



CHEMISTRY SEMINAR 291

Environmental Health Studies on Navajo Lands

Date: **11/15/2019**

Time: **3:00 PM**

Location: **COB1 267**

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Abstract

During the mid-1900s, the United States was locked in a nuclear arms race with the former Soviet Union in an era known as the Cold War. In order to meet demands, uranium mines were dug across the Navajo reservation in the Southwest United States. Although the Cold War officially ended in 1989 with the fall of the Berlin Wall and the dissolution of the Soviet Union in 1991, these abandoned uranium mines on the Navajo reservation have left a legacy of contamination that infiltrates all aspects of life on the reservation. Uranium is a known toxicant due to its properties as a heavy metal, and uranium mining has been suggested to exacerbate exposure to other elemental toxicants, such as arsenic. Current understanding of the extent of contamination on the Navajo lands is ill-defined. Our research team seeks to elucidate exposure to these toxicants through quantifying uranium and other toxic elemental contaminants in environmental samples including water, soil, plants and sheep, so as to understand the nature of exposure. Collected data is used to usher change to environmental public policies on the reservation and to increase saliency of the issue through community meetings.

About the Speaker

Jani C. Ingram, Ph. D. (Chemistry and Biochemistry) investigates environmental contaminants with respect to their impact on health. A major part of her research is focused on characterizing uranium and arsenic contamination in water, soil, plants and livestock. A critical aspect of her research is to foster collaborations with the Native American community and leaders to build trust, obtain access to field samples and gain insights into their health concerns. Recruiting Native American students to work with her as a Navajo principal investigator on the project and building an interdisciplinary, collaborative team of scientists with expertise in analytical chemistry, geoscience, cancer biology, and social sciences are also important to her research. She is a member of the Navajo Nation (born to the Náneesht' ézhi clan) and is involved in outreach activities for Native American students in undergraduate and graduate research. She is the principal investigator of the Partnership for Native American Cancer Prevention and the director of the Bridges to Baccalaureate program. She was named the 2018 recipient of the American Chemical Society Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences.