

# Global Perspectives in Teratology

## Baltimore Maryland

### Program Agenda

#### FRIDAY, JUNE 22, 2012

- 4:00 PM–6:00 PM REGISTRATION—Grand Foyer West
- 4:00 PM–6:00 PM SPEAKER READY ROOM OPEN—Office 1
- 5:00 PM–8:00 PM COUNCIL IA MEETING—Boardroom

#### SATURDAY, JUNE 23, 2012

- 7:00 AM–6:00 PM REGISTRATION—Grand Foyer West
- 7:00 AM–6:00 PM SPEAKER READY ROOM OPEN—Office 1
- 7:30 AM–8:00 AM EDUCATION COURSE: COFFEE AND CONTINENTAL BREAKFAST—Grand Ballroom V
- 8:00 AM–12:00 Noon EDUCATION COURSE SESSION I (*Separate Registration Required*)—Grand Ballroom V  
**Maternal and Fetal Immunology: Implications for the Prevention of Birth Defects and Infections**  
*Organized by the Education Committee, Chairperson, Christine P. Curran, Northern Kentucky University*
- 8:00 AM–8:10 AM **Welcome**  
*John M. Graham Jr., Teratology Society President*
- 8:10 AM–8:40 AM **Narsingh Agnish Fellow Lecture**  
**Risk Assessment Training in Reproductive and Developmental Toxicology**  
*Carole A. Kimmel, Exponent*
- 8:40 AM–8:45 AM **Course Overview** **CME**  
*Education Committee, Chairperson, Christine P. Curran, Northern Kentucky University*
- 8:45 AM–9:30 AM **Immunology: Implications for Perinatal Infections** **CME**  
*Shawn P. Murphy, University of Rochester*
- 9:30 AM–10:15 AM **Developmental Immunology: Implications for Childhood and Adult Diseases** **CME**  
*Rodney R. Dietert, Cornell University*
- 10:15 AM–10:30 AM **Break**
- 10:30 AM–11:10 AM **Role of the Placenta in Infectious Disease during Pregnancy** **CME**  
*Richard K. Miller, University of Rochester*
- 11:10 AM–11:50 AM **Animal Modeling of Infectious Diseases during Pregnancy** **CME**  
*Mary Alice Smith, University of Georgia*
- 11:50 AM–12:00 Noon **Animal Models of Inflammation during Pregnancy** **CME**  
*Irina Burd, Johns Hopkins University*
- 12:00 Noon–1:00 PM LUNCH ON YOUR OWN

- 1:00 PM–4:30 PM**    **EDUCATION COURSE SESSION II** (*Separate Registration Required*)—**Grand Ballroom V**  
**Infections during Pregnancy: Implications for the Prevention of Birth Defects**  
*Organized by the Education Committee, Chairperson, Christine P. Curran, Northern Kentucky University*
- 1:00 PM–1:05 PM**    **Course Overview** **CME**  
*Education Committee, Chairperson, Christine P. Curran, Northern Kentucky University*
- 1:05 PM–1:50 PM**    **Infectious Agents As Human Teratogens** **CME**  
*Asher Ornoy, Hebrew University Hadassah Medical School and Israeli Ministry of Health*
- 1:50 PM–2:35 PM**    **Prevention Strategies: Lessons from around the World: Postconceptional and Postnatal Preventions—Role of Targeted Antibiotics and Antivirals** **CME**  
*Orna Diav-Citrin, Israeli Teratology Information Service, Israeli Ministry of Health*
- 2:35 PM–2:50 PM**    **Break**
- 2:50 PM–3:35 PM**    **Hypothetical Reproductive and Medical Risks before or during Pregnancy from Maternal Immunization: Alleged or Real?** **CME**  
*Robert L. Brent, duPont Hospital for Children and Thomas Jefferson University*
- 3:35 PM–4:20 PM**    **Global Threats to Mothers and Their Fetuses: Lessons from H1N1** **CME**  
*Sonja A. Rasmussen, Centers for Disease Control and Prevention*
- 4:20 PM–4:30 PM**    **Discussion**
- 4:30 PM–5:30 PM**    **FINANCE COMMITTEE MEETING**—Atlantic
- 5:30 PM–7:30 PM**    **STUDENT/POSTDOCTORAL FELLOW MIXER**—Kozmo's Lounge (Lobby Level)
- 6:30 PM–9:30 PM**    **COUNCIL IB MEETING AND COMMITTEE REPORTS/LEADERSHIP TRAINING**—Dover A

**SUNDAY, JUNE 24, 2012**

- 7:00 AM–8:15 AM DINE WITH A TERATOLOGY AMBASSADOR (*Advanced Signup Required*)
- 7:00 AM–6:00 PM REGISTRATION—Grand Foyer West
- 7:00 AM–6:00 PM SPEAKER READY ROOM OPEN—Office 1
- 8:30 AM–8:45 AM PRESIDENT’S WELCOME—Grand Ballroom V  
*John M. Graham Jr.*
- 8:45 AM–9:30 AM TS/OTIS JOINT LECTURE: JOSEF WARKANY LECTURE—Grand Ballroom V  
**An Epidemiological Enterprise: From Fluoride to Folate (L1)** **CME**  
*Chairperson: John M. Graham Jr., Cedars-Sinai Medical Center*  
*Lecturer: J. David Erickson, Centers for Disease Control and Prevention, Retired*
- 9:30 AM–12:00 Noon STUDENT/POSTDOCTORAL FELLOW PLATFORM SESSION I—Grand Ballroom V  
*Chairperson: Student Affairs Committee, Chairperson, Jane F. Rasco, University of Alabama*  
Presenting author is underlined.
- 9:30 AM–9:45 AM Introduction  
*Student Affairs Committee, Chairperson, Jane F. Rasco, University of Alabama*
- 9:45 AM–10:00 AM 1 **Severity of Nausea and Vomiting of Pregnancy (NVP) in a Cohort of Pregnant Women in the OTIS Pregnancy Registries**  
*Bharti B, Chan P, Johnson DL, Mirrasoul N, Jimenez JL, Chambers CD. University of California, San Diego, La Jolla, CA, United States.*
- 10:00 AM–10:15 AM 2 **Mechanisms of Probiotic-Induced Growth Inhibition of *Listeria monocytogenes***  
*Agyekum AK, Desai R, Edwards K, Smith MA. University of Georgia, Athens, GA, United States.*
- 10:15 AM–10:30 AM 3 **Altered Expression of Sphingolipid Metabolites and TGFβ Superfamily Genes in Fumonisin and FTY720-Treated Exencephalic Embryos**  
*Gardner NM<sup>1</sup>, Maddox JR<sup>1</sup>, Rainey MA<sup>1</sup>, Sachs AJ<sup>1</sup>, Riley RT<sup>2</sup>, Gelineau-van Waes JB<sup>1</sup>. <sup>1</sup>Dept. of Pharmacology, Creighton University School of Medicine, Omaha, NE, United States, <sup>2</sup>Toxicology and Mycotoxin Research Unit, USDA, ARS, Athens, GA, United States.*
- 10:30 AM–10:45 AM 4 **In Vivo and In Vitro Evaluation of *L. monocytogenes* Invasion during Pregnancy**  
*Roulo RM, Fishburn JD, Smith MA. University of Georgia, Athens, GA, United States.*
- 10:45 AM–11:00 AM Break (Grand Foyer West)
- 11:00 AM–11:15 AM 5 **Triazole-Induced Concentration-Related Gene Signatures in Rat Whole Embryo Culture**  
*Robinson JF<sup>1,2</sup>, Tonk ECM<sup>1,2</sup>, Verhoef A<sup>1</sup>, Hermsen SAB<sup>1</sup>, van Dartel DAM<sup>1</sup>, Pennings JLA<sup>1</sup>, Piersma AH<sup>1,3</sup>. <sup>1</sup>National Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands, <sup>2</sup>Department of Toxicogenomics, Maastricht University, Maastricht, Netherlands, <sup>3</sup>Institute for Risk Assessment Sciences (IRAS), Utrecht University, Utrecht, Netherlands.*
- 11:15 AM–11:30 AM 6 **DNA Hypermethylation Is Implicated in the Induction of Diabetic Embryopathy**  
*Xu C, Li X, Reece EA, Yang P. University of Maryland School of Medicine, Baltimore, MD, United States.*
- 11:30 AM–11:45 AM 7 **Developmental Immunotoxicity of Ethanol in EOGRTS and Juvenile Exposure Designs**  
*Tonk ECM<sup>1,2</sup>, Verhoef A<sup>1</sup>, Wolterbeek APM<sup>3</sup>, Waalkens-Berendsen IDH<sup>4</sup>, van Loveren H<sup>1,2</sup>, Piersma AH<sup>1,5</sup>. <sup>1</sup>National Institute for Public Health and the Environment, Bilthoven, Netherlands, <sup>2</sup>Maastricht University, Maastricht, Netherlands, <sup>3</sup>TNO, Zeist, Netherlands, <sup>4</sup>TNO Triskelion, Zeist, Netherlands, <sup>5</sup>Utrecht University, Utrecht, Netherlands.*
- 11:45 AM–12:00 Noon 8 **Maternal Exposure of Hydroxyurea Activates DNA Damage Response Signalling Pathways in Organogenesis Stage Mouse Embryos**  
*Banh S, Hales BF. McGill University, Montreal, QC, Canada.*

