



Thirty-Sixth Annual Meeting of the Neurobehavioral Teratology Society

Held in Conjunction with the 52nd Annual Meeting of the Teratology Society
and the 25th Annual Meeting of the Organization of Teratology Information Specialists

Marriott Baltimore Waterfront, 700 Aliceanna St., Baltimore, MD 21202

June 23rd–27th, 2012

2012 RICHARD BUTCHER NEW INVESTIGATOR AWARD

Tori Schaefer (nominated by Charles Vorhees)

Cincinnati Children's Hospital Medical Center

Illicit and Prescription Drugs Targeting the Developing Serotonergic System Have Deleterious Effects on Cognition

NBTS CONFERENCE AWARDS

Jenna Fielding (nominated by Helen Sable)

University of Memphis

Perinatal Exposure to Polychlorinated Biphenyls in Rats Alters Cocaine-Induced Dopamine Efflux in the Nucleus Accumbens

Brian Powers (nominated by Barbara Strupp)

Cornell University

Perinatal Choline Supplementation Improves Learning and Attention in Ts65Dn Mice and Disomic Littermates without Altering the Nucleus Basalis Cholinergic Neuronal Phenotype

Lindsay Silva (nominated by Diana Dow-Edwards)

State University of New York, Downstate Medical Center

Prenatal Drug Exposure and Maternal Behavior Have Distinct and Persistent Effects on Offspring Behavior

Ramon Velazquez (nominated by Barbara Strupp)

Cornell University

Perinatal Choline Supplementation Improves Spatial Learning and Increases Cholinergic Neuron Density in the Medial Septal Nucleus in the Ts65Dn Mouse Model of Down Syndrome

NBTS 2012 PROGRAM

Saturday, June 23, 2012

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| 8:00 AM–12:00 PM | Teratology Society Education Course Session I (separate registration required) Maternal and Fetal Immunology: Implications for the Prevention of Birth Defects and Infections |
| 1:00 PM–4:30 PM | Teratology Society Education Course Session II (separate registration required) Infections during Pregnancy: Implications for the Prevention of Birth Defects |
| 12:00 PM–5:00 PM | NBTS Registration – Grand Foyer North |
| 1:00 PM–2:00 PM | NBTS Public Affairs Committee Meeting – Bristol |
| 2:00 PM–3:00 PM | NBTS Publications Committee Meeting – Bristol |
| 3:00 PM–6:00 PM | NBTS Council Meeting – Bristol |

