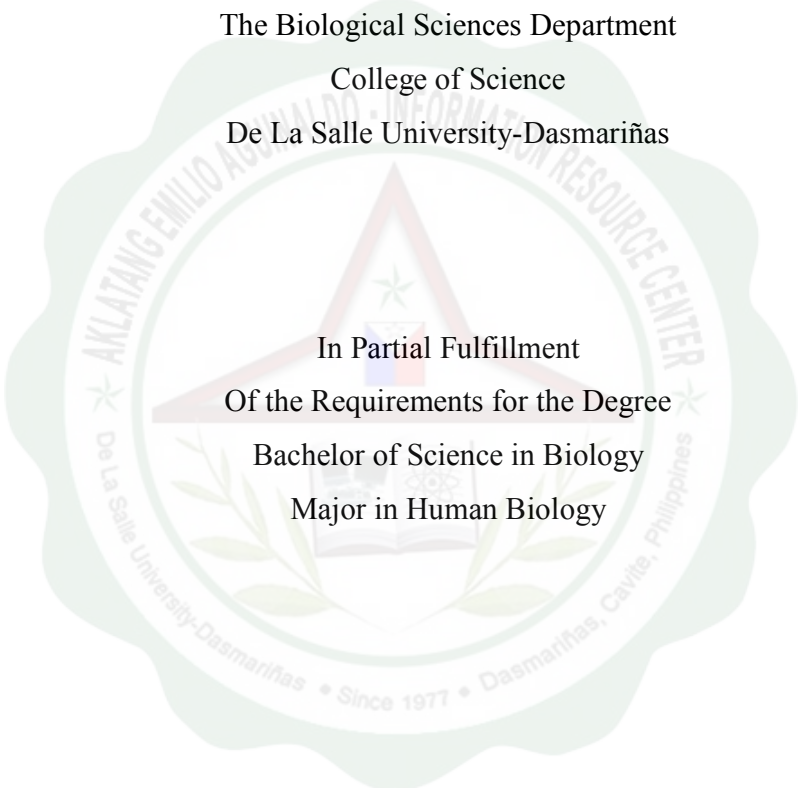


**ANALGESIC PROPERTY OF *Sanderia malayensis* (JELLYFISH) TOXIN
ON *Rattus norvegicus* (ALBINO RAT)**

An Undergraduate Research
Presented To
The Biological Sciences Department
College of Science
De La Salle University-Dasmariñas

The seal of De La Salle University-Dasmariñas is a circular emblem with a scalloped border. It features a central shield with a cross and a star, flanked by two figures. The shield is set against a background of a large, stylized letter 'A'. The text 'AKLATANG EMILIO AGUIBALDO - INFORMATION RESOURCE CENTER' is written in a circular path around the top of the seal. At the bottom, it says 'De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines'.

In Partial Fulfillment
Of the Requirements for the Degree
Bachelor of Science in Biology
Major in Human Biology

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March 2009

ABSTRACT

Pain is mainly a protective mechanism for the body that occurs whenever a tissue is being damaged and caused the individual to react in order to remove the pain stimulus. Three different types of stimuli excite pain receptors: mechanical, thermal, and chemical pain. Series of tests were done to show the potential of *Sanderia malayensis* toxin as pain reliever. The tail tests were applied at 15, 30, 60, and 120 minutes after the intravenous administration of the venom. For the tail clip test, a metal artery clip was applied to the tail of the rat. The time that took the rat to lick its tail was taken as the reaction time. For the tail flick test, the tail of the rat was placed in a hot nichrome wire. For the tail immersion test, the tail of the rats were dipped in a beaker of water at 55°C. The time in seconds taken to withdraw the tail from the hot nichrome wire and from the water was taken as the reaction time. Chemical pain was tested using acetic-acid induced writhing test. Sixty minutes after the intravenous method of administration of the dose of the extract, acetic acid at 0.6%v/v solution was injected intraperitoneally at dose of 10ml/kg. Immediately after administering acetic acid, the number of writhings or stretchings was counted and recorded for 15 minutes.

In Tail Clip Test, all treatments doses showed no significant difference against the negative control, T0, in terms of relieving mechanical pain. In Tail Flick test, T2, T3, and T4 delayed time response compared to T0 suggesting it can relieve thermal pain. In Tail immersion test and Acetic Acid induced writhing test, T3 had no significant difference when compared to the positive control, T4, in terms of relieving thermal and chemical pain. The effectiveness of the toxin as pain reliever was determined by its comparison to the treatment dose of ibuprofen, the positive control T4. Based on the results, it can be inferred that *Sanderia malayensis* toxin has possible analgesic potential.

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