



46th Annual Meeting

Program Agenda

SATURDAY, JUNE 24, 2006

- 9:00 AM–12:00 PM **COUNCIL 1A MEETING**—Executive Board Room
- 11:30 AM–5:00 PM **REGISTRATION**—Grand Ballroom Foyer
- 1:00 PM–4:50 PM **EDUCATION COURSE** (*Separate registration required*)—Salon B
Vertebrate Embryology
Organized by the Education Committee: Gloria Jahnke, Chairperson
Coursebooks provided by Charles River Laboratory Preclinical Services—CTBR
Breaks co-sponsored by Covance, DuPont Haskell Laboratory for Health and Environmental Science, and Gene Logic Laboratories
- 1:00 PM–1:10 PM **Welcome**
Melissa S. Tassinari, President, Teratology Society
- 1:10 PM–1:15 PM **Introduction**
Speaker: Gloria Jahnke, Sciences International, Inc.
- 1:15 PM–1:25 PM **Narsingh Agnish Fellowship**
Speaker: Narsingh Agnish
- 1:25 PM–2:10 PM **Comparative Cleavage & Gastrulation**
Speaker: Gary C. Schoenwolf, University of Utah
- 2:10 PM–2:55 PM **Brain-Neural Tube Development**
Speaker: Richard H. Finnell, Institute of Biosciences and Technology
- 2:55 PM–3:20 PM **Break**
- 3:20 PM–4:05 PM **Craniofacial Development**
Speaker: Lori Kotch, John Hopkins University School of Medicine
- 4:05 PM–4:50 PM **Skeletal Development (Including Limb)**
Speaker: Michael D. Collins, UCLA School of Public Health
- 6:30 PM–9:00 PM **COUNCIL 1B MEETING (COMMITTEE REPORTS)**—Executive Board Room

SUNDAY, JUNE 25, 2006

- 7:30 AM–8:00 AM **EDUCATION COURSE COFFEE AND CONTINENTAL BREAKFAST**—Grand Ballroom Foyer
- 8:00 AM–7:00 PM **REGISTRATION**—Grand Ballroom Foyer

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8:00 AM–11:25 AM **EDUCATION COURSE** (Continued from Saturday)—Salon B

Vertebrate Embryology

8:00 AM–8:45 AM

Heart Development

Speaker: John DeSesso, Mitretek Systems

8:45 AM–9:30 AM

Urogenital Development

Speaker: Kok-Wah Hew, Emisphere Technologies, Inc.

9:30 AM–9:55 AM

Break

9:55 AM–10:40 AM

Xenopus Model

Speaker: Chris Wylie, Cincinnati Children's Hospital Medical Center

10:40 AM–11:25 AM

Zebra Fish Model

Speaker: Kim Brannen, Bristol-Myers Squibb

11:25 AM–2:00 AM

Networking and Lunch on Own

2:00 PM–5:00 PM **TS/NBTS JOINT SYMPOSIUM**—Salon B

Early Exposures: Childhood Behavior Disorders

Chairs: Cynthia F. Bearer, Case Western Reserve University and Jane Adams, University of Massachusetts

2:00 PM–2:40 PM

S1

Autism: Parsing Heterogeneity of Causes and Features

Speaker: Martha Herbert, Massachusetts General Hospital

2:40 PM–3:20 PM

S2

Biomarkers of Prenatal Alcohol Exposure Correlate with Poor Developmental Outcomes

Speaker: Cynthia F. Bearer, Case Western Reserve University

3:20 PM–3:40 PM

Break

3:40 PM–4:20 PM

S3

Low Level Lead Exposure and the Risk of Delinquency: It's Not Just Cognition that's Affected

Speaker: Herbert L. Needleman, University of Pittsburgh School of Medicine

4:20 PM–5:00 PM

S4

Neuropsychological Deficits in Neonatal Dietary Manganese Exposure

Speaker: Francis M. Crinella, University of California—Irvine

2:00 PM–5:00 PM **INTERNATIONALLY HARMONIZED UPDATES TO "TERMINOLOGY OF DEVELOPMENTAL ABNORMALITIES, VERSION 1" SYMPOSIUM**—Salon A

Chairs: Susan Makris U.S. Environmental Protection Agency and Howard Solomon, GlaxoSmithKline

2:00 PM–2:40 PM

S5

Introduction, Background, and Current Status of Terminology Update

Speaker: Susan Makris, U.S. Environmental Protection Agency

2:40 PM–3:20 PM

S6

Terminology Revision—A European Perspective

Speaker: Jochen Buschmann, Fraunhofer-Institute for Toxicology and Experimental Medicine

3:20 PM–3:40 PM

Break

3:40 PM–4:20 PM

S7

A Japanese Perspective on Terminology Revision

Speaker: Kohei Shiota, Kyoto University Graduate School of Medicine

4:20 PM–5:00 PM

S8

An Introduction to: "Terminology of Developmental Abnormalities, Version 2"

Speaker: Howard Solomon, GlaxoSmithKline

5:00 PM–6:15 PM **WELCOME RECEPTION AND EXHIBITS OPEN**—Kiva Ballroom

Co-sponsored by Gene Logic Laboratories and MPI Research

MONDAY, JUNE 26, 2006

7:00 AM–8:00 AM **2007 PROGRAM COMMITTEE MEETING**—Executive Boardroom

7:00 AM–8:00 AM **STUDENT AFFAIRS COMMITTEE MEETING**—Sabino

7:30 AM–8:00 AM **COFFEE AND CONTINENTAL BREAKFAST**—Kiva Ballroom

8:00 AM–5:00 PM **REGISTRATION**—Grand Ballroom Foyer

8:00 AM–8:10 AM **PRESIDENT'S WELCOME**—Salon B

Melissa S. Tassinari, Teratology Society President

8:10 AM–9:00 AM **JOSEF WARKANY LECTURE**—Salon B

Genomics and Assessment of Developmental Risks

George P. Daston, Procter & Gamble Company

9:00 AM–9:30 AM **JAMES G. WILSON PUBLICATION AWARD**—Salon B

Investigations of the Genomic Region that Contains the *clf1* Mutation, a Causal Gene in Multifactorial Cleft Lip and Palate in Mice

