

Mercury Cycling in Rice Paddies: Biogeochemistry and Human Health

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Wednesday, April 27
12:20 – 1:10 p.m.
102 Mann Library

The seminar will focus on mercury cycling in rice paddies, including water-saving rice paddies, and implications for human health. Between 2008 and 2010, Dr. Rothenberg was supported through the NSF International Research Fellowship Program as a postdoctoral fellow in Guiyang, China, where 600 years of mercury mining severely contaminated the environment. Using a combination of embedded sensors for continuous pH monitoring, and analysis of mercury species in sediment cores, the biogeochemistry of mercury cycling was characterized.

In addition, mercury species in rice grain collected from water-saving paddies were analyzed, and potential mitigation of mercury uptake and translocation were investigated among 50 species of rice plants grown along a contamination gradient. The talk will focus on results from these three studies, and potential health effects, including maternal methylmercury exposure through rice ingestion and implications for offspring neurodevelopment.

Refreshments will be provided

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