Sunday, June 24, 2012

- 8:30 AM–5:00 PM **NBTS Registration** – Grand Foyer North
- 8:45 AM–9:15 AM **Continental Breakfast** – Grand Ballroom IX
- 9:15 AM–9:30 AM **President's Welcome** – Grand Ballroom IX
- 9:30 AM–10:45 AM **Session 1: Elsevier Distinguished Lecturer** – Grand Ballroom IX
Adolescents and Alcohol: Acute Sensitivities, Enhanced Intake, and Later Consequences
Linda Patia Spear, *Binghamton University, Binghamton, NY*
- 10:45 AM–1:00 PM **Session 2: NBTS Platform Presentations** – Grand Ballroom IX
Chair: Bruce Beyer, *Sanofi US, Inc., Bridgewater, NJ*
- 10:45 AM–11:05 AM NBTS 01: Does Pharmacotherapy of Preterm Labor Sensitize the Brain to Neurotoxicants? Sequential Exposure to Dexamethasone and Chlorpyrifos
Edward Levin, Marty Cauley, Joshua Johnson, Hannah Sexton, Karen Gordon, Frederic Seidler, Theodore Slotkin, *Duke University Medical Center, Durham, NC*
- 11:05 AM–11:25 AM NBTS 02: The Acute Hazard of Inhaled Volatile Organic Chemicals: Understated or Overblown?
Philip Bushnell, *U.S. Environmental Protection Agency, Research Triangle Park, NC*
- 11:25 AM–11:45 AM NBTS 03: Simple Forms of Environmental Enrichment Affect Neurobehavioral Status of Laboratory Mice
Tommy Saborido, Cathryn S. Coke-Murphy, Matthew A. Buendia, Gregg Stanwood, *Vanderbilt University, Nashville, TN*
- 11:45 AM–12:00 PM Break
- 12:00 PM–12:20 PM NBTS 04: Comparison of Delayed Matching-to-Sample Performance in Children and Adult Rhesus Monkeys
John Chelonis^{1,2}, Seth Osborn², Matthew Glenn², Merle Paule^{1,2}
¹National Center for Toxicological Research, *Jefferson AR*, ²University of Arkansas for Medical Sciences, *Little Rock, AR*
- 12:20 PM–12:40 PM NBTS 05: Hair Cortisol as a Novel Biomarker of Stress
Jerrold Meyer, Melinda Novak, *University of Massachusetts, Amherst, MA*
- 12:40 PM–1:00 PM NBTS 06: Prenatal Exposure to Organophosphate Pesticides and Infant Neurobehavior
Kimberly Yolton^{1,2}, Yingying Xu¹, Ann Popelar¹, Heidi Sucharew^{1,2}, Jane Khoury^{1,2}
¹Cincinnati Children's Hospital Medical Center, *Cincinnati, OH*, ²University of Cincinnati, *Cincinnati, OH*
- 1:00 PM–2:30 PM **Lunch**
- 2:30 PM–5:30 PM **Session 3: NBTS/TS/OTIS Joint Symposium** – Grand Ballroom VI
Strategies for Reducing the Impact of Known Teratogens
Chairs: Katherine L. Wisner, Gale A. Richardson, *University of Pittsburgh School of Medicine, Pittsburgh, PA*
- 2:30 PM–2:35 PM Introduction
Gale A. Richardson, *University of Pittsburgh School of Medicine, Pittsburgh, PA*
- 2:35 PM–3:05 PM NBTS 07: The Potential Benefit of a Multi-Micronutrient Supplement in Pregnant Women Who Consume Alcohol
Christina D. Chambers, *University of California, San Diego, CA*
- 3:05 PM–3:35 PM NBTS 08: Thyroid Hormone to Reduce Impact of Gestational Alcohol Use in the Rat
Eva E. Redei, E. Tunc-Ozcan, *Northwestern University, Feinberg School of Medicine, Chicago, IL*
- 3:35 PM–3:50 PM Break
- 3:50 PM–4:20 PM NBTS 09: Antiepileptic Drugs: Cellular, Physiological, and Behavioral Evidence of Developmental Neurotoxicity
Karen N. Gale, *Georgetown University, Washington, DC*
- 4:20 PM–4:50 PM NBTS 10: Folic Acid Modifies Abnormal Phenotypes in Animal Models
Richard H. Finnell, *University of Texas, Austin, TX*
- 4:50 PM–5:10 PM Future Directions
Katherine L. Wisner, *University of Pittsburgh School of Medicine, Pittsburgh, PA*

- 5:10 PM–5:30 PM Discussion
Lewis B. Holmes, *MassGeneral Hospital for Children, Boston, MA*
- 5:30 PM–7:30 PM **NBTS/TS Welcome Reception and Exhibits Open** – *Grand Ballroom V*
Silent Auction