- 12:00 Noon–1:30 PM LUNCH ON YOUR OWN
- 12:00 Noon–1:30 PM PAST PRESIDENTS' AND HONOREES' LUNCHEON (*By Invitation Only*)—Dover A
- 12:00 Noon–1:30 PM PUBLIC AFFAIRS COMMITTEE MEETING—Atlantic
- 1:30 PM–2:00 PM TS/OTIS JOINT F. CLARKE FRASER NEW INVESTIGATOR AWARD—Grand Ballroom V  
**Keep It Real and Relevant: Focusing Research towards Real World Exposures and Human Relevance (L2)**  
*Chairperson: Marcia Lynn Feldkamp, University of Utah*  
*Lecturer: Robert G. Ellis-Hutchings, The Dow Chemical Company*
- 2:00 PM–2:30 PM JAMES G. WILSON PUBLICATION AWARD—Grand Ballroom V  
**Calcium-Mediated Repression of  $\beta$ -Catenin and Its Transcriptional Signaling Mediates Neural Crest Cell Death in an Avian Model of Fetal Alcohol Syndrome**  
*Chairperson: L. David Wise, Merck Research Laboratories*  
*Lecturer: Susan M. Smith, University of Wisconsin, Madison*
- 2:30 PM–5:30 PM TS/NBTS/OTIS JOINT SYMPOSIUM—Grand Ballroom V  
**Strategies for Reducing the Impact of Known Teratogens**  
*Chairpersons: Katherine L. Wisner and Gale A. Richardson, University of Pittsburgh*
- 2:30 PM–2:35 PM Introduction **CME**  
*Gale A. Richardson, University of Pittsburgh*
- 2:35 PM–3:05 PM S1 **The Potential Benefit of a Multimicronutrient Supplement in Pregnant Women Who Consume Alcohol** **CME**  
*Christina D. Chambers, University of California, San Diego*
- 3:05 PM–3:35 PM S2 **Thyroid Hormone to Reduce Impact of Gestational Alcohol Use in the Rat** **CME**  
*Eva E. Redei, Feinberg School of Medicine, Northwestern University*
- 3:35 PM–3:50 PM Break (Grand Foyer West)
- 3:50 PM–4:20 PM S3 **Antiepileptic Drugs: Cellular, Physiological, and Behavioral Evidence of Developmental Neurotoxicity** **CME**  
*Karen N. Gale, Georgetown University*
- 4:20 PM–4:50 PM S4 **Folic Acid Modifies Abnormal Phenotypes in Animal Models** **CME**  
*Richard H. Finnell, The University of Texas, Austin*
- 4:50 PM–5:10 PM **Session Wrap up and Future Directions** **CME**  
*Katherine L. Wisner, University of Pittsburgh*
- 5:10 PM–5:30 PM **Discussion** **CME**  
*Lewis B. Holmes, MassGeneral Hospital for Children*
- 5:30 PM–7:30 PM TS/NBTS JOINT WELCOME RECEPTION AND EXHIBITS OPEN—Grand Ballroom VI  
**Silent Auction**
- 7:30 PM–8:30 PM F. CLARKE FRASER AND SERVICE AWARDS COMMITTEE MEETING—Boardroom

MONDAY, JUNE 25, 2012

7:00 AM–8:15 AM DINE WITH A TERATOLOGY AMBASSADOR (*Advanced Signup Required*)

7:00 AM–8:30 AM 2013 PROGRAM COMMITTEE MEETING—Boardroom

7:00 AM–6:00 PM REGISTRATION—Grand Foyer West

7:00 AM–6:00 PM SPEAKER READY ROOM OPEN—Office 1

8:00 AM–8:00 PM EXHIBIT HALL OPEN—Grand Ballroom VI  
(*Exhibits Attended 10:45 AM–11:00 AM, 3:15 PM–3:40 PM, and 6:00 PM–8:00 PM*)

8:30 AM–9:30 AM TS/ETS EXCHANGE LECTURE—Grand Ballroom V

**Assessment of Hazard vs. Risk: A Simple Question with Big Implications***Chairperson: Susan L. Makris, US Environmental Protection Agency***Teratology Society****The Risky Business of Regulation (L3)***Linda G. Roberts, Chevron Energy Technology Company***European Teratology Society****Caution—Hazard! But Should We Worry? (L4)***Graham P. Bailey, Janssen Pharmaceutical N.V.*

9:30 AM–12:30 PM MARCH OF DIMES/PUBLIC AFFAIRS COMMITTEE SYMPOSIUM—Grand Ballroom V

**Vitamin D Deficiency in Pregnancy and Neonatal Development***Chairperson: Gloria D. Jahnke, National Institute of Environmental Health Sciences**Organized by the Public Affairs Committee in conjunction with the March of Dimes*

9:30 AM–9:35 AM

**Introduction** **CME***Gloria D. Jahnke, National Institute of Environmental Health Sciences, Chair, Public Affairs Committee*

9:35 AM–10:10 AM

S5

**The Biology of Vitamin D and Effects on Pregnancy and Neonatal Health: The Fallacy of Vitamin D As a Teratogenic Substance** **CME***Scott T. Weiss, Harvard Medical School*

10:10 AM–10:45 AM

S6

**Clinical Vitamin D Deficiency: Risk-Prone Populations for Vitamin D Deficiency***Sarah Običan, Reproductive Toxicology Center*

10:45 AM–11:00 AM

**Break (Exhibit Hall)**

11:00 AM–11:35 AM

S7

**The Science Supporting the Recommended Dietary Allowance of Vitamin D: A Risk Assessment Framework** **CME***Patsy M. Brannon, Cornell University*

11:35 AM–12:10 PM

S8

**Does Vitamin D Given during Pregnancy Reduce Preterm Birth and Pre-Eclamsia?** **CME***Scott T. Weiss, Harvard Medical School*

12:10 PM–12:30 PM

**Discussion** **CME**

9:30 AM–12:30 PM PLATFORM SESSION II—Dover A

**Cellular and Molecular Mechanisms***Chairpersons: Eve Mylchreest, Southern Research Institute and Michael A. Schellpfeffer, Medical College of Wisconsin*Presenting author is underlined.

9:30 AM–9:45 AM

**Introduction***Michael A. Schellpfeffer, Medical College of Wisconsin*

9:45 AM–10:00 AM

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**In Utero Caffeine Exposure Alters DNA Methylation Patterns in Adult Hearts***Fang X<sup>1</sup>, Wendler C<sup>1</sup>, Rivkees S<sup>1,2</sup>. <sup>1</sup>Yale University, New Haven, CT, United States, <sup>2</sup>University of Florida, Gainesville, FL, United States.*

10:00 AM–10:15 AM

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**Valproic Acid Induces p53 Hyperacetylation and Activation Leading to Increased Cellular Apoptosis in Murine Limb Buds***Paradis FH, Hales BF. McGill University, Montreal, QC, Canada.*

