

## **Symposium**

### **W-SY101: Residential Exposures to Endocrine Disrupting Compounds from Consumer Products and Building Materials: Recent Findings and Future Directions**

There is tremendous interest in the potential health effects of endocrine disrupting compounds (EDCs) from consumer products and building materials, however research is hampered by our inability to characterize exposure to these complex mixtures. In fact we know so little about key sources of exposure to these compounds that it is difficult to make evidence-based recommendations about ways to reduce exposure. While indoor exposures have decreased over the years for some chemicals (e.g. VOCs, formaldehyde), indoor exposures to many EDCs have increased due to their growing presence in consumer products and building materials. More indoor sources coupled with a trend of decreasing residential air exchange leads to increased exposures to EDCs and potentially adverse health effects. Many common indoor contaminants have been identified as EDCs, including certain alkyphenols, parabens, pesticides, phthalates, polybrominated diphenyl ethers (PBDEs), organochlorines, glycol ethers and others. Since many EDCs act through common biological mechanisms, research on mixtures in residential environments will inform epidemiological study design and cumulative risk assessment. This symposium will showcase current research focused on understanding exposure to EDCs from consumer products and building materials. Presentations will cover the following topics: indoor-outdoor air concentration relationships for a broad suite of EDCs; multiple pathway exposure assessment for phthalates; cumulative exposure assessment for PBDEs and PCBs - two distinct families of thyrotoxic compounds; exposure to glycol ethers - an emerging class of EDCs; and translation of exposure science into policy and action to reduce exposures. Each presenter will include 1-2 slides describing new technologies or approaches they believe will advance this area of research, and the set of presentations will be followed by a discussion to highlight key directions for future research in this field - for example technologies for integrated functionally-relevant measurements of chemical mixtures, and evaluation of indoor air quality in green buildings. The symposium will be moderated by Ruthann Rudel, director of research at the Silent Spring Institute. Ms. Rudel has directed several exposure studies of endocrine disrupting compounds in residential environments, publishing results of a household exposure study that identified over 30 EDCs for the first time in residential air and dust. After her brief introduction there will be five presentations followed by 30 minutes for discussion.