

Post-doctoral Fellow: Pesticide Exposure Characterization and Health Effects

NC State University
Department of Biological Sciences
Center for Human Health and the Environment
Raleigh, NC

Postdoctoral fellow with expertise in environmental epidemiology and exposure science to work in Dr. Jane Hoppin's research group <http://jahoppin.wordpress.ncsu.edu/> on the analyses related to pesticides and human health in the ISA Study in Matina County, Costa Rica. The ISA study is a prospective birth cohort of women and their children living in the banana growing region of Costa Rica. Individuals in this area are exposed to multiple pesticides in the environment including mancozeb, chlorpyrifos, and pyrethroids. We have assessed exposure using biological markers as well as air samples. Information has been collected on respiratory outcomes and obesity in both mothers and children as well as neurobehavioral outcomes in the children. Due to the complex exposure environment and the short half life of urinary biomarkers, statistical methods are being developed to create appropriate exposure metrics. Data collection is ongoing and the previously collected data are clean and available for analysis. The study team includes researchers at NC State as well as in Costa Rica.

The postdoctoral fellow will conduct epidemiologic analyses of the pesticide exposure and human health, with primary focus on maternal outcomes: respiratory health, obesity, and others; additionally there will be the opportunity to explore appropriate metrics for mixture analyses. The fellow will prepare manuscripts for publication and present findings at scientific meetings. Statistical analyses will involve analyses of chemical mixtures as well as repeated measures analysis working in conjunction with Statistics faculty. The fellow will be part of an active research team and will participate in data collection and community report back as appropriate. Opportunity exists to develop new research ideas using stored biological specimens or additional data collection.

Required skills: Doctorate in Environmental Epidemiology or similar training

Statistical analysis including linear and logistic regression as well as multilevel modeling for analysis of mixtures. Experience with SAS or R. Strong written and oral communication skills.

Preferred skills:

Data management experience

Training with regard to data security protections.

Spanish speaking.

Experience with human subjects research (CITI training or similar).

Data visualization experience

Training in environmental exposure assessment

Experience with pesticides

Experience with the analysis of BMI or obesity data.

Experience with respiratory and allergic outcomes

CONTACT: <https://jobs.ncsu.edu/postings/114797>

DEADLINE: Open until filled