- 10:15 AM–10:30 AM 11 **A Model Teratogen, 2-Methoxyacetic Acid, Disrupts Epigenetic Programming Leading to Apoptosis during Limb Development *In Vitro***  
*Dayan C, Hales BF. McGill University, Montreal, QC, Canada.*
- 10:30 AM–10:45 AM 12 **Nrf2-Mediated Protection by Dietary Supplementation in Organogenesis Stage Embryos**  
*Hansen J. Emory University, Atlanta, GA, United States.*
- 10:45 AM–11:00 AM **Break (Exhibit Hall)**
- 11:00 AM–11:15 AM 13 **Embryonic DNA Repair and Gender Are Risk Factors in Ethanol Embryopathies in Oxoguanine Glycosylase 1 (Ogg1) Knockout Mice: A Role for Oxidatively Damaged DNA and Protection by a Free Radical Spin Trapping Agent**  
*Miller L, Shapiro AM, Wells PG. University of Toronto, Toronto, ON, Canada.*
- 11:15 AM–11:30 AM 14 **Developmental Consequences of Embryonic Oxidative Stress from Methamphetamine and Ethanol in BRCA1-Deficient Mice *In Vivo* or in Embryo Culture**  
*Shapiro AM, Miller L, Wells PG. University of Toronto, Toronto, ON, Canada.*
- 11:30 AM–11:45 AM 15 **The Role of 4-Hydroxy-2-Nonenal Adducts with Glyceraldehyde-3-Phosphate Dehydrogenase in Hydroxyurea-Induced Teratogenicity and Caspase-Dependent Cell Death in CD-1 Mouse Embryos**  
*Schlisser A, Hales BF. McGill University, Montreal, QC, Canada.*
- 11:45 AM–12:00 Noon 16 **Activation of Akt by Cadmium in Micromass Cultures of Mouse Embryo Limb Bud Cells**  
*Kapron CM, Backman KE, Ostler C, Wagner KE. Trent University, Peterborough, ON, Canada.*
- 12:00 Noon–12:15 PM 17 **Transcriptome and Neural Tube Defects in Nonobese Diabetic (NOD) Mice**  
*Kappen C, Salbaum JM. Pennington Biomedical Research Center, Baton Rouge, LA, United States.*
- 12:15 PM–12:30 PM 18 **Partial HIF-1a Deficiency Increases Risk of Diabetic Embryopathy**  
*Pavlinkova G<sup>1</sup>, Bohuslavova R<sup>1</sup>, Sedmera D<sup>2</sup>, Skvorova L<sup>1</sup>. <sup>1</sup>Institute of Biotechnology AS CR, Prague, Czech Republic, <sup>2</sup>Institute of Physiology AS CR, Prague, Czech Republic.*
- 12:30 PM–12:45 PM **CASH AND CARRY LUNCH AVAILABLE—Rigano’s Bakery and Deli**
- 12:45 PM–2:30 PM **GRANT FUNDING WORKSHOP—Dover A**  
**Grant Funding Workshop Organizations: Their Priorities and Upcoming Opportunities Workshop**  
*Chairperson: Elaine Z. Francis, US Environmental Protection Agency*
- 12:45 PM–1:00 PM **National Children’s Study** **CME**  
*Carol H. Kasten, Eunice Kennedy Shriver National Institute for Child Health and Development, NIH*
- 1:00 PM–1:15 PM **Eunice Kennedy Shriver National Institute of Child Health and Human Development** **CME**  
*A. Tyl Hewitt, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH*
- 1:15 PM–1:30 PM **National Institute for Environmental Health Sciences** **CME**  
*Thaddeus T. Schug, National Institute for Environmental Health Sciences*
- 1:30 PM–1:45 PM **US Food and Drug Administration** **CME**  
*Suzanne Fitzpatrick, US Food and Drug Administration*
- 1:45 PM–2:00 PM **US Environmental Protection Agency** **CME**  
*Richard L. Callan, US Environmental Protection Agency*
- 2:00 PM–2:15 PM **March of Dimes** **CME**  
*Joe Leigh Simpson, March of Dimes*
- 2:15 PM–2:30 PM **Questions and Answers** **CME**

**1:00 PM–5:30 PM TS/OTIS JOINT PREGNANCY REGISTRY WORKSHOP—Grand Ballroom I**

Chairpersons: Vincent T. Armenti, Thomas Jefferson University and  
Christina D. Chambers, University of California, San Diego

Underlined author indicates presenter.

- 1:00 PM–1:30 PM W1 Pregnancy Registries: Lessons Learned and Opportunities Ahead** **CME**  
*Melissa S. Tassinari, US Food and Drug Administration*
- 1:30 PM–1:50 PM W2 Pregnancy Registries: Focusing on Methodological Points with Examples Based on Real Data** **CME**  
*Sonia Hernandez-Diaz, Harvard School of Public Health*
- 1:50 PM–2:10 PM W3 Pregnancy Registries and REMS: Opportunities for Collaboration?** **CME**  
*Vincent T. Armenti, Thomas Jefferson University*
- 2:10 PM–2:30 PM W4 Conducting Global Pregnancy Registries: Challenges and Opportunities**  
*Deborah Covington, Pharmaceutical Product Development, Inc.*
- 2:30 PM–2:50 PM W5 How Can Pregnancy Registries Complement Other Sources of Clinical and Observational Information for Pregnancy Surveillance?**  
*Sara A. Ephross, GlaxoSmithKline*
- 2:50 PM–3:15 PM W6 Interpreting Data from Pregnancy Registries: Who, When, and How?** **CME**  
*Janet D. Cragan, Centers for Disease Control and Prevention and  
Sara H. Riordan, Navigenics, Inc.*
- 3:15 PM–3:30 PM Break (Exhibit Hall)**
- 3:30 PM–3:40 PM W7 Recruitment Efforts and Enrollment into the OTIS Actemra Pregnancy Registry**  
*Chambers CD<sup>1</sup>, Johnson DL<sup>1</sup>, Miller K<sup>2</sup>, Bezchinsky M<sup>2</sup>. <sup>1</sup>University of California, San Diego, La Jolla, CA, United States, <sup>2</sup>Genentech, South San Francisco, CA, United States.*
- 3:40 PM–3:50 PM W8 No Adverse Signals Observed after Exposure to Human Papillomavirus Type 6/11/16/18 Vaccine during Pregnancy: Five Year Pregnancy Registry Data**  
*Goss MA, Lievano E, Seminack M, Buchanan K, Dana A. Merck Research Laboratories, West Point, PA, United States.*
- 3:50 PM–4:00 PM W9 The DoD Birth and Infant Health Registry: Findings from the First Million Infants**  
*Conlin AS, Gumbs GR, Sevick CJ, Snell KJ, DeScisciolo C, Bukowski AT, Lee S, Jacobson IG, Crum-Cianflone NF. Naval Health Research Center, Deployment Health Research Department, San Diego, CA, United States.*
- 4:00 PM–4:10 PM W10 Antidepressant Use during Pregnancy and the Risk of Delay in Overall Cognitive Development at One Year Old: Results from the OTIS Antidepressants Study**  
*Berard A<sup>1,2</sup>, Karam F<sup>1,2</sup>, Sheehy O<sup>2</sup>, Huneau M-C<sup>2</sup>, Blais L<sup>1,3</sup>, Briggs G<sup>4</sup>, Chambers C<sup>5</sup>, Einarson A<sup>6</sup>, Fraser W<sup>1,2</sup>, Gaedgik A<sup>7</sup>, Jonhson D<sup>8</sup>, Kao K<sup>3</sup>, Koren G<sup>6</sup>, Martin B<sup>2</sup>, Polifka JE<sup>9</sup>, Riordan S<sup>10</sup>, Roth M<sup>11</sup>, Tremblay RE<sup>2</sup>, Voyer LS<sup>12</sup>, Wolfe L<sup>13</sup>, The OTIS Research Committee. <sup>1</sup>University of Montreal, Montreal, QC, Canada, <sup>2</sup>CHU Ste-Justine, Montreal, QC, Canada, <sup>3</sup>Sacré-Coeur Hospital, Montreal, QC, Canada, <sup>4</sup>Long Beach Memorial Center, Long Beach, CA, United States, <sup>5</sup>University of California, San Diego, CA, United States, <sup>6</sup>Hospital for Sick Children, Toronto, ON, Canada, <sup>7</sup>Children's Mercy Hospital, Kansas City, MO, United States, <sup>8</sup>California TIS, San Diego, CA, United States, <sup>9</sup>University of Washington, Seattle, WA, United States, <sup>10</sup>University of Arizona, Tucson, AZ, United States, <sup>11</sup>NYS TIS, Binghamton, NY, United States, <sup>12</sup>Connecticut Pregnancy Exposure Information Service, Farmington, CT, United States, <sup>13</sup>Texas TIS, Denton, TX, United States.*
- 4:10 PM–4:20 PM W11 Quantitative Analysis of Bias in Dysmorphology Evaluations for Minor Structural Anomalies Performed by Multiple Examiners in Research Studies**  
*Chan B Xu R, Luo Y, Jones KL, Johnson DL, Chambers CD. University of California, San Diego, La Jolla, CA, United States.*

4:20 PM–4:30 PM W12 **Topiramate: Potential Fetal Effects**  
*Holmes LB<sup>1,3</sup>, Noonan MS<sup>1,3</sup>, Harkins M<sup>1,3</sup>, Smith CR<sup>1,3</sup>, Hernandez-Dias S<sup>2,3</sup>.*  
<sup>1</sup>MassGeneral Hospital for Children, Boston, MA, United States, <sup>2</sup>Harvard School of Public Health, Boston, MA, United States, <sup>3</sup>North American AED Pregnancy Registry, Boston, MA, United States.

