Project: Accumulation of metals in aquatic organisms and its implications on humans in the Puerto Hondo community, Guayaquil-Ecuador

The Ecuadorian coastal zone, particularly the mangrove-rich Guayas Province, faces environmental threats from heavy metal pollution due to urbanization and resource demand. Previous studies identified elevated levels of mercury, cadmium, and lead in sediments, mussels, and fish, surpassing safety limits. As artisanal fishing is a key economic activity, and heavy metals pose health risks, this new project seeks to assess heavy metal concentrations in sediments, mollusks, fish, and human hair. The study involves volunteers from the Puerto Hondo community, with ethical approval, aiming to understand the distribution and potential impacts of these contaminants on the mangrove ecosystem and human health.

Student Activities and Responsibilities:

• Participation in field trips and sampling collection.
• Sample processing for metal analysis for mollusks, fish and human hair samples.
• Complete database.

Student Characteristics and Eligibility:
Open to graduate students who possess Spanish language skills, are comfortable working on mangrove ecosystems, and possess basic laboratory skills. Organizational talent, comfortable working outside the US in low resource settings. Background or interest in environmental health, water safety, social determinants of health, or global health preferred.

Language Proficiency
B2 Spanish; Spanish proficiency or upper intermediate Spanish language skills required

Length of Program:
Approximately 8 weeks during June – July 2024