


**Anti-ulcer Potential of *Hedyotis diffusa* (Daniri) against  
Acetylsalicylic Acid (Aspirin) induced Gastric Ulcer  
on Albino Mice**

An Undergraduate Research Proposal  
Presented to  
the Faculty of 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 field containing a white cross and a red field containing a white cross. Above the shield is a green star. The shield is flanked by two green leaves. The text "AKLATANG EMILIO AGUIAR" is written in a semi-circle at the top, and "RESOURCE CENTER" is written in a semi-circle at the bottom. The full name "De La Salle University-Dasmariñas" and "Dasmariñas, Cavite, Philippines" are written around the bottom edge, with "Since 1977" in the center of the bottom edge.

In Partial Fulfillment  
of the Requirements for the Degree  
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(major in Human Biology)

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## ABSTRACT

The anti-ulcer potential of *Hedyotis diffusa*, or Daniri, of the family Rubiaceae was evaluated. *H. diffusa* is a widespread weed found in open lands throughout the Philippines and all over subtropical areas. Studies on the chemical properties of the plant revealed that it contained anthraquinones, flavonoids and ursolic acid [Zhou et al. 2007]. A total of 36 albino mice were used and were divided into three groups of 12 animals each. T<sub>0</sub> was given normal saline solution at 0.003 ml/g dosage and T<sub>1</sub> was given the same dosage of normal saline solution every 12 hours and aspirin at a dosage of 0.19 mg/g/day. T<sub>2</sub> was treated similarly, except that the normal saline solution was replaced with *H. diffusa* extract at a dose of 0.15 ml/g/day. T<sub>1</sub>, which received aspirin at a dose of 0.19 mg/g, demonstrated a fifty percent survival rate, while T<sub>2</sub>, which received the same dose of aspirin and the *H. diffusa* extract, demonstrated a hundred percent survival. This suggests that the extract may have protected the mice from the adverse effect of the high dose of aspirin. For the histopathological examinations, T<sub>0</sub> was found to be ulcer free. T<sub>1</sub> was found to have a single occurrence of ulcer. The ulcer detected did not reach the submucosa of the stomach. All the other test subjects from T<sub>1</sub> were observed to have hyperplasia and dysplasia. Test subjects from T<sub>2</sub> did not develop ulcers, however, all the test subjects were observed to have hyperplasia and dysplasia. The *H. diffusa* extract does not present any significant effect on the occurrence of gastric ulcer

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