

F22.027: Diet, Trade, and Domestication: Isotopic Analyses of Archaeological Remains from Peru

Faculty mentor: Corina M. Kellner

Overview

Isotopes are the chemical signatures left in your tissues by what you eat and what you drink. In the Paleodiet Isotope Lab, we will use animal and human remains gathered ethically from the Andes to understand trade in domesticated animals and human diet across time and region. Using these remains, we will ask wide ranging questions about social and political shifts and climate change in the ancient past from over 2,000 years ago, well before the Inka Empire. How did ancient Peruvians treat their domesticated animals? What kinds of diets did they eat and were they fed or were they free-range? How are human diets impacted by how domesticated animals like llamas and guinea pigs were fed and treated? Can we see shifts in animal and human diet during periods of climate change and political shifts? What can we learn from these ancient people about our own experience with such changes in the modern day?

What the student will DO and LEARN

Students will learn how to work in a group lab, keep a detailed lab notebook, use chemicals to process fragile bones and teeth for collagen (flexible, protein portion) and carbonate (hard, mineral portion) of bone and teeth for isotopic (chemical signatures) analysis. Students will learn to be motivated, neat, with an attention to detail, and open to constructive criticism. Students will also be trained in assessing the anthropological isotopic literature.

Additional benefits

These lab skills will be transferable to other types of lab settings. The work ethic gained with this internship can be applied to academics and the workforce. Students will learn to work constructively and creatively within a group and will be able to see a project through from beginning to end in a poster for the Undergraduate Research Symposium.

Additional qualifications

Will consider students with no chemical training, but it is a bonus!

Time commitment

6 hrs/week for 30 weeks