



**Society of Toxicology  
49<sup>th</sup> Annual Meeting • March 7–11, 2010  
Highlights of Newsworthy Topical Sessions**

The following highlights some of the key scientific sessions that will be featured at the Society of Toxicology's 49<sup>th</sup> Annual Meeting and ToxExpo™ at the Salt Palace in Salt Lake City, Utah.

**Monday, March 8, 2010**

**9:15 AM–12:00 NOON, Ballroom B—*Ovarian Toxicity: Current Concepts in Toxicology, Pathology, and Mechanisms***

Infertility is a complex disorder with significant medical, psychosocial, and economic aspects. Infertility has increased over the past 30 years and there are more infertile women in the population seeking treatment. Panelists will talk about ovarian anatomy, histopathology, and potential mechanisms of toxicity. Presenters will also explore recent work that suggests that a two-week rodent study may be sufficient to elucidate the effects of pharmaceuticals on ovarian function.

*Chairpersons:* William J. Brock, Brock Scientific Consulting, LLC and Ali Faqi, MPI Research

**9:15 AM–12:00 NOON, Ballroom J—*Heart Smart: Innovative Approaches for Improving Cardiovascular Safety through Collaboration***

The number of new drugs successfully brought to the consumer market has declined and the reasons for the decline vary. For example, adverse effects on the cardiovascular system account for attrition of approximately 30 percent of developmental compounds. Presenters will explore creative approaches researchers are using to improve the identification of cardiovascular toxicities during drug development. Presenters will also feature initiatives in which industrial, government, and academic scientists have joined and developed strategies to improve the drug discovery process.

*Chairpersons:* Cyril E. Pettit, Health and Environmental Sciences Institute (HESI) and Jean-Pierre Valentin, AstraZeneca, UK

**9:15 AM–12:00 NOON, Meeting Room 250—*Toxicology in the 21<sup>st</sup> Century: Stem Cells in Drug Discovery and Development***

Pluripotent stem cells have the potential to differentiate into any cell type in the body, which is being leveraged to change the way drugs are discovered, assessed, designed and delivered. Presenters will highlight what is known about these cells and how they are being used to understand pharmaceutical mechanisms of toxicity. Panelists will also explore the practical issues and obstacles that will need to be addressed to make regenerative, cellular therapy a reality.

*Chairpersons:* Kyle Kolaja, Hoffmann-LaRoche, Inc. and Chris Kendrick-Parker, Cellular Dynamics International

**12:10 PM–1:30 PM, Ballroom F—*Melamine Contamination of Infant Formulas: Lessons Learned***

Melamine is emerging as a poison because of two recent incidents involving melamine contamination. Panelists will talk about the 2007 contamination of pet food and the 2008 melamine contamination of baby formula. Presenters will compare the U.S. pet food contamination with the China infant formula contamination, offer risk assessment considerations and offer guidance about the use of melamine in foods.

*Chairpersons:* Wilson K. Rumbleha, Michigan State University and Madhusudan G. Soni, Vero Beach Hematology & Oncology

**1:40 PM–4:25 PM, Ballroom D—*Phthalate Reproductive and Developmental Toxicity: Implications for Cumulative Risk Assessment***

Are humans at risk because of their exposure to phthalates, a group of chemicals that are associated with solvents, plasticizers, and additives? Because people are exposed to mixtures of phthalates, conducting a cumulative human health risk assessment is important. Presenters will discuss phthalate exposures, the potential impact of phthalate exposures on human reproductive health, common adverse outcomes, and recommendations regarding the assessment of cumulative risk of human exposures to phthalates, and other chemicals.

*Chairpersons:* Susan Markris, U.S. Environmental Protection Agency (EPA) and Paul Foster, National Institute of Environmental Health Sciences (NIEHS)

**1:40 PM–4:25 PM, Ballroom G—*Signaling Mechanisms for Metabolic Dysfunction Following Low-Level Arsenic Exposures: From Mouse to Man***

Chronic low-level arsenic exposure is a major health concern. Epidemiological studies that carefully address arsenic speciation in complex exposure analysis provide evidence of arsenic-related increases in atherosclerosis, stroke, and diabetes. This symposium presents research that investigates whether low-level exposure to arsenic in drinking water change human metabolism to increase the risk of diabetes and cardiovascular disease. Studies are presented in isolated human cells and in mice that identify mechanisms that cause these metabolic changes. Identifying these mechanisms will provide better means to determine if exposed populations are at risk for chronic disease and to develop policies and tools to reduce risk and protect regional public health.

*Chairpersons:* Aaron Barchowsky, University of Pittsburgh and Richard Vaillancourt, University of Arizona

**4:35 PM–5:55 PM, Ballroom B—*Inhaled Particles: From the Nose to the Brain***

Panelists will present the latest findings regarding nose-particle-brain interactions from the viewpoint of ambient, ultra fine particles and engineered nanoparticles.

*Chairpersons:* Flemming R. Cassee, National Institute for Public Health and the Environment (RIVM) and Alison C. Elder, University of Rochester Medical Center

**4:35 PM–5:55 PM, Ballroom D—*Safety of Vitamins and Minerals: Controversies and Perspectives***

Currently, more than 47 percent of males and 59 percent of females use dietary supplements for health benefits. Numerous studies suggest that some supplements provide no health benefits and other studies suggest that supplements elicit some adverse health effects. Presenters will characterize the current state-of-the-science, review the safety of vitamin usage in terms of statutes and regulations and characterize the beneficial and adverse effects of vitamins.

*Chairpersons:* Madhusudan G. Soni, Vero Beach Hematology & Oncology and Stanley T. Omaye, University of Nevada Reno