



**EFFECTS OF *Helianthus annuus L.* (SUNFLOWER) SEEDS ON THE  
ERYTHROPOIESIS IN LEAD INDUCED ANEMIA IN *Rattus norvegicus***

This Undergraduate Thesis is Presented to the  
Biological Sciences Department  
College of Science and Computer Studies  
De La Salle University -Dasmariñas  
City of Dasmariñas, Cavite

In Partial Fulfilment of the Requirements for the Degree  
Bachelor of Science in Medical Biology

**ALYANNA RENEE M. ASTORGA  
KATRINA BEATRIZ G. NABLO**

APRIL 2016



### ABSTRACT

*Erythropoiesis is a natural process characterized by red blood cell formation in the red bone marrow. Anemia is a condition where in there is a decreased number of red blood cell in the blood. The study evaluated the effect of different ratios of Helianthus annuus L. and rat pellet on the erythropoiesis in Rattus norvegicus. The experimental groups were injected intramuscularly with a sub-lethal dose of lead once a day for a week. Hematocrit and Hemoglobin levels were measured as indicators of the erythropoietic effects of the sunflower seed to the lead-induced rats. A sub-lethal dose of lead with 10 mg/kg dissolved in 0.5 ml water injected intramuscularly for a week abolished heme biosynthesis as evidenced by a decrease in the hemoglobin and hematocrit levels. The study showed that sunflower seed were observed to be effective in increasing the overall rate of red blood cell production. The greatest increase was observed in rats fed with the most number of sunflower seed.*