Monday, June 25, 2012

- 8:00 AM–5:00 PM **NBTS Registration** – *Grand Foyer North*
- 8:00 AM–8:45 AM **NBTS Strategic Planning Committee Meeting** – *Bristol*
- 8:30 AM–9:00 AM **Continental Breakfast** – *Grand Ballroom IX*
- 9:00 AM–11:45 AM **Session 4: Behavioral Toxicology Symposium** - *Grand Ballroom IX*
Neurotoxic Effects on Emotion and Social Behavior
Chair: Edward D. Levin, *Duke University Medical Center, Durham, NC*
- 9:00 AM–9:15 AM Introduction and Overview
Edward D. Levin, *Duke University Medical Center, Durham, NC*
- 9:15 AM–9:45 AM NBTS 11: The Voices of Yesterday's Children: The Late Consequences of Childhood Lead Poisoning
Kim Dietrich¹, Kim Cecil², ¹*University of Cincinnati College of Medicine, Cincinnati, OH*, ²*Cincinnati Children's Hospital Medical Center, Cincinnati, OH*
- 9:45 AM–10:15 AM NBTS 12: Use of Rodent Tests of Depression in Neurobehavioral Toxicology
Sherry Ferguson, *Division of Neurotoxicology, National Center for Toxicological Research/FDA, Jefferson, AR*
- 10:15 AM–10:30 AM Break
- 10:30 AM–11:00 AM NBTS 13: The Calm Before the Storm: Neural Activity Predicts Socio-Affective Vulnerabilities to Stress
Herbert Covington^{1,3}, Rainbo Hultman¹, Sunil Kumar¹, Stephen Mague¹, Michael Lacagnina¹, Howard Bomze¹, Kafui Dzirasa^{2,3}, ¹*Duke University, Department of Psychology and Neuroscience, Durham, NC*, ²*Duke University, Department of Psychiatry and Behavioral Sciences, Durham, NC*, ³*Duke University, The Duke Institute for Brain Sciences, Durham, NC*
- 11:00 AM–11:30 AM NBTS 14: Embryonic Alcohol Exposure Impairs Shoaling and the Dopaminergic and Serotonergic Systems in Zebrafish
Robert Gerlai, *University of Toronto Mississauga, Mississauga, Canada*
- 11:30 AM–11:45 AM Discussion
- 12:00 PM–1:30 PM **Lunch on your own**
(NTT Editorial Board Luncheon – for board members only)
- 1:30 PM–3:30 PM **Session 5: NBTS Symposium** – *Grand Ballroom IX*
Cannabinoids and Mental Disorders
Chairs: *Diana Dow-Edwards, SUNY Downstate Medical Center, Brooklyn, NY*; *Nancy L. Day, University of Pittsburgh School of Medicine, Pittsburgh, PA*
- 1:30 PM–2:00 PM NBTS 15: Cannabinoids and Brain Development
Diana Dow-Edwards, *State University of New York, Downstate, Brooklyn, NY*
- 2:00 PM–2:30 PM NBTS 16: Developmental Cannabis Exposure and its Epigenetic Consequences
Yasmin Hurd, *Mount Sinai School of Medicine, New York, NY*
- 2:30 PM–3:00 PM NBTS 17: Endocannabinoid-CB1R Signaling: A Link between Early Life Stress and Changes in Limbic System Function?
Cecilia J. Hillard, *Dylan Coss, Medical College of Wisconsin, Milwaukee, WI*
- 3:00 PM–3:30 PM NBTS 18: Developmental Effects of Marijuana Exposure: Gestation and Early Adolescence
Nancy L. Day, *University of Pittsburgh School of Medicine, Pittsburgh, PA*
- 3:30 PM–3:45 PM Break
- 3:45 PM–5:05 PM **Session 6: NBTS Platform Presentations** - *Grand Ballroom IX*
Chair: Vincent Smeriglio, *Retired Branch Chief, National Institute on Drug Abuse*

3:45 PM–4:05 PM

2012 Richard Butcher New Investigator Award Recipient

NBTS 19: Illicit and Prescription Drugs Targeting the Developing Serotonergic System have Deleterious Effects on Cognition

Tori Schaefer¹, Curtis Grace², Devon Graham³, Matthew Skelton¹, Michael Williams¹, Charles Vorhees¹,
¹*Cincinnati Children's Research Foundation, Cincinnati, OH*, ²*U.S. Environmental Protection Agency, Research Triangle Park, NC*, ³*Vanderbilt University, Nashville, TN*

4:05 PM–4:25 PM

NBTS 20: Differential Effects of Prenatal Cocaine and/or Nicotine on Indices of Psychiatric Disorders in Elderly Rats
Sonya K. Sobrian¹, Katherine Ressman¹, Lara Marr¹, LaPorcia Wagner¹, R. Robert Holson^{1,2}, ¹*Howard University College of Medicine, Washington, DC*, ²*New Mexico Tech, Socorro, NM*

4:25 PM–4:45 PM

NBTS 21: Twelve-Month Outcomes of Methylenedioxyamphetamine (MDMA), Polydrug-Exposed Infants in the United Kingdom

Lynn T. Singer¹, Derek G. Moore^{1,2}, Meeyoung O. Min¹, Julia Goodwin^{1,2}, John J.D. Turner^{1,2}, Sarah Fulton¹,
Andrew C. Parrott^{1,2}, ¹*Case Western Reserve University, Cleveland, OH*, ²*The University of East London, Stratford Campus, London, UK*

4:45 PM–5:05 PM

NBTS 22: L-Carnitine Attenuates Anesthetic-Induced Increases in a Marker of Glial Activation in the Developing Monkey Brain

Merle Paule¹, Xuan Zhang¹, Glenn Newport¹, Shuliang Liu¹, Fang Liu¹, Ralph Callicott¹, Marc Berridge², Scott Apana²,
Joseph Hanig³, William Slikker¹, Cheng Wang¹, ¹*National Center for Toxicological Research/FDA, Jefferson, AR*, ²*3D-Imaging, Little Rock, AR*, ³*Center For Drug Evaluation and Research/FDA, White Oak, MD*