4:30 PM–5:15 PM **Facilitated Panel Discussion**  
 Moderator: Christina D. Chambers, University of California, San Diego

5:15 PM–5:30 PM **Summary of Workshop Conclusions and Recommendations**

2:30 PM–5:30 PM **WILEY-BLACKWELL SYMPOSIUM—Grand Ballroom V**

**Computational Embryology: Integration and Modeling of Developmental Mechanisms**

Chairpersons: Nisha S. Sipes, US Environmental Protection Agency and Barbara F. Hales, McGill University

2:30 PM–2:35 PM **Introduction** **CME**  
 Nisha S. Sipes, US Environmental Protection Agency

2:35 PM–3:00 PM S9 **Regulatory Network Controlling Limb Anterior-Posterior Patterning and Digit Identity: Bridging Steps from Early Patterned Gene Expression to Final Morphogenesis** **CME**  
 Susan Mackem, National Cancer Institute

3:00 PM–3:25 PM S10 **Multiscale, Multicell Simulations of Developmental Toxicity, Development and Developmental Diseases** **CME**  
 James A. Glazier, Indiana University

3:25 PM–3:40 PM **Break (Exhibit Hall)**

3:40 PM–5:05 PM S11 **How Does Computational Modeling Reveal Mechanisms of Cell Chain Migration?** **CME**  
 Santiago Schnell, University of Michigan

5:05 PM–5:30 PM S12 **vEmbryo: In Silico Models: Predicting Vascular Developmental Toxicity** **CME**  
 Nicole C. Kleinstreuer, US Environmental Protection Agency

5:30 PM–6:15 PM **TS/OTIS JOINT SPECIAL LECTURE—Grand Ballroom V**

**How to Communicate Data from the National Birth Defects Prevention Study**

Chairperson: Elizabeth A. Conover, University of Nebraska Medical Center

Lecturer: Antony R. Scialli, Reproductive Toxicology Center and Tetra Tech Sciences

6:00 PM–8:00 PM **TS/NBTS/OTIS JOINT POSTER SESSION I AND EXHIBITS OPEN—Grand Ballroom VI**

**Teratology Society Posters: P1–P20**

**NBTS Posters: NBTS P1–NBTS P15**

**OTIS Posters: 1–9**

8:00 PM–10:30 PM **TS/MARTA STUDENT CAREER EVENT—Grand Foyer West**

TUESDAY, JUNE 26, 2012

- 6:30 AM–7:00 AM SUNRISE MINI COURSE BREAKFAST—Grand Ballroom V
- 6:30 AM–5:00 PM SPEAKER READY ROOM OPEN—Office 1
- 7:00 AM–5:00 PM REGISTRATION—Grand Foyer West
- 7:00 AM–8:15 AM DINE WITH A TERATOLOGY AMBASSADOR (*Advanced Signup Required*)
- 7:00 AM–8:30 AM SUNRISE MINI COURSE (*Separate Registration Required*)—Grand Ballroom V  
**Understanding MicroRNAs (miRNAs) and Their Role in Human Disease and Teratogenesis**  
*Organized by the Education Committee, Chairperson, Christine P. Curran, Northern Kentucky University*
- 7:00 AM–7:45 AM **Overview of microRNAs (miRNAs) in Toxicology and Human Disease** CME  
*Anthony K.L. Leung, Johns Hopkins Bloomberg School of Public Health*
- 7:45 AM–8:30 AM **The Role of miRNAs in Development and Teratogenesis** CME  
*Rajesh C. Miranda, Texas A&M Health Science Center*
- 8:00 AM–7:30 PM EXHIBIT HALL OPEN—Grand Ballroom VI  
*(Exhibits Attended 10:55 AM–11:15 AM, 3:45 PM–4:10 PM, and 5:30 PM–7:30 PM)*
- 8:30 AM–9:30 AM TS/OTIS JOINT SPECIAL LECTURE—Grand Ballroom V  
**Congenital Malformation Studies in Chernobyl Impacted Regions of Ukraine: Lessons Learned (L5)** CME  
*Chairperson: John M. Graham Jr., Cedars-Sinai Medical Center*  
*Lecturer: Wladimir Wertelecki, OMNI-Net Ukraine Child Program and University of South Alabama*
- 9:30 AM–10:00 AM TS/NBTS JOINT SPECIAL LECTURE—Grand Ballroom III  
**Addiction: A Developmental Disorder (L6)** CME  
*Chairperson: Gregg D. Stanwood, Vanderbilt University*  
*Lecturer: Cheryl A. Boyce, National Institute of Drug Abuse*
- 10:00 AM–12:30 PM TS/NBTS JOINT SYMPOSIUM—Grand Ballroom III  
**Effects of Prenatal Methamphetamine: Clinical, Preclinical, and Translation Aspects**  
*Chairpersons: Cheryl A. Boyce, US Food and Drug Administration and Gregg D. Stanwood, Vanderbilt University*
- 10:00 AM–10:30 AM S13 **Growth and Neurodevelopmental Outcomes in Children Prenatally Exposed to Methamphetamine** CME  
*Lynne Smith, University of California, Los Angeles*
- 10:30 AM–11:00 AM S14 **Brain Imaging in Children Prenatally Exposed to Methamphetamine** CME  
*Linda Chang, University of Hawaii*
- 11:00 AM–11:15 AM **Break (Exhibit Hall)**
- 11:15 AM–11:45 AM S15 **Rat Model of Third Trimester Methamphetamine Exposure: Effects on Behavior, Neurotransmitters, and Receptors** CME  
*Charles V. Vorhees, Cincinnati Children's Hospital Medical Center*
- 11:45 AM–12:15 PM S16 **Fetal Oxidative Stress, DNA Damage and Repair in Methamphetamine Neurodevelopmental Deficits in Mice** CME  
*Peter G. Wells, University of Toronto*
- 12:15 PM–12:30 PM **Discussion: Translational Aspects: How Can Affected Children Be Treated?** CME

## 9:30 AM–12:30 PM PLATFORM SESSION III—Grand Ballroom V

**Hazard Assessment**

Chairpersons: John M. DeSesso, Exponent and Tacey E.K. White, Covance Laboratories Inc.

Presenting author is underlined.

