

Forty-Second Annual Meeting of the Developmental Neurotoxicology Society

Held in Conjunction with the 58th Annual Meeting of the Teratology Society

Hilton Clearwater Beach Resort

Clearwater Beach, FL

June 23–27, 2018

2018 Richard Butcher New Investigator Award: Timothy Flanigan, *National Center for Toxicological Research, US FDA, Jefferson, AR, USA; University of Arkansas for Medical Sciences, Little Rock, AR, USA*
Effects of Cyclophosphamide (CYP) and/or Doxorubicin (DOX) in a Murine Model of Post-Chemotherapy Cognitive Impairment

2018 Patricia Rodier Mid-Career Award: Helen Sable, *University of Memphis, Dept. of Psychology, Memphis, TN, USA*

Assessing Addiction Risk in Rodents Following Perinatal Exposure to PCBs: Behavioral and Neurochemical Indicators

2018 DNTS Conference Awards

Rekha Balachandran *University of Illinois at Urbana-Champaign, Urbana, IL, USA*

Pharmacological Challenges Examining the Underlying Mechanism of Altered Response Inhibition and Attention Due to Circadian Disruption in Adult Long-Evans Rats

Kelsey Dzwilewski, *University of Illinois at Urbana-Champaign, Urbana, IL, USA*

Associations of Prenatal Exposure to Bisphenols with Visual Recognition Memory in 7.5-Month-Old Infants

Allonna Harker, *University of Lethbridge, Lethbridge, AB, Canada*

Supported by Palix Foundation, Alberta, Canada

Father, an Essential Element: Preconception Paternal Experience— Epigenetic Transmission of Male Experience Through the Germline

Katherine Hatcher *University of Illinois at Urbana Champaign, Urbana, IL, USA*

Two Types of Circadian Disruption Modify Locomotor Behavior, Reproductive Health, and Clock Gene Expression in Male and Female Long Evans Rats

Andrew Hawkey, *Duke University, Durham, NC, USA*

Adult Activity in the Zebrafish is Altered by Low-Dose Organophosphate Exposures that Spare Larval Motility

Melissa Martin, *Center for Brain Repair, Department of Biomedical Sciences, Florida State University, Tallahassee, FL, USA*

Brain and Behavioral Consequences of Developmental Nicotine Exposure in a GAD67-GFP Mouse Model

Francheska Merced-Nieves, *University of Illinois Urbana-Champaign, Urbana, IL, USA*

Associations of Phthalates Found in Personal Care Products with Cognitive Function in 4.5-Month-Old Infants

Queenster Nartey, *Oak Ridge Institute of Science and Education, Oak Ridge, TN, USA; US FDA Center for Food Safety and Applied Nutrition, College Park, MD, USA*

Developmental Neurotoxicology in Juvenile Animal Studies: Implications for Infant Safety Assessment for Food Contact Materials

Claire Niehaus, *University of Lethbridge, Lethbridge, AB, Canada*

Supported by Palix Foundation, Alberta, Canada

Does Adolescent WIN-55 Exposure Affect Brain and Social Behaviour in Rats: Assessing Play Interactions and Neuroanatomy

Emily Pitzer, *Cincinnati Children's Research Foundation, University of Cincinnati College of Medicine, Cincinnati, OH, USA*

Developmental Deltamethrin Exposure Alters Dopaminergic Activity and Long-Term Potentiation in Rats

Samantha Regan, *Cincinnati Children's Research Foundation, University of Cincinnati College of Medicine, Cincinnati, OH, USA*

Latrophilin-3 (*Lphn3*) and ADHD: A rat knockout model

DNTS 2018 Program

Saturday, June 23, 2018

Teratology Education Courses: (Separate Registration Required through TS)

Morning: Embryology and Development of the Central Nervous System: From Prenatal Period to Adolescence

Afternoon: Assessment and Management of Developmental Effects on the CNS: From the Molecular Level to the Clinical Setting

5:00–6:30 DNTS Council Meeting

Starfish Room

Sunday, June 24, 2018

7:30–8:00 Morning Coffee and Pastries (Joint with TS)

Grand Ballroom Foyer

8:00–8:15 Presidential Welcome

Grand Ballroom G

8:15–9:00 DNTS 1: Josef Warkany Lecture: (Joint with TS)