6:00 PM–8:00 PM

Session 7: NBTS/TS/OTIS Joint Poster Session — Grand Ballroom V

NBTS P01: Prenatal Phenytoin Exposure Disrupts Behavioral and Neuroendocrine Processes of Female Rats
Madeline Rhodes, Marlene Vasquez, *McDaniel College, Westminster, MD*

NBTS P02: Effects of Anxiety on Motivation in Children as Measured By Progressive Ratio Task Performance
John Chelonis^{1,3}, Haley Aaron^{2,3}, Georgia Belk^{2,3}, Juan Castro³, Shelly Baldwin³, Andrea Sutton^{1,3}, Merle Paule^{1,3}
¹*National Center for Toxicological Research, Jefferson, AR*, ²*Hendrix College, Conway, AR*, ³*University of Arkansas for Medical Sciences, Little Rock, AR*

NBTS P03: **NBTS Conference Award Recipient:** Perinatal Exposure to Polychlorinated Biphenyls in Rats Alters Cocaine-Induced Dopamine Efflux in the Nucleus Accumbens

Jenna Fielding, Tiffany Rogers, Abby Meyer, Mellessa Miller, Jenna Nelms, Melissa Ward, Guy Mittleman,
Charles Blaha, Helen Sable, *University of Memphis Department of Psychology, Memphis, TN*

NBTS P04: Decreased Anxiety in Adult Rats Developmentally Exposed to Methylphenidate
Leah Fisher¹, Sherry Ferguson², ¹*University of Arkansas at Little Rock, Little Rock, AR*, ²*NCTR/FDA, Jefferson, AR*

NBTS P05: Substance Use, Externalizing Behavior Problems, and Quality of Family Relations in Prenatally Cocaine-Exposed Adolescents

Meeyoung Min, Sonia Minnes, Adelaide Lang, Miaoping Wu, Lynn Singer, *Case Western Reserve University, Cleveland, OH*

NBTS P06: Developmental Methylphenidate Exposure Does Not Alter Rodent Righting Reflex or Slant Board Behaviors

Kaitlyn Maier, Sherry Ferguson, *NCTR/FDA, Jefferson, AR*

NBTS P07: Developmental Bisphenol A Exposure in Mice Does Not Impair Performance on a Spatial Reversal Learning Task

Melissa Ward, Jenna Nelms, Mellessa Miller, Abby Meyer, Guy Mittleman, Helen Sable,
University of Memphis, Memphis, TN

NBTS P08: **NBTS Conference Award Recipient:** Perinatal Choline Supplementation Improves Spatial Learning and Increases Cholinergic Neuron Density in the Medial Septal Nucleus in the Ts65Dn Mouse Model of Down Syndrome

Ramon Velazquez¹, Jessica Ash¹, Christy Kelley², Brian Powers¹, Myla Strawderman¹, Elliot Mufson², Stephen Ginsberg³,
Barbara Strupp¹, ¹*Cornell University, Ithaca, NY*, ²*Rush University, Chicago, IL*, ³*Nathan Kline Institute/NYU Langone Medical Center, Orangeburg, NY*

NBTS P09: **NBTS Conference Award Recipient:** Perinatal Choline Supplementation Improves Learning and Attention in Ts65Dn Mice and Disomic Littermates without Altering the Nucleus Basalis Cholinergic Neuronal Phenotype

Brian Powers¹, Christy Kelley², Jessica Ash¹, Ramon Velazquez¹, Myla Strawderman¹, Elliot Mufson², Stephen

Ginsberg³, Barbara Strupp¹, ¹Cornell University, Ithaca, NY, ²Rush University Medical Center, Chicago, IL, ³Nathan Kline Institute/New York University Langone Medical Center, Orangeburg, NY

NBTS P10: NBTS Conference Award Recipient: Prenatal Drug Exposure and Maternal Behavior Have Distinct and Persistent Effects on Offspring Behavior

Lindsay Silva, Diana Dow-Edwards, State University of New York, Downstate Medical Center, School of Graduate Studies, Program in Neural and Behavioral Science, Brooklyn, NY

NBTS P11: Substance Use in Prenatally Cocaine-Exposed Adolescents

Sonia Minnes, Meeyoung O. Min,

Adelaide Lang, Miaoping Wu, Lynn T. Singer, Case Western Reserve University, Cleveland, OH

NBTS P12: Dopamine Receptor Reporter Mice: Are They Useful as a Tool for Developmental Pharmacological and Behavioral Studies?