Diana M. Juriloff, University of British Columbia

9:30 AM–9:45 AM **COFFEE BREAK**—Grand Ballroom Foyer

9:45 AM–11:30 AM **STUDENT PLATFORM SESSION**—Salon B

Chair: Wafa A. Harrouk, U.S. Food and Drug Administration

9:45 AM–10:00 AM 1 **Safety of Leukotriene Receptor Antagonists in Pregnancy**

Bakhireva LN, Jones KL, Chambers CD. OTIS Collaborative Research Group. University of California, San Diego, La Jolla, CA, United States.

10:00 AM–10:15 AM 2 **Vitamin K Homeostasis May be Required for Yolk Sac Angiogenesis**

*Weston AD¹, Navetta K², Brown NA³, Ozolins TR¹.
¹Investigative and Developmental Toxicology, Pfizer Global Research and Development, Groton, CT, United States,*

²Molecular Investigative Toxicology, Pfizer Global Research and Development, Groton, CT, United States, ³Division of Basic Medical Sciences, St. George's University of London, London, United Kingdom.

10:15 AM–10:30 AM 3 **Molecular Characterization of Alcohol-Related Birth Defects in Two Closely Related Lineages of C57BL/6 Mice (B6N, B6J)**

Green ML, Singh AV, Zhang Y, Knudsen TB. University of Louisville, Louisville, KY, United States.

10:30 AM–10:45 AM 4 **Altered Gene Expression in Both Ectoderm and Mesoderm are Associated with a Murine Strain Difference in Retinoic Acid-Induced Forelimb Ectrodactyly in Retinoic Acid-Induced Forelimb Ectrodactyly**

Shimizu H¹, Lee GS², Collins MD^{1,2}. ¹UCLA School of Public Health, Los Angeles, CA, United States, ²UCLA Molecular Toxicology Interdepartmental Program, Los Angeles, CA, United States.

10:45 AM–11:00 AM 5 **Mechanism Underlying Arsenic-Induced Neural Tube Defects in a Mouse Model**

Hill DS, Wlodarczyk BJ, Finnell RH. CEGM, Institute of Biosciences and Technology, Texas A&M University SHSC, Houston, TX, United States.

- 11:00 AM–11:15 AM 6 **Combining Microarrays with Comparative Genomics to Elucidate Gene Regulatory Networks for Normal and Perturbed Forebrain Development**
Gohlke JM, Parham FM, Portier CJ. NIEHS, Chapel Hill, NC, United States.
- 11:15 AM–11:30 AM 7 **Immunological and Pathological Effects of *Listeria monocytogenes* Infection in Pregnant Guinea Pigs**
Irvin EA¹, Williams D¹, Voss KA², Smith MA¹. ¹University of Georgia, Athens, GA, United States, ²U.S. Department of Agriculture–ARS, Athens, GA, United States
- 11:30 AM–12:00 PM **F. CLARKE FRASER AWARD—Salon B**
Christina D. Chambers, University of California—San Diego, San Diego, CA
- 12:00 PM–1:00 PM **PAST PRESIDENTS' LUNCH (By invitation only)—Executive Boardroom**
- 12:00 PM–1:00 PM **LUNCH ON OWN**
- 12:30 PM–7:30 PM **POSTERS AND EXHIBITS OPEN—Kiva Ballroom**
(Attended 6:00 PM–7:30 PM)
- 1:00 PM–3:30 PM **TS/NBTS JOINT SYMPOSIUM—Salon A**
Endocrine Disruption: From Animal to Human Studies
Chairs: Elaine Z. Francis, U.S. Environmental Protection Agency and Mari Golub, University of California—Davis
- 1:00 PM–1:30 PM S9 **The “Phthalate Syndrome” In Rodents: Have We Identified the Human Analog?**
Speaker: Shanna H. Swan, University of Rochester
- 1:30 PM–2:00 PM S10 **PCBs and Auditory Function: From Animal Models to Human Infants**
Speaker: Susan Schantz, University of Illinois—Urbana
- 2:00 PM–2:30 PM S11 **Human and Animal Studies of Pubertal Development Following Perinatal Exposure to PBBs**
Speaker: Michele Marcus, Emory University
- 2:30 PM–3:00 PM S12 **Fetal Exposure to Dioxin Disrupts Progesterone Responsiveness in the Adult Murine Uterus: Implications for the Development of Endometriosis in Humans**
Speakers: Kevin G. Osteen, Vanderbilt University School of Medicine
- 3:00 PM–3:10 PM S13 **Genetic and Environmental Risk Factors for Hypospadias**
Speaker: Jeanne Manson, The Children's Hospital of Philadelphia
- 3:10 PM–3:30 PM **Panel Discussion: Problems and Solutions in Moving from Animal to Human Studies**
Discussion Leader: Jeanne Manson, The Children's Hospital of Philadelphia
- 1:00 PM–2:00 PM **ROBERT L. BRENT LECTURE—TERATOGEN UPDATE—Salon B**
Chair and Commentator: Robert L. Brent, Alfred I. duPont Hospital for Children
Of Mice, Men, Monkeys, and Metabolism: An Update on the Developmental Toxicity of Methanol (Abstract S13A)
John Rogers, U.S. Environmental Protection Agency

