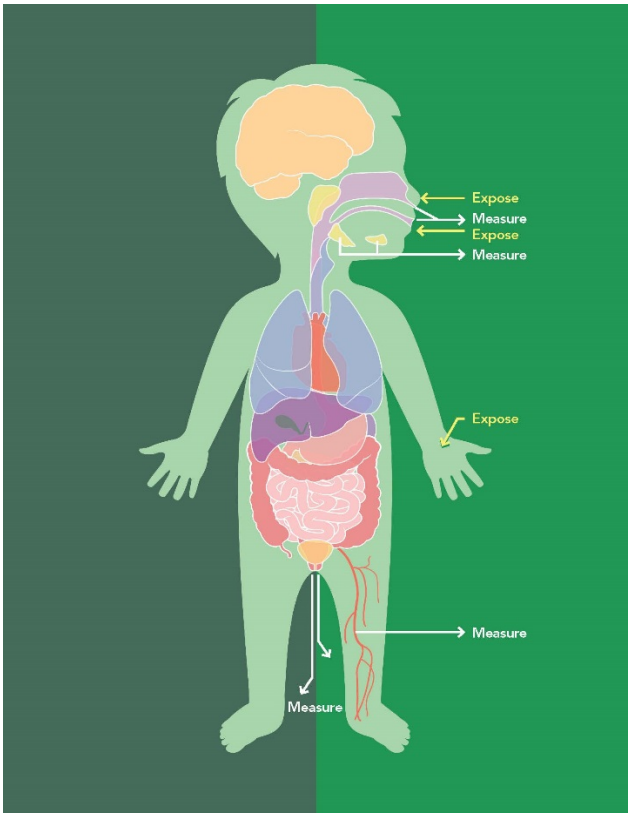
Keywords: interpreting biomonitoring, saliva biomonitoring, Polycyclic Aromatic Hydrocarbons (PAHs), tobacco smoke, cancer, wildfires, cookstoves, organophosphate pesticides, changes in contaminant/drug metabolism during human development, pharmacokinetic models of life stages (fetuses, pregnancy, children), toxicology, exposure assessment

The NIEHS Superfund Research Program & NCEH/ATSDR Office of Science present

Better Understanding Exposures to PAHs and Pesticides



Thursday
April 20, 2017

Seminar with extended Q & A
10:00 – 11:30 am
Chamblee 106 1B

4770 Buford Highway NE
Atlanta, GA 30341

Jordan Ned Smith, PhD
Oregon State University Superfund Program
Pacific Northwest National Laboratory

We use in vitro metabolism and activity based protein profiling to understand Polycyclic Aromatic Hydrocarbon (PAH) metabolism, how PAHs and life-stages may change the amount of enzymes that metabolize PAHs, and how different PAHs may affect the metabolism of other PAHs. We have used these measurements to develop, validate, and refine the first suite of predictive computational dosimetry models (physiologically based pharmacokinetic, or PBPK, models) for PAHs. These models incorporate species and life stage differences in anatomy, physiology, and key biological processes associated with PAH absorption, tissue distribution and interactions, metabolism, and excretion. We dosed humans with very small amounts of ^{14}C-PAHs to collect pharmacokinetic data and compared the results to our models. These PBPK models are designed to predict target tissue doses of PAHs and their metabolites that may cause toxicity or cancer. These PBPK models can be useful for simulating biomarker levels (i.e. contaminant parent and metabolite levels in various compartments that may be sampled for biomonitoring) and predicting an environmental exposure dose from the measured biomarker levels. We have also developed cellular and PBPK models of pesticide transport into saliva.

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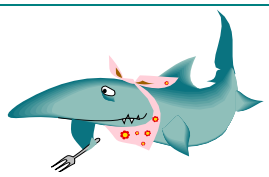
Dr. Jordan N Smith is a member of the Oregon State University Superfund Research Program, which recently released *Human Microdosing with Carcinogenic Polycyclic Aromatic Hydrocarbons: In Vivo Pharmacokinetics of Dibenzo[def,p]chrysene and Metabolites by UPLC Accelerator Mass Spectrometry*. His lab focuses on Cross-Species and Life Stage Comparisons of PAH Dosimetry. He has also published on nerve agent biomonitoring, nicotine distribution in the rat brain, PBPK/PD modeling of nicotine/cotinine, and nicotine-chlorpyrifos interactions.



Join Dr. Smith for informal conversation.

Explore how his work relates to yours!

11:30 am – 12:45 pm
Chamblee 106 cafeteria

Chat while you Chew

What questions would **YOU** like to ask him?

Use the links embedded in his bio above to start thinking!

Meet with Dr. Smith

Consult him for technical advice.
Brainstorm about mutual interests.

1:00 pm – 4:30 pm — Contact Olivia Harris to ***reserve a 30 minute appointment***.

Questions? Contact Olivia Harris at 770-488-0597 or OHarris@cdc.gov.

EXPAND your own network of environmental health contacts! Attend in person!

Local partners outside CDC/ATSDR who wish to attend the seminar in person may contact OHarris@cdc.gov for security clearance (1 week notice for US citizens; 4 weeks for non-citizens).

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Conference ID: 49268239

For State & Federal Partners who do not have the CDC/ATSDR Skype app.

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