

## Pre-Conference Course Descriptions

### Interpretation of Biomonitoring Data in a Risk Assessment Context: Hands-on Course Using Pharmacokinetic and Statistical Models

Biomonitoring data such as those generated through the US Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey provide powerful information on the prevalence and extent of chemical exposure in the general population. However, such data cannot be directly interpreted in the conventional risk assessment framework.

This workshop will discuss and demonstrate the use of pharmacokinetics in the interpretation of biomonitoring data for environmental chemicals in the context of existing risk assessments. Specifically, the course will provide the participants with pharmacokinetic and statistical models of urinary elimination of chemicals, along with actual data from intensive biomonitoring collection studies to understand issues involved with using biomonitoring data and reverse dosimetry to estimate exposures resulting in biomonitoring levels. Issues discussed will include corrections required to account for hydration status, intra-individual variations in spot urine concentrations, physiological factors to consider when interpreting urinary biomonitoring data, and relationships between measurements distributions based on spot vs. pooled biological samples. **All participants will be required to bring their own laptop.** Participants will be provided PK models coded in Microsoft Excel to use during the course.

#### Objectives

The objectives of the course include:

- Examining pharmacokinetic factors affecting variability in biomonitoring data sets
- Illustrating the application of simple pharmacokinetic models in more detailed evaluation of biomonitoring data sets
- Examine factors for consideration in estimating underlying exposures to chemicals based on urinary biomonitoring data.

#### Target Audience

Toxicologists, epidemiologists, exposure scientists, risk assessors, and risk managers interested in exploring the interpretation of biomonitoring data in a risk assessment context.