2:00 PM–3:30 PM

TS/OTIS JOINT PLATFORM SESSION—Salon B

Chairs: Lewis B. Holmes, Massachusetts General Hospital for Children and Kenneth Lyons Jones, University of California—San Diego

- 2:00 PM–2:15 PM 8 **Increased Risk for Non-Syndromic Cleft Palate Among Infants Exposed to Lamotrigine During Pregnancy**
Holmes LB, Wyszynski DF, Baldwin EJ, Habecker E, Glassman LH, Smith CR. North American AED Pregnancy Registry, MassGeneral Hospital for Children, Boston, MA, United States.
- 2:15 PM–2:30 PM 9 **Outcomes of Human Pregnancies with Levetiracetam Exposure**
ten Berg K¹, Van Oppen ACC¹, Van Donselaar CA¹, Wentges-Van Holthe JM², Koppe WM³, Tamminga P⁴, Lindhout D¹. ¹University Medical Center Utrecht, Utrecht, Utr, Netherlands, ²National Institute for Public Health and the Environment, Bilthoven, Utr, Netherlands, ³Bethesda Hospital, Hoogeveen, Dr, Netherlands, ⁴Academic Medical Center, Amsterdam, NH, Netherlands.
- 2:30 PM–2:45 PM 10 **Seasonal Conceptions in Neural Tube Defects, Schizophrenia and Hemispheric Laterality: Evidence Implicating Differential Embryonic Survival**
Marzullo G. Per Aspera Research Foundation, New York, NY, United States.
- 2:45 PM–3:00 PM 11 **Risk of Congenital Malformations in Pregnant Users of NSAIDs**
Ofori B^{1,2}, Oraichi D², Berard A^{1,2}. ¹Faculty of Pharmacy, University of Montreal, Montreal, QC, Canada, ²Sainte Justine Hospital, Montreal, QC, Canada.
- 3:00 PM–3:15 PM 12 **Failure of Pregnancy Prevention for Category X Medications: the Example of Leflunomide**
Tassinari E¹, Johnson D², Chambers CD², Jones KL², OTIS Collaborative Research Group². ¹George Washington University, Washington DC, United States, ²University of California San Diego, La Jolla, CA, United States.
- 3:15 PM–3:30 PM 13 **Neurodevelopmental Outcome in Children of Women Treated with Anticonvulsant Monotherapy**
Mattson SN¹, Chambers CD², Vander Velde JJ¹, Kao KK², Jones KL². ¹Center for Behavioral Teratology, San Diego State University, San Diego, CA, United States, ²Department of Pediatrics, Division of Dysmorphology and Teratology, University of California, San Diego, La Jolla, CA, United States.

3:30 PM–3:45 PM

BREAK

3:45 PM–5:45 PM

TS/OTIS JOINT ROUNDTABLE—Catalina Ballroom

Communicating Teratogenic Risk Information: Case Studies in Teratogenic Risk Communication and Perception

Chairs: Janine E. Polifka, University of Washington and Christina D. Chambers, University of California—San Diego

- 3:45 PM–4:45 PM S14 **Risk Analysis and Risk as Feelings: Commentary on the Dance of Affect and Reason**
Speaker: Paul Slovic, Decision Research Institute

- 4:45 PM–4:55 PM S15 **Risk Communication in the Face of Uncertainty and New Findings**
Speaker: Alice Hughes, Center for Drug Evaluation and Research, U.S. Food and Drug Administration
- 4:55 PM–5:05 PM S16 **Cultural Differences in Risk Perception and Assessment**
Speaker: Lee Ann Kaskutas, University of California—Berkeley
- 5:05 PM–5:15 PM S17 **Communication of Fluorochemical Research to Production Workers**
Speaker: Geary Olsen, 3M Corporate Occupational Medicine
- 5:15 PM–5:45 PM **Panel Discussion: Risk Communication Challenges—Implications for Teratogen Information**
- 3:45 PM–5:45 PM **NATIONAL CHILDREN’S STUDY: PLANNING AND IMPLEMENTATION—Salon B**
Chair: Carole A. Kimmel, Consultant, National Children’s Study, NICHD/NIH
- 3:45 PM–3:55 PM S18 **Introduction**
Speaker: Carole A. Kimmel, Consultant, National Children’s Study, NICHD/NIH
- 3:55 PM–4:15 PM S19 **Update on the Study Protocol**
Speaker: Ruth A. Brenner, National Children’s Study, NICHD/NIH
- 4:15 PM–4:35 PM S20 **Coordination of the National Children’s Study**
Speaker: Carla Maffeo, Westat Corporation
- 4:35 PM–4:55 PM S21 **Community Engagement and Recruitment in a Vanguard Center**
Speaker: Edward B. Clark, University of Utah Health Sciences Center
- 4:55 PM–5:45 PM S22 **The North Carolina Herald Pilot Study**
Speaker: Pauline Mendola, National Health and Environmental Effects Research Laboratory, ORD/U.S. EPA
- 5:30 PM–7:30 PM **TS/NBTS/OTIS JOINT POSTER SESSION I AND EXHIBITS OPEN—Kiva Ballroom**
*Co-sponsored by Gene Logic Laboratories and GlaxoSmithKline
 (Posters attended from 6:00 PM–7:30 PM)*
- Teratology Society Posters P1–P27**
 P1–P17: Clinical Teratology and Epidemiology
 P18–P21: Public Policy
 P22–P27: Mechanisms—Animal Model
- NBTS Posters NBTS24–NBTS33**
OTIS Posters OTIS-P1–OTIS-P2
- 7:30 PM–10:30 PM **MARTA/MTA STUDENT CAREER EVENT—Bill’s Grill**

