

# Universidad del Valle de Guatemala

## Lago Atitlán

### Project: Exposure to persistent pesticides and toxic metals via breastmilk in neonates living in the Lake Atitlán watershed, Guatemala

This pilot project has two specific aims directed at assessing exposures to pesticides (Aim 1) and toxic metal(loid)s (Aim 2) via breastmilk in neonates in the Lake Atitlán watershed in Guatemala. The fetus and neonate are the most vulnerable to contaminant exposure, but to maximize the opportunity to collect pilot data, this proposal focuses on the neonate and exposure through breastmilk. Information on specific pesticides (including many banned in the US) and metal(loid)s elevated in breastmilk is necessary to demonstrate exposure risk and to refine research aims for an RO1 application. An important research goal is to test for an association between contaminant exposure and stunting.

#### Student Responsibilities:

- - Drafting the study protocol
- - Supporting the creation of liaisons with local authorities (AMSCLAE, Ministry of Health, Municipalities, Health posts) to present the study and get the necessary approvals
- - Sample collection and processing (including storing samples at the UVG- Altiplano campus and shipping them to the U.S.)
- - Conducting surveys and completing questionnaires with the participating subjects
- - Constructing databases and entering the collected information
- - Data analysis and reporting
- - Participation in the drafting of a manuscript for submission
- - Conducting training sessions or workshops with the communities on proper use of agrochemicals, infant and women nutrition (focus on lactating women), and other relevant topics.
- various on-line training (such as CITI human subjects training, responsible conduct of research, etc)

### Tentative Updated Budget

Item	Cost (USD)
Accommodations & Meals	\$840
Placement Fees	\$500
Local Transportation	\$520
Flight	\$500
Health Insurance	\$130
Total	\$2,490

#### Requirements:

- Graduate Student
- Spanish Speaking preferred, but not required

#### Length of Program:

Approximately 6 weeks during June/July 2022