Devon Graham¹, Katie Sprinkel¹, Matthew Buendia¹, Tommy Saborido¹, Gregg Stanwood^{1,2}, ¹Pharmacology, Vanderbilt University Medical Center, Nashville, TN,

²Vanderbilt Kennedy Center for Research on Human Development, Nashville, TN

8:00 PM–10:30 PM

TS/MARTA Student Career Event – Grand Foyer West

Tuesday, June 26, 2012

8:00 AM–5:00 PM

NBTS Registration – Grand Foyer North

8:30 AM–9:00 AM

Continental Breakfast – Grand Ballroom IX

9:30 AM–10:00 AM

Session 8: NBTS/TS Joint Special Lecture – Grand Ballroom IX

NBTS 23: Addiction: A Developmental Disorder

Joseph Frascella, National Institute on Drug Abuse, Bethesda, MD

10:00 AM–12:30 PM

Session 9: NBTS/TS Joint Symposium – Grand Ballroom IX

Effects of Prenatal Methamphetamine: Clinical, Preclinical, and Translational Aspects

Chairs: Nicolette Borek, Food and Drug Administration, Rockville, MD; Gregg D. Stanwood, Vanderbilt University, Nashville, TN

10:00 AM–10:30 AM

NBTS 24: Growth and Neurodevelopmental Outcomes in Children Prenatally Exposed to Methamphetamine

Lynne Smith¹, L. LaGasse², C. Derauf³, E. Newman⁴, R. Shah⁵, A. Arria⁸, M.A. Huestis⁶, W. Haning³, A. Strauss⁷, S. DellaGrotta², L.M. Dansereau², C. Neal³, B.M. Lester², ¹Harbor-UCLA Medical, Los Angeles, CA, ²Brown University, Providence, RI, ³University of Hawaii, Honolulu, HI, ⁴The University of Tulsa, Tulsa, OK, ⁵Blank Hospital Regional Child Protection Center, Des Moines, IA, ⁶National Institute on Drug Abuse, NIH, Baltimore, MD, ⁷Miller Children's Hospital Long Beach, Long Beach, CA, ⁸University of Maryland School of Public Health, College Park, MD

10:30 AM–11:00 AM

NBTS 25: Brain Imaging in Children Prenatally Exposed to Methamphetamine

Linda Chang¹, C. Cloak¹, S. Buchthal¹, T. Wright¹, C. Jiang¹, K. Oishi², J. Skranes³, L. Fujimoto¹, S. Mori², T. Ernst¹, ¹John A. Burns School of Medicine, University of Hawaii, Manoa, Honolulu, HI, ²Johns Hopkins University School of Medicine, Baltimore, MD,

³Norwegian University of Science and Technology, Trondheim, Norway

11:00 AM–11:15 AM

Break

11:15 AM–11:45 AM

NBTS 26: Rat Model of Third Trimester Methamphetamine Exposure: Effects on Behavior, Neurotransmitters, and Receptors

Charles V. Vorhees, Cincinnati Children's Research Foundation, Cincinnati, OH

11:45 AM–12:15 AM

NBTS 27: Fetal Oxidative Stress, DNA Damage and Repair in Methamphetamine Neurodevelopmental Deficits in Mice

Peter G. Wells^{1,2}, L. Miller², A. Ramkissoon¹, A.M. Shapiro¹, ¹Faculty of Pharmacy, University of Toronto, Toronto, ON, Canada, ²Dept. of Pharmacology & Toxicology, University of Toronto, Toronto, ON, Canada

12:15 PM–12:30 PM

Discussion: Translational Aspects: How Can Affected Children Be Treated?