TUESDAY, JUNE 27, 2006

- 6:30 AM–7:00 AM **MINI COURSE BREAKFAST**—Salon B
- 7:00 AM–8:30 AM **BDRA EDITORIAL BOARD MEETING**—Executive Boardroom
- 7:00 AM–8:30 AM **BDRB EDITORIAL BOARD MEETING**—Sabino
- 7:00 AM–5:00 PM **REGISTRATION**—Grand Ballroom Foyer
- 7:00 AM–8:30 AM **SUNRISE MINI-COURSE** (*Separate registration required*)—Salon B
Developmental Pharmacokinetics
Organized by the Education Committee: Gloria Jahnke, Chairperson
Coursebooks provided by Charles River Laboratory Preclinical Services—CTBR
- 7:00 AM–7:45 AM **Prenatal Pharmacokinetics—Maternal & Fetal**
Speaker: Edward W. Carney, The Dow Chemical Company
- 7:45 AM–8:30 AM **Postnatal Pharmacokinetics (Postnatal Through Juvenile)**
Speaker: Hugh Barton, U.S. Environmental Protection Agency
- 8:00 AM–8:30 AM **COFFEE AND CONTINENTAL BREAKFAST**—Kiva Ballroom
- 8:00 AM–1:30 PM **POSTERS AND EXHIBITS OPEN**—Kiva Ballroom
(Attended 11:45 AM–1:30 PM)
- 8:30 AM–11:30 AM **MARCH OF DIMES SYMPOSIUM**—Salon B
New Insights in Myogenesis: Implications for Muscle Development, Birth Defects, and Regeneration (Abstract S23)
Chair: Tyra M. Leazer, Procter & Gamble Company
Sponsored by March of Dimes
- 8:30 AM–8:35 AM **Introduction**
- 8:35 AM–9:15 AM **Introductions to Muscle Dystrophies: Insights from the Clinic**
Speaker: Jan K. Blancato, Georgetown University Medical Center
- 9:15 AM–9:55 AM **Asymmetry in Myogenesis**
Speaker: Charles P. Ordahl, University of California—San Francisco
- 9:55 AM–10:10 AM **BREAK**
- 10:10 AM–10:50 AM **Myogenesis Development and Molecular Control: Role of the Rho Family of Small GTPases**
Speaker: Mingyao Liu, Texas A&M University
- 10:50 AM–11:30 AM **Genetics of Muscular Dystrophy and Disease: Impact and Implications of Polymorphisms in Animals and Humans**
Speaker: Eric Hoffman, Children's Research Institute
- 11:30 AM–1:30 PM **TS/NBTS JOINT POSTER SESSION II AND EXHIBITS OPEN**—Kiva Ballroom
Co-sponsored by Gene Logic Laboratories and GlaxoSmithKline
(Posters attended from 11:45 AM–1:30 PM)
- Teratology Society Posters P28–P61:**
- P28–P38: Hazard/Risk Evaluation
- P39–P53: Mechanisms
- P54–P61: Methods
- NBTS Posters NBTS34–NBTS38**

1:30 PM–3:30 PM **PLATFORM SESSION I—Salon B****Epidemiology—Clinical Teratology**

Chair: Suzan L. Carmichael, California Birth Defects Monitoring Program

- 1:30 PM–1:45 PM 14 **Childhood Cancer and Pesticides - A Case-Control Study of Possible Gene-Environment Interactions**
Soldin OP^{1,2}, Loffredo CA¹, Shields PG¹, Barr D³, Luban N⁴, Shad A¹, Nelson D⁵. ¹Department of Oncology, Lombardi Comprehensive Cancer Center, Georgetown University Medical Center, Washington, DC, United States, ²Department of Medicine and Center for Sex Differences, Washington, DC, United States, ³Centers for Disease Control and Prevention, Atlanta, GA, United States, ⁴Children's National Medical Center, (CNMC), George Washington University, Washington, DC, United States, ⁵Department of Pediatrics, Georgetown University Medical Center, Washington, DC, United States.
- 1:45 PM–2:00 PM 15 **Child Neurodevelopment Following Exposure to Venlafaxine In Utero, Unexposed Siblings as Comparison Groups: Preliminary Results**
Nulman I^{1,2}, Knittel-Keren D^{1,2}, Valo S^{1,2}, Sussman R^{1,2}, Barrer A M^{1,2}, Koren G^{1,2}. ¹University of Toronto, Toronto, ON, Canada, ²Hospital for Sick Children, Toronto, ON, Canada.
- 2:00 PM–2:15 PM 16 **Evaluation of Clinical Presentation in Neonates Exposed to Antidepressants in Late Pregnancy**
Boucher N^{1,2}, Bairam A^{1,3}, Beaulac-Baillargeon L^{1,2}. ¹Perinatology Research Unit, Laval University affiliated Hospitals (CHUQ), Saint-Francois d'Assise Hospital, Quebec, QC, Canada, ²Faculty of Pharmacy, Laval University, Quebec, QC, Canada, ³Faculty of Medicine, Laval University, Quebec, QC, Canada.
- 2:15 PM–2:30 PM 17 **Pregnancy Outcome After In-Utero Exposure to Valproic Acid: A Prospective Controlled Cohort Study**
Diav-Citrin O¹, Shechtman S¹, Cantrell D², Bar-Oz B^{3,2}, Arnon J¹, Ornoy A^{1,2}. ¹The Israeli Teratogen Information Service, Israel Ministry of Health, Jerusalem, Israel, ²The Hebrew University Hadassah Medical school, Jerusalem, Israel, ³The Department of Neonatology, Hadassah University Hospital, Mount Scopus, Jerusalem, Israel.
- 2:30 PM–2:45 PM 18 **Long Delay Eyeblink Conditioning in Autism**
Arndt TL¹, Chadman KK², Watson DJ², Tsang V¹, Rodier PM¹, Stanton ME². ¹University of Rochester School of Medicine and Dentistry, Rochester, NY, United States, ²University of Delaware, Newark, DE, United States.
- 2:45 PM–3:00 PM 19 **Maternal Thyroid Disease as a Possible Risk Factor for Craniosynostosis, National Birth Defects Prevention Study, 1997-2002**
Rasmussen SA¹, Yazdy M¹, Honein M¹, Carmichael SL², Canfield M³. ¹Centers for Disease Control and Prevention, Atlanta, GA, United States, ²California Birth Defects Monitoring Program, Berkeley, CA, United States, ³Texas Center for Birth Defects Research and Prevention, Austin, TX, United States.

