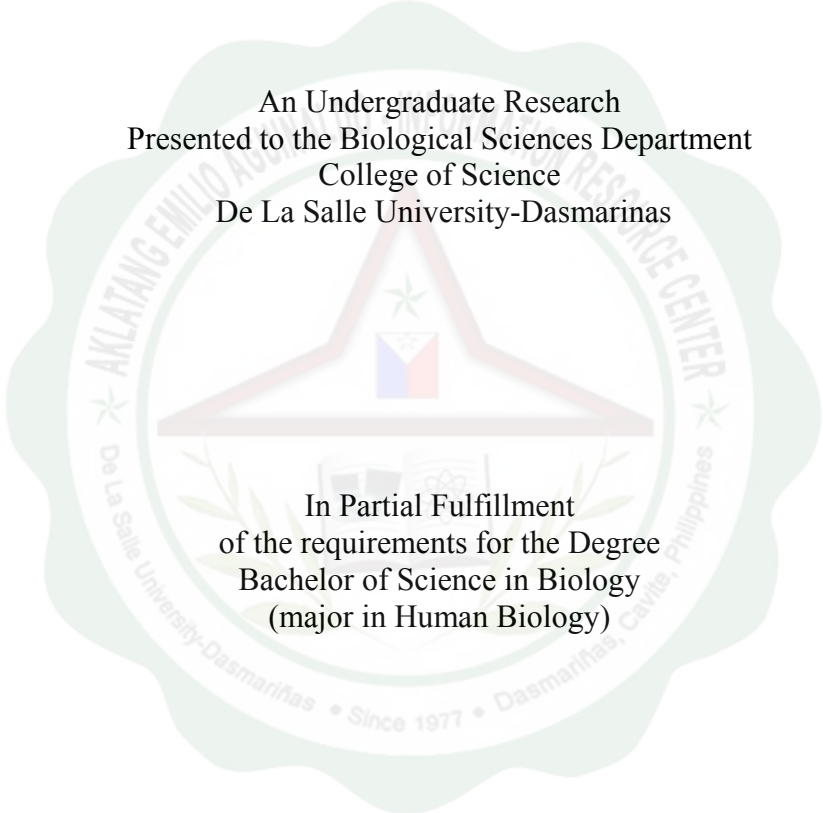


THE EFFECTS OF THE TOXIN OF *Echinothrix calamaris* (HAPTIN URCHIN) IN THE REFLEX OF *Mus musculus* (ALBINO MICE)

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 blue and red field, a white cross, and a green star. The shield is set against a background of a green triangle and a white triangle. The text "AKLATANG EMILIO AGUIAR RESEARCH CENTER" is written around the top inner edge of the seal. The text "De La Salle University-Dasmariñas" is written around the bottom inner edge. The text "Dasmariñas, Cavite, Philippines" is written around the bottom outer edge. The text "Since 1977" is written at the bottom center of the seal.

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ABSTRACT

The study is about the effects of toxin of *Echinothrix calamaris* to the reflex of *Mus musculus*. *Echinothrix calamaris* is a kind of sea urchin that belongs to family of *Diadematidae*. Sea urchins are known to possess a toxin. *Echinothrix calamaris* is very distinctive because it is the only sea urchin that has a banded spine. *Echinothrix calamaris* has toxin that has enzyme that can have an effect in the muscle contraction. *Echinothrix calamaris* toxin can also be poisonous enough to kill an organism. LD50 is the accurate concentration of toxin that can kill the test organism. Dilution of the toxin is also significant to secure the correct concentration of the toxin in order to have an interaction to the other enzyme of the body. The Range Finding Test is obtained by arriving at different concentrations and this concentrations are determined by Logarithmic method at 0.03 intervals. There are four test organism in each treatments in Range Finding Test. In the Range Finding Test, the concentration of the toxin that is the LD50 is 0.75cc, meaning it is 75% of the toxin. The Eye Boggle Test, Flipping Test and Tail Pricking Test are used to test the reflex of the Albino mice. The Eye Boggle test is for consciousness. The Flipping Test is a test for balance. The Tail Pricking Test is a test for pain reception. The null hypothesis was accepted meaning there is significant difference in the effects of the dose of the toxin of *Echinothrix calamaris* to the reflex of *Mus musculus*. It was concluded that the toxin has an effect in the muscle contraction, but not in the consciousness which falls under the nervous system. The enzymes present are the Two D-galactose binding lectin and heparin binding lectin. Also Contractin A is present.

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