Grand Ballroom D

The Arrogance of Teratology

Chairperson: Alan M. Hoberman, Charles River Laboratories

Lecturer: John M. DeSesso, Exponent, Inc., Alexandria, VA, USA

9:05–11:00 DNTS Symposium

Grand Ballroom G

Systematic Review of Behavioral Measures of Developmental Neurotoxicology: Evaluating and Integrating Environmental Health Data for Human Health Risk Assessment

Chairpersons: Michele Taylor and Laura Dishaw, US Environmental Protection Agency

9:05–9:10 Introduction

9:10–9:35 **DNTS 2:** Neurobehavioral Epidemiology: Accounting for Confounding Variability and Bias in the Application to Risk Assessment.

Jonathan Chevrier, McGill University, Montréal, QC, Canada

9:35–10:00 **DNTS 3:** Exposure Assessment and Misclassification in Epidemiological Studies: Implications for Environmental Risk Assessment

Carmen Messerlian, Harvard University, Boston, MA, USA

10:00–10:25 **DNTS 4:** Application of Systematic Review Methods in Evaluating Animal PBDE Neurotoxicity Studies

David Dorman, North Carolina State University, Raleigh, NC, USA

10:25–10:35 Break (Grand Ballroom Foyer)

10:35–11:00 **DNTS 5:** Bridging the Divide: Translating from Animal Models to Humans and Back Again

Susan Shantz, University of Illinois at Urbana-Champaign, Urbana, IL, USA

11:00–12:00 Platform Session I

Grand Ballroom G

Chairperson: Sherry Ferguson; Neurotoxicology, NCTR, US FDA, Jefferson, AR, USA;

Presenting author is underlined.

11:00–11:20 **DNTS 6:** An Improved Approach to Regulatory Developmental Neurotoxicity Testing (DNT)
Charles Vorhees, Michael Williams; University of Cincinnati and Cincinnati Children's Hospital, Cincinnati, OH, USA

11:20–11:40 **DNTS 7:** Refining the Evaluation of Neurological Endpoints in a Systematic Review of Polychlorinated Biphenyls (PCBs)
Laura Carlson, Pamela Lein, Michele M. Taylor, Geniece M. Lehmann; US Environmental Protection Agency, Research Triangle Park, NC, USA

11:40–12:00 **DNTS 8:** Chronic Gestational Exposure of Rats to Low Doses of the Organophosphate Insecticide Diazinon: Persisting Effects on Cognitive Function
Edward Levin, Hannah White, Andrew Hawkey, Erica Pippen, Bruny Kenou; Duke University Medical Center, Durham, NC, USA

12:00–1:20 Lunch on Your Own

1:20–2:30 Platform Session II **Grand Ballroom G**
Chairperson: Christina Sobin, University of Texas, El Paso, TX, USA

Presenting author is underlined.

1:20–1:40 **DNTS 9:** Pharmacological Challenges Examining the Underlying Mechanism of Altered Response Inhibition and Attention Due to Circadian Disruption in Adult Long-Evans Rats
Travel Award
Rekha Balachandran, Katherine Hatcher, Megan Sieg, Margaret Richards, Michael Leventhal, Megan Mahoney, Paul Eubig; University of Illinois at Urbana Champaign, Urbana, IN, USA

1:40–2:00 **DNTS 10:** Two Types of Circadian Disruption Modify Locomotor Behavior, Reproductive Health, and Clock Gene Expression in Male and Female Long Evans Rats
Travel Award
Katherine Hatcher, Rekha Balachandran, Angel Chu, Leonardo Molina, Megan Sieg, Yesh Patel, Paul Eubig, Megan Mahoney; University of Illinois at Urbana Champaign, Urbana, IL, USA

2:00–2:30 **DNTS 11:** Effects of Cyclophosphamide (CYP) and/or Doxorubicin (DOX) in a Murine Model of Post-Chemotherapy Cognitive Impairment
Richard Butcher New Investigator Award
Timothy Flanigan¹, Julie Anderson², Ikram Elayan³, Antiño Allen², Sherry Ferguson¹; ¹National Center for Toxicological Research, US FDA, Jefferson, AR, USA; ²University of Arkansas for Medical Sciences, Little Rock, AR, USA; ³Center for Drug Evaluation and Research, US FDA, Silver Spring, MD, USA