- 9:30 AM–9:45 AM **Introduction**  
*Tacey E.K. White, Covance Laboratories Inc.*
- 9:45 AM–10:00 AM 19 **Single Low-Level Teratogenic Exposure As a Potential Risk Factor for Osteoporosis**  
*Torchinsky A, Mizrahi L, Savion S, Toder V, Kobylansky E. Tel Aviv University, Tel Aviv, Israel.*
- 10:00 AM–10:15 AM 20 **Embryo-Fetal Biodistribution of a Humanized IgG2 during Rat Organogenesis**  
*Bowman CJ, King LE<sup>2</sup>, Stedman D<sup>1</sup>. <sup>1</sup>Pfizer Drug Safety Research & Development, Groton, CT, United States, <sup>2</sup>Pfizer Pharmacokinetics, Dynamics & Metabolism, Groton, CT, United States.*
- 10:15 AM–10:30 AM 21 **Bisphenol A and Early Human Placenta *In Vitro* As Model for Implantation**  
*Sanderink JWH<sup>1,2</sup>, Garcia Pulido P<sup>1,3</sup>, Penmetsa A<sup>1</sup>, Domalski R<sup>1</sup>, Tisdale B<sup>1</sup>, Rinderknecht AL<sup>1</sup>, Miller RK<sup>1</sup>. <sup>1</sup>University of Rochester School of Medicine & Dentistry, Rochester, NY, United States, <sup>2</sup>Radboud University, Nijmegen, Netherlands, <sup>3</sup>Bristol University, Bristol, United Kingdom.*
- 10:30 AM–10:45 AM 22 **The Effects of Diesel Exhaust Particles on Neural Tube Development in the Early Stage Chicken Embryo**  
*Simsek H<sup>1</sup>, Kaya S<sup>4</sup>, Colak A<sup>2</sup>, Kutlay AM<sup>4</sup>, Cetinkal A<sup>1</sup>, Haholu A<sup>3</sup>. <sup>1</sup>Kasimpasa Military Hospital, Department of Neurosurgery, Istanbul, Turkey, <sup>2</sup>GATA Haydarpaşa Training Hospital, Department of Neurosurgery, Istanbul, Turkey, <sup>3</sup>GATA Haydarpaşa Training Hospital, Department of Pathology, Istanbul, Turkey, <sup>4</sup>GATA School of Medicine, Department of Neurosurgery, Ankara, Turkey.*
- 10:45 AM–11:00 AM 23 **A Pilot Study of Gastroschisis and Specific and Nonspecific Biomarkers for Chlamydia Infection and Inflammation**  
*Feldkamp ML<sup>1</sup>, Enioutina EY<sup>2</sup>, Byrne JLB<sup>1,3</sup>, Bareyan D<sup>4</sup>, Krikov S<sup>1</sup>, Botto LD<sup>1</sup>. <sup>1</sup>Division of Medical Genetics, Department of Pediatrics, University of Utah, Salt Lake City, UT, United States, <sup>2</sup>Division of Geriatrics, Department of Internal Medicine, University of Utah, Salt Lake City, UT, United States, <sup>3</sup>Division of Maternal Fetal Medicine, Department of Obstetrics, University of Utah, Salt Lake City, UT, United States, <sup>4</sup>Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, United States.*
- 11:00 AM–11:15 AM **Break (Exhibit Hall)**
- 11:15 AM–11:30 AM 24 **Lead Concentrations in VLBWs following Blood Transfusion Reduces Laminin-Mediated Neurite Outgrowth at Concentrations As Low As 1.3ug/dL**  
*McCaig MC, Bamford P, Tang N, He M, Bearer CF. University of Maryland Medical Center, Baltimore, MD, United States.*
- 11:30 AM–11:45 AM 25 **An *In Vitro* Adipocyte Model for Evaluating the Effects of Environmental Obesogens**  
*Watkins AM, Wood CR, Abbott BD. US EPA, ORD, NHEERL, TAD, Developmental Toxicology Branch, Research Triangle Park, NC, United States.*
- 11:45 AM–12:00 Noon 26 **Weight of Evidence Evaluation of Noncancer Health Effects after di(2-ethylhexyl)phthalate (DEHP) Exposure**  
*Makris SL, Kraft A, Segal D, Christensen K, Cooper GS. US Environmental Protection Agency, NCEA, Washington, DC, United States.*
- 12:00 Noon–12:15 PM 27 **Meta-Analysis of the Effects of Formaldehyde Exposure on the Risk of Spontaneous Abortion**  
*Bateson TF<sup>1</sup>, Glenn B<sup>1</sup>, Bayliss D<sup>1</sup>, Xu D<sup>2</sup>, Sinha B<sup>2</sup>. <sup>1</sup>US EPA, National Center for Environmental Assessment, Washington, DC, United States, <sup>2</sup>University of Maryland, Baltimore, MD, United States.*
- 12:15 PM–12:30 PM 28 **Fetal Limb Malformations Are Induced by an Environmentally-Relevant Exposure to Brominated Flame Retardants (BFRs) in Sprague-Dawley Rats**  
*Lefèvre PLC<sup>1</sup>, Ernest SE<sup>1</sup>, Berger RG<sup>1</sup>, Ma Y-Q<sup>1</sup>, Wade MG<sup>3</sup>, Robaire B<sup>2</sup>, Hales BF<sup>1</sup>. <sup>1</sup>McGill University, Depts of Pharmacology and Therapeutics, Montreal, QC, Canada, <sup>2</sup>McGill University, Depts of Pharmacology and Therapeutics and Obstetrics and Gynecology, Montreal, QC, Canada, <sup>3</sup>Health Canada, Environmental Health Science & Research Bureau, Ottawa, ON, Canada.*

**9:30 AM–12:30 PM PHARMACEUTICAL WORKSHOP SERIES—Dover A**

**Story of Drug Safety in Pregnancy: From a Cell to the Label**

*Chairperson: Kary E. Thompson, Bristol-Myers Squibb*

**9:30 AM–9:35 AM Introduction**  
*Kary E. Thompson, Bristol-Myers Squibb*

**Testicular Biomarkers**

*Chairperson: Ali Faqi, MPI Research*

**9:35 AM–9:40 AM Introduction**  
*Ali Faqi, MPI Research*

**9:40 AM–10:05 AM W13 Sperm RNAs As Surrogate Markers of Dad's Impact to the Birth of a Healthy Child**  
*Stephen A. Krawetz, Wayne State University*

**10:05 AM–10:30 AM W14 Industry Efforts to Validate Inhibin B and microRNA As Translational Testicular Toxicity Biomarkers**  
*Jane Stewart, AstraZeneca*

**10:30 AM–10:55 AM Discussion**

**10:55 AM–11:10 AM Break (Exhibit Hall)**

**Placental Transfer of Monoclonal Antibodies: Biological, Scientific, Regulatory, and Clinical Considerations**

*Chairpersons: Belen Tornesi, Abbott Laboratories and Christopher J. Bowman, Pfizer Inc.*

**11:10 AM–11:35 AM W15 Physiology of the Placenta: Differences between Species and Potential Impact to Regulatory Testing**  
*John DeSesso, Exponent*

**11:35 AM–11:45 AM W16 Evaluating the Potential for Developmental Toxicity of Monoclonal Antibodies**  
*Belen Tornesi, Abbott Laboratories*

**11:45 AM–12:10 PM W17 A Clinical Perspective: What Are the Health Risks from mAb Treatment during Pregnancy? Do Animal Studies Help to Identify These Risks?**  
*Sunanda V. Kane, Mayo Clinic College of Medicine*

**12:10 PM–12:30 PM Panel Discussion**  
*Christopher J. Bowman, Pfizer Inc.; Sunanda V. Kane, Mayo Clinic College of Medicine; John DeSesso, Exponent; Lynnnda Reid, US Food and Drug Administration; and Belen Tornesi, Abbott Laboratories*

**12:30 PM–1:30 PM LUNCH ON YOUR OWN**

**12:30 PM–1:30 PM EDUCATION COMMITTEE MEETING—Bristol**

**12:30 PM–1:30 PM PUBLICATIONS COMMITTEE MEETING—Atlantic**

**12:30 PM–1:30 PM STUDENT AFFAIRS COMMITTEE MEETING—Boardroom**

**1:30 PM–2:30 PM TS/OTIS JOINT ROBERT L. BRENT LECTURE—Grand Ballroom V**

**Do Birth Defects Increase with Assisted Reproductive Technologies?**

*Chairperson: John M. Graham Jr., Cedars-Sinai Medical Center*

*Lecturer: Joe Leigh Simpson, March of Dimes*

**2:30 PM–5:30 PM DEVELOPMENTAL EXPOSURES AND EFFECTS ON ADULT REPRODUCTIVE FUNCTION SYMPOSIUM—Grand Ballroom V**

*Chairpersons: Susan Euling, National Center for Environmental Assessment, US EPA and Mary L. Hixon, Brown University*

**2:30 PM–2:40 PM Early Life Exposures, Developmental Effects, and Adult Disease of the Reproductive System **  
*Susan Euling, National Center for Environmental Assessment, US EPA*

- 2:40 PM–3:15 PM S17 ***In Utero* Environmental Influences on Male Reproductive Disease** **CME**  
Kamin J. Johnson, A.I. duPont Hospital for Children
- 3:15 PM–3:45 PM S18 **Male and Female Reproductive Development: Elucidating Gene-Environment InterAktionen** **CME**  
Mary L. Hixon, Brown University
- 3:45 PM–4:00 PM **Break (Exhibit Hall)**
- 4:00 PM–4:30 PM S19 **Early Life Environmental Exposures and Female Reproductive Disease** **CME**  
Anna Z. Pollack, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH
- 4:30 PM–5:00 PM S20 **Early Life Environmental Exposures: Lifelong Impact on Mammary Gland Development and Function** **CME**  
Suzanne E. Fenton, National Toxicology Program, NIEHS
- 5:00 PM–5:30 PM S21 **European Secular Trends in the Timing of Puberty** **CME**  
Anders Juul, University Hospital of Copenhagen

2:30 PM–5:15 PM **TS/OTIS JOINT PLATFORM SESSION IV—Grand Ballroom I**

**Pregnancy Outcomes: Basic Science to Clinical Practice**

Chairpersons: Pexin Yang, University of Maryland School of Medicine and Sharon Voyer Lavigne, CT Pregnancy Exposure Information Service

Presenting author is underlined.

