

ASSESSMENT OF THE IMPACT OF TOXIC CHEMICALS ON HUMANS AND THE ENVIRONMENT

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Description:

This ten-week summer internship will train two undergraduate students (LAMP Participants) about the Assessment of the impact of Toxic Chemicals on Humans and the Environment. Participants will be assisted to design experiments about evaluation of toxicity testing of organic and inorganic environmental xenobiotic. They will be guided in conducting these experiments in a laboratory setting by exposing aquatic organisms to different concentrations of toxicants. They will learn how to use analytical lab equipment and determine the levels of these contaminants in tissues of exposed animals. They will be trained on monitoring selected water parameters. These include dissolved oxygen, Ph, temperature, alkalinity and hardness. Finally, students are expected to learn and apply statistical methods to the interpretation of their data. Participants will write a final report and present it to a group of faculty and students.

Objectives:

Upon the completion of the Internship, students will be able to:

- 1) Design and implement a toxicity evaluation experiment.
- 2) Use statistical models to analyze and interpret the experimental results.
- 3) Use analytical lab equipment to measure the toxicant levels in abiotic and biotic samples.
- 4) Assess the risk of study chemicals to humans and the environment using available risk assessment models.
- 5) Write a scientific report and present it to a group of scientists.

Prerequisites:

A basic knowledge of biology, math and chemistry is much desirable. Motivation and commitment are extremely important.