

**EPITHELIAL MICRONUCLEI OCCURRENCE AND HAIR LEAD
CONCENTRATIONS AMONG PUBLIC AND PRIVATE
SCHOOL CHILDREN IN THE MUNICIPALITIES
OF BACOR AND ALFONSO, CAVITE,
PHILIPPINES**

A Dissertation
Presented to
The Faculty of Graduate School
De La Salle University

In Partial Fulfillment
of the Requirements for the degree of
Doctor of Philosophy in Biology

by

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June 2011

ABSTRACT

Macawile, Janet Pachoco. 2011. Epithelial Micronuclei Occurrence and Hair Lead Concentrations among Public and Private School Children in the Municipalities of Bacoor and Alfonso, Cavite, Philippines. De La Salle University, 166 pp.

Adviser: Dr. Glenn L. Sia Su

The unabated environmental condition such as airborne lead vehicle emission pollution reaching the Province of Cavite, particularly Bacoor, is a rising concern, as it has been associated with long-lasting and expensive health problems, particularly among the young populace. This research study aimed to determine the trace lead status and the occurrence of epithelial micronuclei among 1,000 public and private school children between the congested municipality of Bacoor and the uncongested municipality of Alfonso. This study also aimed to determine if sociodemographic factors, such as gender, age, educational level, mode of vehicle transportation, length of travel time to school, and body mass index, influence epithelial micronuclei occurrence in respondents. Nine hundred ninety-two school children participated in this study: 52.2% were from public schools and 45.8% were from private schools. The mean lead concentrations obtained from the hairs of all the children surveyed was 3.1715 ppm. The mean frequency of epithelial micronuclei occurrence observed among all the children was 83.41%. The hair lead concentrations and frequency of epithelial micronuclei occurrence observed among the children in the municipalities of Alfonso and Bacoor were found to be not significantly correlated ($p > 0.05$). The difference in the frequency of micronucleus occurrence observed among the children studying in private schools in both areas and those studying in public schools in both areas was significant ($p < 0.05$). Among the sociodemographic factors assessed, gender was found to be significantly correlated with the occurrence of epithelial micronuclei of the school children ($p < 0.05$).