1:00 PM–2:15 PM

NBTS Business Meeting – Grand Ballroom IX

2:30 PM–5:20 PM

Session 10: NBTS Symposium – Grand Ballroom IX

Genetic Bases of Chemical Sensitivity

Chair: Philip Bushnell, U.S. Environmental Protection Agency, Research Triangle Park, NC

- 2:30 PM–2:35 PM Introduction
Philip Bushnell, *U.S. EPA, Research Triangle Park, NC*
- 2:35 PM–3:05 PM NBTS 28: Integrating Genetic and Toxicogenomic Information to Understand Susceptibility to Developmental Toxicants
Elaine Faustman, J.F. Robinson, X. Yu, S. Hong, W.C. Griffith, *University of Washington, Seattle, WA*
- 3:05 PM–3:35 PM NBTS 29: The Genetic Basis for Natural Variation in Alcohol Sensitivity in *Drosophila*
Tatiana Morozova^{1,2}, Sruthipriya Sridhar¹, Michael Magwire^{2,3}, Trudy F. C. Mackay^{2,3}, Robert R. H. Anholt^{1,2,3},
¹*Department of Biology*, ²*W.M. Keck Center for Behavioral Biology*, ³*Department of Genetics, North Carolina State University, Raleigh, NC*
- 3:35 PM–3:50 PM Break
- 3:50 PM–4:20 PM NBTS 30: Dopaminergic Modulation of Phototaxis in Zebrafish Larvae
Harold A. Burgess, Kandice Fero, *National Institute of Child Health & Human Development, Bethesda, MD*
- 4:20 PM–4:50 PM NBTS 31: Behavioral Phenotyping of Two Mouse Lines with Reduced Antioxidant Capacity
Chris Curran¹, Ying Chen², Daniel Nebert², Krishna Patel², Michael Williams³, Charles Vorhees³
¹*Northern Kentucky University, Highland Heights, KY*, ²*University of Cincinnati College of Medicine, Cincinnati, OH*,
³*Cincinnati Children's Research Foundation, Cincinnati, OH*
- 4:50 PM–5:20 PM NBTS 32: A Framework to Study Gene-Environment Interactions in Child Development
Robert Wright, *Harvard School of Public Health, Cambridge, MA*
- Evening **NBTS Social Event**

Wednesday, June 27, 2012

- 8:00 AM–8:30 AM **Continental Breakfast** – *Grand Ballroom IX*
- 8:30 AM–9:30 AM **Session 11: NBTS/TS Joint Lecture** – *Grand Ballroom VI*
NBTS 33: The Consequences of Barriers to Prenatal Care in Less Developed Countries: Important Lessons for Everyone
Chair: Edward W. Carney, *The Dow Chemical Company, Midland, MI*
Janet R. Hardy, Consultant in Global Maternal, Reproductive & Child Health Research
- 9:40 AM–12:00 PM **Session 12: NBTS Symposium** – *Grand Ballroom IX*
21st Century Methodologies for Hazard and Risk Characterization
Chair: Susan Makris, *U. S. Environmental Protection Agency, National Center for Environmental Assessment, Washington, DC*
- 9:40 AM–10:05 AM NBTS 34: Potential Use of Omics Data in a Mode-of-Action Analysis of Neurobehavioral Toxicity of Methylmercury
Ambuja Bale¹, David Szabo², Raghu Nath¹, Suryanarayana Vulimiri¹
¹*ORD/NCEA, Washington, DC*, ²*ORISE/ORD/NCEA, Washington, DC*
- 10:05 AM–10:30 AM NBTS 35: Systems Biology Approach for Better Understanding of Mechanisms of Neurodevelopment Toxicity: A Case Study Using the Major Flame Retardant HBCD
David Szabo¹, Ruchir Shah², Susan Sumner³, Linda Birnbaum⁴
¹*ORISE/NCEA/US EPA, Washington DC*, ²*SRA, Research Triangle Park, NC*, ³*RTI, Research Triangle Park, NC*,
⁴*NCI/NIEHS, Research Triangle Park, NC*
- 10:30 AM–10:45 AM Break
- 10:45 AM–11:10 AM NBTS 36: Ex Vivo Models and Chemical Neurotoxicity Assessment
Andrew Kraft, Ambuja Bale, *National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC*
- 11:10 AM–11:35 AM NBTS 37: Statistical Significance versus Biological Relevance: A Case Study in Neurobehavioral Testing
Jordan Trecki, *National Center for Environmental Assessment, Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, DC*
- 11:35 PM–12:00 PM NBTS 38: Interaction of Nonchemical Stressors with Developmental Neurotoxicants
Deborah Segal, *U.S. Environmental Protection Agency, Washington, DC*

12:00 PM

NBTS 2012 Formally Adjourned

12:45 PM–4:00 PM

**Teratology Society National Children's Study Program
(separate registration required)**

See <http://teratology.org> for detailed agenda.