3:00 PM–3:15 PM 20 **Maternal Stressors and Risks of Selected Birth Defects**
Carmichael SL¹, Shaw GM¹, Yang W¹, Abrams B². ¹March of Dimes/California Birth Defects Monitoring Program, Berkeley, CA, United States, ²University of California, Berkeley, CA, United States.

3:15 PM–3:30 PM 21 **Birth Prevalence Rate of Major Malformations: Establishing Prevalence Rate of Major Malformations after In-Uterine Exposure: A Challenge for Pregnancy Registries**
Harel EH, Holmes LB. MassGeneral Hospital for Children, Boston, MA, United States.

1:45 PM–3:15 PM **TS/OTIS JOINT SYMPOSIUM—Catalina Ballroom**

Emerging Infections: Mechanisms of Inflammation During Pregnancy

Chairs: Mary Alice Smith, University of Georgia and Dee Quinn, University of Arizona

1:45 PM–2:15 PM S24 **Molecular Mechanisms of Oral Infection Mediated Perinatal Complications**
Speaker: Steven Offenbacher, University of North Carolina

2:15 PM–2:45 PM S25 **Immunopathogenesis of Malaria During Pregnancy**
Speaker: Julie Moore, University of Georgia

2:45 PM–3:15 PM S26 **Listeria-Induced Stillbirths: Impact of Mechanisms of Infection on Risk Assessment**
Speaker: Mary Alice Smith, University of Georgia

3:15 PM–3:30 PM **BREAK**

3:30 PM–6:30 PM **TS/OTIS JOINT SYMPOSIUM—Catalina Ballroom**

Emerging Infections: Viruses Beyond Rubella

Chairs: Sonja Rasmussen, Centers for Disease Control and Prevention and Dee Quinn, University of Arizona

3:30 PM–3:40 PM **Introduction**
Speaker: Sonja Ramassen, Centers for Disease Control & Prevention

3:40 PM–4:10 PM S27 **Is West Nile Virus a Teratogen?**
Speaker: Dawn M. Wesson, Tulane Health Sciences Center

4:10 PM–4:40 PM S28 **Lymphocytic Choriomeningitis Virus (LCMV): Emerging Fetal Teratogen**
Speaker: Marilyn Baird Mets, Northwestern University

4:40 PM–5:10 PM S29 **Risks and Benefits of Immunizing Pregnant Women: The Risk of Doing Nothing**
Speaker: Robert L. Brent, Alfred I. duPont Hospital for Children

5:10 PM–5:40 PM S30 **Challenges to the Study, Prophylaxis and Treatment of Pregnant Women for Emerging Infection**
Speaker: Denise Jamieson, Division of Reproductive Health, Center for Disease Control and Prevention

5:40 PM–6:30 PM **Panel Discussion**

3:30 PM–6:15 PM **PLATFORM SESSION II—Salon B**

Mechanisms I

Chairs: Louise M. Winn, Queen's University and E. Sidney Hunter, III, U.S. Environmental Protection Agency

3:30 PM–3:45 PM 22 **Overexpression of c-Ha-ras Protects Against All-trans Retinoic Acid Induced Malformations**
Marshall EK, Albert JR, Collins MD. University of California Los Angeles, Los Angeles, CA, United States.

- 3:45 PM–4:00 PM 23 **Comparative Pathogenesis of Cadmium- and/or All-trans Retinoic Acid- Induced Postaxial Forelimb Ectrodactyly in the C57BL/6 Mouse**
Liao X, Shimizu H, Lee G, Collins MD. Univeristy of California, Los Angeles, Los Angeles, CA, United States.
- 4:00 PM–4:15 PM 24 **Abnormal Yolk Sac Vasculature and Decreased Nitric Oxide in Copper Deficient Mouse Embryos**
Yang SJ, Lanoue L, Keen CL, Rucker RB, Uriu-Adams JY. University of California, Davis, Davis, CA, United States.
- 4:15 PM–4:30 PM 25 **Minimal Role for Reactive Oxygen Species in Dichloroacetic Acid-Induced Dysmorphology in Mouse Whole Embryo Culture**
Hunter, III ES, Rogers EH, Blanton MR. US EPA, RTD, NHEERL, ORD, Research Triangle Park, NC, United States.
- 4:30 PM–4:45 PM 26 **Benzene Alters Embryonic Pim-1 Signalling and Induces Oxidative Stress in CD-1 Mice**
Wan J, Winn LM. Queen's University, Kingston, ON, Canada.
- 4:45 PM–5:00 PM 27 **The Ontogeny of Circulating Thyroid Hormone Levels in Sprague-Dawley Rats**
Beck MJ, Fillutzy H, Godsey J, Nemeč MD, Stump DG, Holson JF. WIL Research Laboratories, LLC, Ashland, OH, United States.
- 5:00 PM–5:15 PM 28 **The Effects of Methimazole on Circulating Thyroid Hormone Levels in Sprague-Dawley Rats**
Beck MJ, Donahue DA, Varsho BJ, Nemeč MD, Stump DG, Holson JF. WIL Research Laboratories, LLC, Ashland, OH, United States.
- 5:15 PM–5:30 PM 29 **Lack of Association Between Cardiovascular Malformations and Treatment with Selective Estrogen Receptor Modulators (SERMs) in Rats and Rabbits**
Henck JW, Reddy VR, Hilbish KG, Breslin WJ. Eli Lilly and Company, Greenfield, IN, United States.
- 5:30 PM–5:45 PM 30 **Artesunate: Developmental Toxicity in Monkeys**
Clark RL¹, Kumemura M², Makori N³, Nakata Y⁴, Bernard F⁵, Harrell A⁵, White TEK¹, Arima A². ¹GlaxoSmithKline, King of Prussia, PA, United States, ²SNBL, Kagoshima, Japan, ³SNBL-USA, Everett, WA, United States, ⁴GlaxoSmithKline, Shibuya-ku, Tokyo, Japan, ⁵GlaxoSmithKline, Ware, Hertfordshire, United Kingdom.
- 5:45 PM–6:00 PM 31 **Mitochondrial Involvement of Artesunate Toxicity in Rat Embryonic Erythroblasts**
Laffan SB¹, James AC¹, Maleeff BE¹, Pagana JM², Bushdid PB¹, Clark RL¹, White TEK¹. ¹GlaxoSmithKline, Safety Assessment, King of Prussia, PA, United States, ²Drexel University, Philadelphia, PA, United States.
- 6:00 PM–6:15 PM 32 **Dinocap Induced Cleft Palate and Otoconia Agenesis Due to a Single Isomer**
Tornesi B¹, Marshall V¹, Carney EW, Billington R². ¹The Dow Chemical Company, Midland, MI, United States, ²Dow AgroSciences, Milton, United Kingdom.