- 2:30 PM–2:45 PM **Introduction**  
Sharon Voyer Lavigne, CT Pregnancy Exposure Information Service
- 2:45 PM–3:00 PM 29 **Pregnancy Outcomes in Women Exposed to Adalimumab for the Treatment of Rheumatoid Arthritis: An Update on the OTIS Autoimmune Diseases in Pregnancy Project**  
Chambers CD, Johnson DL, Jones KL, Luo Y, Xu R, Jimenez JL, Mirrasoul N, Salas E. University of California, San Diego, La Jolla, CA, United States.
- 3:00 PM–3:15 PM 30 **Preliminary Analysis of the Impact of Micronutrient Supplements on Neurophysiological Encoding and Memory in Ukrainian Infants 12–18 Months Postpartum**  
Kable JA<sup>1</sup>, Coles CD<sup>1</sup>, Chambers CD<sup>2</sup>, Keen CL<sup>3</sup>, Uriu-Adams J<sup>3</sup>, Jones KL<sup>2</sup>, Yevtushok L<sup>4</sup>, Wertelecki W<sup>4,5</sup>, The CIFASD. <sup>1</sup>Emory University School of Medicine, Atlanta, GA, United States, <sup>2</sup>University of California, San Diego, San Diego, CA, United States, <sup>3</sup>University of California Davis, Davis, CA, United States, <sup>4</sup>OMNI-Net, Rivne, Ukraine, <sup>5</sup>University of South Alabama, Mobile, AL, United States.
- 3:15 PM–3:30 PM 32 **The Transition from the Human Embryonic Arterial Pattern Is Associated Temporally and Anatomically with Specific Skeletal Defects**  
Hootnick DR, Packard Jr. DS. SUNY Upstate Medical University, Syracuse, NY, United States.
- 3:30 PM–3:45 PM 33 **Pre-Emptive Diclectin® Treatment for Nausea and Vomiting of Pregnancy: Results of a Randomized Controlled Trial**  
Maltepe C, Koren G. Motherisk NVP Helpline, Hospital for Sick Children, Toronto, ON, Canada.
- 3:45 PM–4:00 PM **Break (Exhibit Hall)**
- 4:00 PM–4:15 PM 34 **Differing Relationships between Neighborhood Characteristics and Birth Outcomes in Urban and Rural Alabama**  
Kent ST, Gohlke JM. University of Alabama at Birmingham, Birmingham, AL, United States.

- 4:15 PM–4:30 PM 35 **Pregnancy Outcome and Child Neurodevelopment following *In Utero* Exposure to Maternal Cancer**  
*Nulman I*, Barrera M<sup>2</sup>, Maxwell C<sup>3</sup>, Koren G<sup>1</sup>. <sup>1</sup>The Motherisk Program, Division of Clinical Pharmacology, The Hospital for Sick Children, The University of Toronto, Toronto, ON, Canada, <sup>2</sup>The Hospital for Sick Children, Division of Psychology, Toronto, ON, Canada, <sup>3</sup>Department of Obstetrics and Gynaecology, Mount Sinai Hospital University of Toronto, Toronto, ON, Canada.
- 4:30 PM–4:45 PM 36 **Oxidative Stress Is Responsible for Maternal Diabetes-Induced TGF- $\beta$  Signaling in the Embryonic Heart**  
*Wang F*, Li X, Reece EA, Yang P. University of Maryland School of Medicine, Baltimore, MD, United States.
- 4:45 PM–5:00 PM 37 **Pregnancy Outcome after First Trimester Exposure to Malarone (Atovaquone-Proguanil): A Prospective Case-Series**  
*Reuvers N*<sup>1</sup>, Vial T<sup>2</sup>, Schaefer C<sup>3</sup>, Elefant E<sup>4</sup>, De Santis M<sup>5</sup>, Malm H<sup>6</sup>, *Wentges-van Holthe N*<sup>7</sup>. <sup>1</sup>Academic Medical Centre, University of Amsterdam, Amsterdam, The Netherlands, <sup>2</sup>On behalf of the French Pharmacovigilance Network, Centre de Pharmacovigilance de Lyon, Lyon, France, <sup>3</sup>Pharmakovigilanz- und Beratungszentrum Embryonaltoxikologie, Berlin, Germany, <sup>4</sup>Centre de Référence sur les Agents Tératogènes Hôpital Trousseau, Paris, France, <sup>5</sup>Department of Obstetrics & Gynecology, Catholic University of Sacred Heart, Rome, Italy, <sup>6</sup>Teratology Information Service, HUSLAB and Helsinki University Central Hospital, Helsinki, Finland, <sup>7</sup>Teratology Information Service, The Netherlands Pharmacovigilance Centre Lareb, 's-Hertogenbosch, The Netherlands.
- 5:00 PM–5:15 PM 38 **Agreement between Self-Reported Drug Use and Urine Toxicology Screens among Pregnant Women**  
*Garg M*, Leeman L, Cano S, Wohlert E, Goff C, Rayburn W, Bakhireva L. University of New Mexico Health Sciences, Albuquerque, NM, United States.

2:30 PM–4:45 PM PHARMACEUTICAL WORKSHOP SERIES (*con't.*)—Dover A

**Story of Drug Safety in Pregnancy: From a Cell to the Label**

Chairperson: *Mary Ellen McNerney, Bristol-Myers Squibb*

- 2:30 PM–2:35 PM **Introduction**  
*Mary Ellen McNerney, Bristol-Myers Squibb*

**Options for Rapid Progression into Clinical Trials with Women of Child Bearing Potential**

- 2:35 PM–2:40 PM **Introduction**  
*Jane Stewart, AstraZeneca, Chairperson*
- 2:40 PM–3:00 PM W18 **Strategic Use of the ICH M3(R2) Preliminary Embryo-Fetal Developmental Study Design**  
*Sandra L. Wood, Merck Research Laboratories*
- 3:00 PM–3:15 PM W19 **Effective Contraception in Clinical Trials**  
*Jane Stewart, AstraZeneca*
- 3:15 PM–3:30 PM W20 **Drug-Drug Interaction Considerations for Contraception Choices**  
*Glenn Carlson, AstraZeneca*
- 3:30 PM–3:55 PM **Discussion**
- 3:55 PM–4:10 PM **Break (Exhibit Hall)**

**Harmonization of Postmarketing Surveillance Studies and Labeling**

- 4:10 PM–4:15 PM **Introduction**  
*Diego F. Wyszynski, Amgen Inc., Chairperson*
- 4:15 PM–4:45 PM W21 **Pregnancy Data Labeling Challenges: A Discussion with US FDA Perspective**  
*Tammie Howard, US Food and Drug Administration*