WEDNESDAY, JUNE 28, 2006

- 7:00 AM–8:30 AM **PUBLIC AFFAIRS COMMITTEE MEETING**—Sabino
 7:00 AM–8:30 AM **PUBLICATIONS COMMITTEE MEETING**—Executive Boardroom
 7:30 AM–8:00 AM **COFFEE AND CONTINENTAL BREAKFAST**—Grand Ballroom Foyer
 8:00 AM–5:00 PM **REGISTRATION**—Grand Ballroom Foyer
 8:00 AM–9:30 AM **PLATFORM SESSION III**—Salon B

Mechanisms II

Chairs: Claudia Kappen, University of Nebraska Medical Center and Richard H. Finnell, Institute of Biosciences and Technology

- 8:00 AM–8:15 AM 33 **Early Embryonic Development in Reduced Folate Carrier (RFC1) Knockout Mice is Characterized by Neural Tube Defects, Absence of Erythropoiesis, and Failure of Chorioallantoic Fusion**
Gelineau-Van Waes J¹, Heller S¹, Maddox J¹, Eedy J¹, Askew J¹, Bauer L¹, Aleman F¹, Finnell RH^{1,2}. ¹University of Nebraska Medical Center, Omaha, NE, United States, ²Institute of Biosciences and Technology, Houston, TX, United States.
- 8:15 AM–8:30 AM 34 **Folic Acid Prevents Conotruncal Malformations in *Folbp1* Knockout Mice: Role of Folate in Cardiac Neural Crest Cell Survival and Migration**
Gelineau-Van Waes J¹, Aleman F¹, Maddox J¹, Bauer L¹, Tang L², Rosenquist T¹, Finnell RH^{2,1}. ¹University of Nebraska Medical Center, Omaha, NE, United States, ²Institute of Biosciences and Technology, Houston, TX, United States.
- 8:30 AM–8:45 AM 35 **Maternal Diabetes and Cardiac Malformations: The Role of *Pax3*, p53-Dependent Apoptosis, and Cardiac Neural Crest Migration**
Morgan SC¹, Relaix F², Buckingham M², Sandell L³, Tilghman S4, Loeken MR¹. ¹Joslin Diabetes Center, Boston, MA, United States, ²Pasteur Institute, Paris, France, ³Stowers-Institute, Kansas City, MO, United States, ⁴Princeton University, Princeton, NJ, United States.
- 8:45 AM–9:00 AM 36 **Altered Gene Expression Profiles in Embryos Exposed to Maternal Diabetes**
Pavlinkova G, Kruger C, Salbaum JM, Kappen C. University of Nebraska Medical Center, Omaha, NE, United States.
- 9:00 AM–9:15 AM 37 **Orofacial Clefts Induced by Diabetes Are Not Affected by Maternal Immune Stimulation**
Toops KA¹, Hrubec TC^{1,2}, Hollanay SD¹. ¹VA-MD Regional College of Veterinary Medicine, Blacksburg, VA, United States, ²E. Via Virginia College of Osteopathic Medicine, Blacksburg, VA, United States.
- 9:15 AM–9:30 AM 38 **Impact of Maternal Diets and Early Environmental Exposure on Weight Maintenance and Development of the Offspring**
Wolterbeek APM, Eussen SRBM, Jansink R, Van Der Horst JML, Otto M, Waalkens DH, Dijkstra A, Salmon FGCH, Wortelboer HM, Pasma WJ, Hendriks HFJ, Bobeldijk I, Groten JP, De Groot DMG. TNO Quality of Life, Zeist, Netherlands.

304 TERATOLOGY SOCIETY PROGRAM

8:00 AM–12:00 PM **TS/NBTS JOINT SYMPOSIUM—Salon A**
Recent Advances in Research on the Safety of Thimerosal in Vaccines
Chair: Thomas Burbacher, University of Washington

8:00 AM–8:05 AM **Introduction**
Speaker: Thomas M. Burbacher, University of Washington

8:05 AM–8:35 AM S31 **The Many Faces of Mercury**
Speaker: Thomas W. Clarkson, University of Rochester

8:35 AM–9:05 AM S32 **Thimerosal Kinetics in Infants Receiving Routine Vaccinations**
Speaker: Polly Sager, National Institute of Allergy and Infectious Diseases

9:05 AM–9:30 AM S33 **Animal Models of Thimerosal Absorption, Distribution, and Dealkylation**
Speaker: Thomas M. Burbacher, University of Washington

9:30 AM–10:00 AM **WARKANY TEA—Grand Ballroom Foyer**
Sponsored by Amgen, Inc.

10:00 AM–10:30 AM S34 **Nanomolar Thimerosal Dysregulates Dendritic Cell Functions: Mechanisms and Ramifications**
Speaker: Issac N. Pessah, University of California—Davis

10:30 AM–11:00 AM S35 **Neurobehavioral Analysis of Early Postnatal Thimerosal Exposure in Mice**
Speaker: Robert F. Berman, University of California—Davis

11:00 AM–11:30 AM S36 **Neuroanatomical Correlates of Mercury Exposure**
Speaker: Jean Harry, National Institute of Environmental Health Sciences

11:30 AM–12:00 PM **Discussion**

10:00 AM–12:00 PM **MARTA/MTA PEDIATRIC SYMPOSIUM—Catalina Ballroom**
Pediatric Safety Evaluation: Regulatory, Nonclinical, and Clinical Experience
Chair: Kok-Wah Hew, Emisphere Technologies, Inc.

10:00 AM–10:30 AM S40 **Pediatric Safety Evaluation Guidelines: What's New**
Speaker: Shaun R. Maguire, GlaxoSmithKline

10:30 AM–11:00 AM S41 **Pediatric Safety Evaluation: Nonclinical Experience**
Speaker: Keith Robinson, Charles River Laboratories Preclinical Services—CTBR

11:00 AM–11:30 AM S42 **Translational Pediatric Research: Bridging the Gap From Preclinical to Clinical Setting**
Speaker: Daniel M. Jorgensen, Pfizer Global Research & Development

11:30 AM–12:00 PM S43 **Conducting Pediatric Clinical Trials: An Overview**
Speaker: Xilla Ussery, Pfizer Global Research & Development

10:00 AM–12:00 PM **RARE DISEASES SYMPOSIUM—Salon B**
Chemically Induced Congenital Anomalies: Is Oxidative Stress a Common Pathway?
Chair: Peter G. Wells, University of Toronto

Sponsored by the Office of Rare Diseases, National Institutes of Health, DHHS

10:00 AM–10:05 AM **Introduction**
Speaker: Peter G. Wells, University of Toronto

10:05 AM–10:40 AM S37 **Oxidative DNA Damage and Repair in Teratogenesis**
Speaker: Peter G. Wells, University of Toronto

- 10:40 AM–11:15 AM S38 **Oxidative Stress and Signal Transduction in Chemical Teratogenesis**
Speaker: Jason Hansen, Emory School of Medicine
- 11:15 AM–11:50 AM S39 **Oxidative Stress in Diabetic Teratogenesis**
Speaker: Mary R. Loeken, Harvard University
- 11:50 AM–12:00 PM **Discussion**
- 12:00 PM–1:00 PM **EDUCATION COMMITTEE MEETING—Executive Boardroom**
- 12:00 PM–1:00 PM **LUNCH ON OWN**
- 1:00 PM–2:00 PM **RARE DISEASES ROUNDTABLE—Salon B**
Chair: Melissa Tassinari, Pfizer, Inc.
Speaker: Jean F. Campbell, National Organization for Rare Disorders, Inc.
- 2:00 PM–5:00 PM **WILEY LISS SYMPOSIUM—Salon B**
MicroRNAs in Development
Chairs: Barbara F. Hales, McGill University and Philip Mirkes, Texas A&M University
- 2:00 PM–2:10 PM **Introduction**
- 2:10 PM–2:45 PM S44 **Introduction to MiRNA**
Speaker: Lance P. Ford, Ambion, Inc.
- 2:45 PM–3:20 PM S45 **Computational Identification of MiRNAs and Their Target Genes**
Speaker: Nikolaus Rajewsky, New York University
- 3:20 PM–3:35 PM S45 **Break**
- 3:35 PM–4:10 PM S46 **MiRNAs as Regulators of *C. elegans* Development**
Speaker: Allison Abbott, Dartmouth Medical School
- 4:10 PM–4:45 PM S47 **Mammalian Small RNA Biology**
Speaker: Michael T. McManus, University of California—San Francisco
- 4:45 PM–5:00 PM **Conclusion and Discussion**
- 5:00 PM–6:30 PM **BUSINESS MEETING AND REPORTS FROM BIRTH DEFECTS RESEARCH EDITORS—Salon B**
- 6:30 PM–11:00 PM **RECEPTION AND BANQUET—Kiva Ballroom**

THURSDAY, JUNE 29, 2006

- 7:00 AM–7:30 AM **COFFEE AND CONTINENTAL BREAKFAST—Grand Ballroom Foyer**
- 7:00 AM–10:00 AM **REGISTRATION—Grand Ballroom Foyer**
- 7:30 AM–10:30 AM **PUBLIC AFFAIRS COMMITTEE PLATFORM SESSION—Salon B**
Regulatory Science
Chair: Anthony R. Scialli, Sciences International, Inc.
Co-sponsored by the ILSI Health and Environmental Sciences Institute (HESI)—Developmental and Reproductive Toxicology Technical Committee
- 7:30 AM–8:10 AM 39 **The Effects of Serotonin Depletion on Locomotor Development in Zebrafish**
Airhart MJ¹, Miller B^{1,2}, Lee D¹, Wilson T², Miller M², Skalko RG¹. ¹Dept. of Anatomy and Cell Biology, East Tennessee State University, Johnson City, TN, United States, ²Dept. of Psychiatry, East Tennessee State University, Johnson City, TN, United States.