5:30 PM–7:30 PM POSTER SESSION II AND EXHIBITS OPEN—Grand Ballroom VI

Teratology Society Posters: P21–P48

7:30 PM–8:30 PM WEB SITE COMMITTEE MEETING—Board Room

## WEDNESDAY, JUNE 27, 2012

- 6:30 AM–7:30 AM TERATOLOGY SOCIETY 31ST ANNUAL VOLLEYBALL GAME—Baltimore Beach
- 7:00 AM–8:15 AM DINE WITH A TERATOLOGY AMBASSADOR (*Advanced Signup Required*)
- 7:00 AM–8:30 AM BDRB EDITORIAL BOARD MEETING—Atlantic
- 7:00 AM–8:30 AM SCIENCE COMMITTEE MEETING—Bristol
- 7:00 AM–3:00 PM REGISTRATION—Grand Foyer West
- 7:00 AM–3:00 PM SPEAKER READY ROOM OPEN—Office 1
- 8:30 AM–9:30 AM TS/NBTS JOINT SPECIAL LECTURE—Grand Ballroom V  
**The Consequences of Barriers to Prenatal Care in Less Developed Countries: Important Lessons for Everyone (L8)** **CME**  
*Chairperson: Edward W. Carney, The Dow Chemical Company*  
*Lecturer: Janet R. Hardy, Consultant in Global Maternal, Reproductive & Child Health Research*
- 9:30 AM–12:30 PM ILSI HESI SYMPOSIUM—Grand Ballroom V  
**Predictive Toxicology: Screening Tools and Mechanistic Support**  
*Chairpersons: Thomas B. Knudsen, US Environmental Protection Agency and Robert G. Ellis-Hutchings, The Dow Chemical Company*
- 9:30 AM–9:35 AM **Introduction**  
*Robert G. Ellis-Hutchings, The Dow Chemical Company*
- 9:35 AM–10:10 AM S22 **Predictive Developmental Toxicity: Profiles and Modes of Action**  
*George P. Daston, Procter and Gamble Company*
- 10:10 AM–10:45 AM S23 **Species-Specific Predictive Signatures of Developmental Toxicity Using the ToxCast™ Chemical Library** **CME**  
*Nisha S. Sipes, US Environmental Protection Agency*
- 10:45 AM–11:15 AM **Warkany Tea (30 Minutes)**
- 11:15 AM–11:50 AM S24 **Zebrafish As a Model for Predicting Developmental Toxicity**  
*Donald B. Stedman, Pfizer Global Research & Development*
- 11:50 AM–12:25 PM S25 **Approaches for Predicting Developmental Toxicity: An Integrated Testing Strategy** **CME**  
*Aldert H. Piersma, National Institute for Public Health and the Environment (RIVM)*
- 12:25 PM–12:30 PM **Discussion** **CME**  
*Thomas B. Knudsen, US Environmental Protection Agency*
- 9:30 AM–12:30 PM SOCIETY OF MATERNAL FETAL MEDICINE ROUNDTABLE—Dover A  
*Chairperson: Michael F. Greene, MassGeneral Hospital*  
Underlined author indicates presenter.
- 9:30 AM–9:35 AM **Introduction**  
*Michael F. Greene, MassGeneral Hospital*
- 9:35 AM–10:30 AM **First Trimester Aneuploidy Screening in Pregnancy** **CME**  
*Karen J. Blakemore, Johns Hopkins Medicine*
- 10:30 AM–10:45 AM R1 **Methotrexate for Ectopic Pregnancy**  
*Hyoun S<sup>1</sup>, Običan S<sup>2</sup>, Scialli A<sup>3</sup>. <sup>1</sup>George Washington University School of Medicine and Health Sciences, Washington DC, United States, <sup>2</sup>George Washington University Department of Obstetrics and Gynecology, Washington DC, United States, <sup>3</sup>Tetra Tech Sciences, Arlington, VA, United States.*
- 10:45 AM–11:15 AM **Warkany Tea (30 Minutes)**
- 11:15 AM–11:30 AM R2 **Counseling About Risks of Congenital Anomalies from Prescription Opioids**  
*Brennan MC, Mozurkewich EL, Rayburn WF. University of New Mexico, Albuquerque, NM, United States.*

- 11:30 AM–11:45 AM R3 **Prenatal Alcohol Exposure Impacts Information Processing and Memory in Ukrainian Infants 12–18 Months Postpartum**  
*Kable JA<sup>1</sup>, Coles CD<sup>1</sup>, Chambers CD<sup>2</sup>, Keen CL<sup>3</sup>, Uriu-Adams J<sup>3</sup>, Jones KL<sup>2</sup>, Yevtushok L<sup>4</sup>, Wertelecki W<sup>4,5</sup>, The CIFASD<sup>2</sup>. <sup>1</sup>Emory University School of Medicine, Atlanta, GA, United States, <sup>2</sup>University of California, San Diego, San Diego, CA, United States, <sup>3</sup>University of California at Davis, Davis, CA, United States, <sup>4</sup>OMNI-Net Center, Rivne, Ukraine, <sup>5</sup>University of South Alabama, Mobile, AL, United States.*
- 11:45 AM–12:00 Noon R4 **Micronutrient Supplements Can Mitigate the Teratogenic Effects of Prenatal Alcohol Exposure on Ukrainian Infants at Six Months**  
*Coles CD<sup>1</sup>, Chambers CD<sup>2</sup>, Yevtushok L<sup>3</sup>, Zymak-Zakutnya N<sup>4</sup>, Wertelecki W<sup>3,4</sup>, Keen CL<sup>5</sup>, Uriu-Adams JY<sup>5</sup>, Kable JA<sup>1</sup>, Jones KL<sup>2</sup>, The CIFASD<sup>2</sup>. <sup>1</sup>Emory University School of Medicine, Atlanta, GA, United States, <sup>2</sup>University of California, San Diego, San Diego, CA, United States, <sup>3</sup>OMNI-Net Center, Rivne, Ukraine, <sup>4</sup>OMNI-Net Center, Khmelnytsky, Ukraine, <sup>5</sup>University of California, Davis, Davis, CA, United States.*
- 12:00 Noon–12:15 PM R5 **The Effect of Copper Deficiency on Placental Growth and Antioxidant Capacity in the Cohen Diabetic Rat Model**  
*Ergaz Z<sup>1,2</sup>, Fudim L<sup>1</sup>, Zangen SW<sup>1</sup>, Ornoy A<sup>1</sup>. <sup>1</sup>Hebrew University Hadassah Medical School, Jerusalem, Israel, <sup>2</sup>Hebrew University Medical Center Hebrew University Hadassah Medical Center, Jerusalem, Israel.*
- 12:15 PM–12:30 PM R6 **Vitamin D Supplementation and Neonatal Outcomes in Term Pregnancies**  
*Baghlaif H, Wheeler S, Werner E, Fox H, Burd I, Althaus J. Johns Hopkins University, Baltimore, MD, United States.*

10:00 AM–12:00 Noon **NATIONAL CHILDREN'S STUDY POSTER SESSION—Grand Ballroom I**  
**National Children's Study Posters: NCS P1–NCS P6**

10:45 AM–11:15 AM **WARKANY TEA—Grand Foyer West**

12:30 PM–1:30 PM **LUNCH ON YOUR OWN**

12:30 PM–12:45 PM **CASH AND CARRY LUNCH AVAILABLE—Rigano's Bakery and Deli**

12:45 PM–4:00 PM **NATIONAL CHILDREN'S STUDY PROGRAM**

**National Children's Study Symposium—Grand Ballroom I**

*Chairpersons: Christina D. Chambers, University of California, San Diego and Melissa S. Tassinari, US Food and Drug Administration*

- 12:45 PM–12:50 PM **Welcome**  
*Christina D. Chambers, University of California, San Diego*
- 12:50 PM–1:10 PM **The National Children's Study: Present and Future**  
*Steven Hirschfeld, National Children's Study, NIH*
- 1:10 PM–1:35 PM **National Children's Study Biorepository: Past, Present, and Future**  
*Jack Moye, National Children's Study, NICHD*
- 1:35 PM–2:00 PM NCS2 **'Omics Sciences in National Children's Study**  
*Kjersti Aagaard-Tillery, Baylor College of Medicine*
- 2:00 PM–2:15 PM **Break (Grand Foyer West)**

**National Children's Study Workshop I: Genetics and Stem Cells—Grand Ballroom I**

*Chairpersons: Christopher J. Stodgell, University of Rochester and Carol H. Kasten, Eunice Kennedy Shriver National Institute for Child Health and Development, NIH*

- 2:15 PM–2:20 PM **Welcome**  
*Christopher J. Stodgell, University of Rochester*
- 2:20 PM–2:35 PM NCS3 **The Effects of Time and Temperature on Neonatal Hematopoietic and Mesenchymal Stem Cell Populations: National Children's Study Project 2-18**  
*Cheryl K. Walker, University of California, Davis*
- 2:35 PM–2:50 PM NCS4 **Heritability of Genotypes and DNA Methylation Patterns: The Use of National Children's Study Archived Blood Samples As a Source of DNA for Whole-Genome SNP, Copy Number Variation, and DNA Methylation Analysis**  
*Stewart MacLead, University of Arkansas*

- 2:50 PM–3:05 PM NCS5 **Genetic Ancestry and Diversity of Participants in the National Children's Study**  
*Kelly A. Frazer, University of California, San Diego*
- 3:05 PM–3:20 PM NCS6 **Gene Expression in the Human Placenta As a Function of Time: A National Children's Study Formative Research Project**  
*Christopher J. Stodgell, University of Rochester*
- 3:20 PM–3:35 PM NCS7 **Lab Experience: Measuring Genomic Imprinting Status and MicroRNA Expression in Human Placentas of the National Children's Study**  
*Luca Lambertini, Mount Sinai School of Medicine*
- 3:35 PM–4:00 PM NCS8 **Next Generation Epigenomics and Transcriptomics in the National Children's Study**  
*Kjersti M. Aagaard-Tillery, Baylor College of Medicine*

**National Children's Study Workshop II: Pregnancy and Environmental Concerns—Grand Ballroom III**

*Chairpersons: Richard K. Miller, University of Rochester and Jack Moye, National Children's Study, NICHD*

- 2:15 PM–2:20 PM **Welcome**  
*Richard K. Miller, University of Rochester*
- 2:20 PM–2:35 PM NCS9 **Field Experience: Use of the Human Placenta As a Biomarker for Environmental Exposures, Epigenetic, and Morphological Assessments in the National Children's Study**  
*Richard K. Miller, University of Rochester*
- 2:35 PM–2:50 PM NCS10 **Validation of ICP-MS for the Quantitative Analysis of Traditional and Emerging Environmental Toxic and Nutritional Metals in Human Placenta from the National Children's Study**  
*Thomas Darrah, University of Massachusetts-Boston*
- 2:50 PM–3:05 PM NCS11 **Bisphenol A: Ultrasensitive Detection by MRM LC-MS/MS in Human Placentae from the National Children's Study**  
*Lizabeth L. Hoffman, University of Rochester*
- 3:05 PM–3:20 PM NCS12 **Urine Iodine in Pregnant Women Enrolled in the National Children's Study**  
*Kathleen Caldwell, Centers for Disease Control and Prevention*
- 3:20 PM–3:35 PM NCS13 **Exposure to Environmental Phenols in Pregnant Women Enrolled in the National Children's Study**  
*Mary E. Mortensen, Centers for Disease Control and Prevention*
- 3:35 PM–4:00 PM NCS14 **Persistent and Bioaccumulative Environmental Organic Pollutants in Human Placenta: National Children's Study Placental Pilot Study**  
*Shyamalee Dassanayake, University of Illinois, Chicago*

**National Children's Study Workshop III: Pregnancy—Exposures, Pathology, and Assessments—Dover A**

*Chairpersons: Elaine M. Faustman, University of Washington and Carl V. Hill, National Children's Study, NICHD*

- 2:15 PM–2:20 PM **Welcome**  
*Elaine M. Faustman, University of Washington*
- 2:20 PM–2:30 PM NCS15 **Evaluation of Environmental Study Visit Measures in the Initial National Children's Vanguard Study**  
*Carol H. Kaston, Eunice Kennedy Shriver National Institute for Child Health and Development, NIH*
- 2:30 PM–2:45 PM NCS16 **Measuring Placenta: A Comparison of the National Collaborative Perinatal Project and the National Children's Study: 50 Years of Progress**  
*Caroline M. Salafia, Placenta Analytics, LLC*
- 2:45 PM–3:00 PM NCS17 **Cost-Effective, Reproducible, and Reliable Automated Diagnosis of Intraamniotic Infection for Population from Placentae in the National Children's Study**  
*Dawn P. Misra, Wayne State University*
- 3:00 PM–3:15 PM NCS18 **Development and Implementation of a Visit Instrument to Assess Physical Variations and Dysmorphology in the National Children's Study**  
*John C. Carey, University of Utah*
- 3:15 PM–3:30 PM NCS19 **The Bayley, Babies and Baseline Data: An Update on the Development of the Bayley-III Short Form for the National Children's Study**  
*Carol Andreassen, Westat*

3:30 PM–3:45 PM NCS20 **Saliva As a Biospecimen in the National Children's Study: Prospects and Possibilities**

*Douglas A. Granger, Johns Hopkins University*

3:45 PM–4:00 PM NCS21 **Organic Chemicals Found in Settled Household Dust Collected in San Diego County by Nontargeted Analysis**

*Eunha Hoh, San Diego University*

1:30 PM–4:00 PM **PLATFORM SESSION V—Grand Ballroom V**

**New Methods and Models**

*Chairpersons: Belen Tornesi, Abbott Laboratories and Christopher J. Bowman, Pfizer Inc.*

Presenting author is underlined.

- 1:30 PM–1:45 PM **Introduction**  
*Christopher J. Bowman, Pfizer Inc.*
- 1:45 PM–2:00 PM 39 **Assessment of Developmental Exposure to Pediatric Anesthetics Using MicroPET Imaging**  
*Slikker W<sup>1</sup>, Zhang X<sup>1</sup>, Newport G D<sup>1</sup>, Paule MG<sup>1</sup>, Liu F<sup>1</sup>, Berridge MS<sup>2</sup>, Kabalka G<sup>3</sup>, Wang C<sup>1</sup>. <sup>1</sup>NCTR, US FDA, Jefferson, AR, United States, <sup>2</sup>3D Imaging, Little Rock, AR, United States, <sup>3</sup>The University of Tennessee, Knoxville, TN, United States.*
- 2:00 PM–2:15 PM 40 **Inhibition of the Glucocorticoid Receptor Protects against Arsenic-Induced Birth Defects**  
*Ahir BK, Sanders AP, Fry RC. Department of Environmental Sciences and Engineering, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, United States.*
- 2:15 PM–2:30 PM 41 **Linking ToxCast™ Signatures with Functional Consequences: Proof-of-Concept Study Using Known Inhibitors of Vascular Development**  
*Ellis-Hutchings RG<sup>1</sup>, Settivari RS<sup>1</sup>, McCoy AT<sup>1</sup>, Kleinstreuer NC<sup>2</sup>, Marshall VA<sup>1</sup>, Knudsen TB<sup>2</sup>, Carney EW<sup>1</sup>. <sup>1</sup>The Dow Chemical Company, Midland, MI, United States, <sup>2</sup>NCCT, US EPA, Research Triangle Park, NC, United States.*
- 2:30 PM–2:45 PM **Break (Grand Foyer West)**
- 2:45 PM–3:00 PM 42 **Cardiovascular Defects Induced by 6-Aminonicotinamide in a Validation Study with NZW Rabbits**  
*White TEK<sup>1</sup>, Simmons SJ<sup>1</sup>, Noteboom SA<sup>1</sup>, Qualls CD<sup>1</sup>, Chmielewski G<sup>1</sup>, Harris SB<sup>2</sup>, Ivett JL<sup>1</sup>. <sup>1</sup>Covance Laboratories Inc., Greenfield, IN, United States, <sup>2</sup>SBH Group, San Diego, CA, United States.*
- 3:00 PM–3:15 PM 43 **Comparison of Birth- and Conception-Based Definitions of Postnatal Age in Developmental and Reproductive Rodent Toxicity Studies: Influence of Gestation Length and Timing of Neonatal Examinations on Litter Data in Controls**  
*Narotsky MG. US Environmental Protection Agency, ORD, Toxicity Assessment Division, Research Triangle Park, NC, United States.*
- 3:15 PM–3:30 PM 44 **Role of Ethanol in Enhancing Fluconazole-Related Teratogenic Effects**  
*Menegola E, Giavini E, Di Renzo F. Università degli Studi di Milano, Department of Biology, Milan, Italy.*
- 3:30 PM–3:45 PM 45 **Visualization of Vasculature in the Early Human Placenta: Whole Mount vs. Classical Immunohistochemistry (IHC)**  
*Siebert AL, Bushway ME, Gerber SA, Katzman PJ, Lord EM, Miller RK, Murphy SP. University of Rochester School of Medicine & Dentistry, Rochester, NY, United States.*
- 3:45 PM–4:00 PM 46 **VPA-Related Neural Tube Defects: An Histological Approach to Describe the Pathogenesis of Exencephaly in CD1 Mice**  
*Di Renzo F, Giavini E, Menegola E. Università degli Studi di Milano, Department of Biology, Milan, Italy.*

4:15 PM–5:45 PM **BUSINESS MEETING AND STRATEGIC PLANNING REPORT—Grand Ballroom V**

6:30 PM–7:30 PM **BANQUET RECEPTION—Grand Foyer West**

7:30 PM–11:00 PM **BANQUET—Grand Ballroom VI**

**Travel Awards**

**James C. Bradford Memorial Student Poster Awards**

**Wilson Presentation Awards**

**Marie Taubeneck Award**

**Distinguished Service Award**

**THURSDAY, JUNE 28, 2012**

**7:00 AM-10:00 AM COUNCIL II MEETING—Boardroom**