- 8:10 AM–8:50 AM 40 **Mineralization of the Lumbar Part of the Vertebral Column in Rat Fetuses Exposed to Cyclooxygenase Inhibitors**
Burda F^{1,2}, Rozylo-Kalinowska I², Szumilo J³, Dudka J³, Klepacz R³. ¹Experimental Teratology Unit of the Human Anatomy Department; Medical University of Lublin, Lublin, Poland, ²Second Radiology Department; Medical University of Lublin, Lublin, Poland, ³Clinical Pathomorphology Department; Medical University of Lublin, Lublin, Poland.
- 8:50 AM–9:10 AM **Break**
- 9:10 AM–9:50 AM 41 **The Genomic Response of a Human Uterine Endometrial Adenocarcinoma Cell Line to 17 α -Ethinyl Estradiol: A Potential Alternative to Animal Testing for Estrogens.**
Naciff JM, Khambatta ZS, Thomason RG, Carr GJ, Tiesman JP, Daston GP. The Procter and Gamble, Cincinnati, OH, United States.
- 9:50 AM–10:30 AM 42 **Gestational Exposure to Paroxetine and Cardiac Malformations in Infants: A Nested Case-Control Study**
Berard A^{1,2}, Ramos E^{1,2}, Oraichi D², Blais L^{1,3}, Rey E^{1,2}. ¹University of Montreal, Montreal, QC, Canada, ²Ste-Justine Hospital, Montreal, QC, Canada, ³Sacre-Coeur Hospital, Montreal, QC, Canada.
- 7:30 AM–9:45 AM **PLATFORM SESSION IV—Salon A**
Mechanisms III
Chairs: Marianne Barrier, Texas A&M University and Thomas B. Knudsen, University of Louisville
- 7:30 AM–7:45 AM 43 **Risk of Limb Deficiency Defects Associated with NAT1, NAT2, GSTT1, GSTM1 and NOS3 Genetic Variants, Maternal Smoking, and Vitamin Supplement Intake**
Carmichael SL¹, Shaw GM¹, Yang W¹, Iovannisci D², Lammer EJ². ¹March of Dimes / California Birth Defects Monitoring Program, Berkeley, CA, United States, ²Children's Hospital Research Institute, Oakland, CA, United States.
- 7:45 AM–8:00 AM 44 **A Genomic Approach to Hyperthermia-Induced Neural Tube Defects**
Barrier M, MO Q, Vannucci M, Mirkes PE. Texas A&M University, College Station, TX, United States.
- 8:00 AM–8:15 AM 45 **Hydroxyurea (HU) Induces 4-Hydroxy-2-Nonenal (4HNE) Protein Adducts in Organogenesis Stage Mouse Embryos**
Yan JY, Hales BH. McGill University, Montreal, QC, Canada.
- 8:15 AM–8:30 AM 46 **Integrative Analysis of the Mouse Embryonic Transcriptome**
Singh AV, Zhang Y, Knudsen KB, Rouchka EC, Knudsen TB. University of Louisville, Louisville, KY, United States.
- 8:30 AM–8:45 AM 47 **MicroRNA Gene Expression During Early Postimplantation Mouse Development**
Barrier M¹, Dugas DV^{2,3}, Shelton J², Ford LP², Mirkes PE¹. ¹Texas A&M University, College Station, TX, United States, ²Ambion, Inc, Austin, TX, United States, ³Rice University, Houston, TX, United States.

- 8:45 AM–9:00 AM 48 **Teratogen-Induced Activation of p53 Signaling Pathways in Day 9 Mouse Embryos**
Hosako H, Watson EM, Mirkes PE. Texas A&M University, College Station, TX, United States.
- 9:00 AM–9:15 AM **Break**
- 9:15 AM–9:30 AM 49 **Heat Shock Protein 70 (Hsp70) Protects Embryos from Teratogen-Induced Exencephaly: Analysis Using Hsp70 Null Mice**
*Barrier M¹, Gil S², Faske JB¹, Watson EM¹, Mirkes PE¹.
¹Texas A&M University, College Station, TX, United States,
²University of Washington, Seattle, WA, United States.*
- 9:30 AM–9:45 AM 50 **A System Based Approach to Identify Potential Signalling Pathways During Gonad Development from Microarray Data**
*Yu X¹, Griffith WC¹, Hanspers K², Ong H¹, Faustman EM¹.
¹Dept. of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA, United States,
²GenMAPP Development Team, Bioinformatics Research Associate, San Francisco, CA, United States.*
- 7:30 AM–10:30 AM **THYROID HORMONE AND BRAIN DEVELOPMENT: BASIC BIOLOGY, TOXICOLOGY, AND PUBLIC HEALTH SYMPOSIUM—Catalina Ballroom**
Chairs: Jerry Heindel, National Institute of Environmental Health Sciences and R. Thomas Zoeller, University of Massachusetts
Sponsored by the National Institute of Environmental Health Sciences
- 7:30 AM–8:10 AM S48 **Thyroid Hormone and Brain Development**
Speaker: Joanne Rovet, The Hospital for Sick Children
- 8:10 AM–8:50 AM S49 **Genetic Analysis of Thyroid Hormone Action During Brain Development**
Speaker: Frederic Flamant, Ecole Normale Supérieure de Lyon
- 8:50 AM–9:10 AM **Break**
- 9:10 AM–9:50 AM S50 **Environmental Factors That Alter Thyroid Hormone Signaling**
Speaker: R. Thomas Zoeller, University of Massachusetts
- 9:50 AM–10:30 AM S51 **Thyroid Hormone and Public Health**
Speaker: James Haddow, Women and Infants Hospital of Rhode Island
- 11:00 AM–2:00 PM **COUNCIL II MEETING—Executive Board Room**