2:30–5:30 DNTS Symposium **Grand Ballroom G**
Transgenerational Effects of Abuse Substances on Behavior: The Epigenetic Link and What the Clinician Needs to Know

2:30–2:40 Introduction
Sonya Sobrian, Howard University School of Medicine, Washington, DC, USA

- 2:40–3:10 **DNTS 12:** Multi-Generational Effects of Adolescent Cannabis Exposure
Henrietta Szutorisz, Icahn School of Medicine at Mount Sinai, New York, NY, USA
- 3:10–3:40 **DNTS 13:** Paternal Cocaine Use and Sex-Dependent Effects on Future Generations
R. Chris Pierce, University of Pennsylvania, Philadelphia, PA, USA
- 3:40–4:10 **DNTS 14:** Preclinical Modeling of Prenatal Opioid Exposure in the Age of Epigenetics
Elizabeth Byrnes, Tufts University, N. Grafton, MA, USA
- 4:10–4:25 Break (Grand Ballroom Foyer)
- 4:25–4:55 **DNTS 15:** Drinking Beyond a Lifetime: Emerging Insights into Paternal Alcohol Exposure on Subsequent Generations
Gregg Homanics, University of Pittsburgh, Pittsburgh, PA, USA
- 4:55–5:25 **DNTS 16:** Transgenerational Transmission of the Effects of Maternal and Paternal Nicotine Exposure upon the Brain, Behavior, and Germ Cells
Pradeep G. Bhide, Florida State University, Tallahassee, FL, USA
- 5:30–6:00 Patricia Rodier Mid-Career Award for Research and Mentoring Grand Ballroom D**
DNTS 17: Assessing Addiction Risk in Rodents Following Perinatal Exposure to PCBs: Behavioral and Neurochemical Indicators
Helen Sable, University of Memphis, Dept. of Psychology, Memphis, TN, USA
- 6:00–7:30 Welcome Reception, Poster Session 1, and Exhibits Grand Ballroom E**

Presenting author is underlined.

DNTS P1: Co-use of Tobacco and Marijuana during Pregnancy: Pathways to Externalizing Behavior Problems in Early Childhood
Stephanie Godleski¹, Shannon Shisler², Rina Eiden², Marilyn Huestis³, Emily Joslyn¹;
¹Rochester Institute of Technology, Rochester, NY, USA; ²Research Institute on Addictions, University at Buffalo, Buffalo, NY, USA; ³Thomas Jefferson University, Philadelphia, PA, USA

DNTS P2: The Effect of Maternal Substance Use on Child Aggression
Emily Joslyn, Stephanie Godleski; Rochester Institute of Technology, Rochester, NY, USA

DNTS P3: Externalizing Behavior in Prenatally Cocaine Exposed Young Adults at Age 21
Meeyoung Min, Sonia Minnes, Adelaide Lang, Paul Weishampel, Gregory Powers, June-Yung Kim, Lynn Singer; Case Western Reserve University, Cleveland, OH, USA

DNTS P4: Reduced Sustained Attention in Children Exposed to Aluminum in the Home
Lonnie Sears, Clara Sears, Barbara Polivka, Kris Zierold; University of Louisville, Louisville, KY, USA; Brown University, Providence, RI, USA

DNTS P5: Considering Children's Cognitive Tests When Synthesizing Epidemiologic Evidence of Neurodevelopmental Effects: A Case Study with Methylmercury
Deborah Segal, Johanna Congleton, Leonid Kopylev, Rebecca Nachman, Elizabeth Radke; US Environmental Protection Agency, ORD, NCEA, Washington, DC, USA

DNTS P6: Enteral Nutrition, Especially with Phosphatidylserine-DHA Supplementation, is better than Parenteral Nutrition at Promoting Neurodevelopment in Preterm Pigs

*Helen Sable*¹, *Zade Holloway*¹, *Jeffrey Sable*², *Victor Chizhikov*³, *Asim Choudhri*⁴, *Karyl Buddington*⁵, *Randal Buddington*⁶; ¹Univ. of Memphis, Department of Psychology, Memphis, TN, USA. ²Christian Brothers University, Department of Behavioral Sciences, Memphis, TN, USA. ³University of Tennessee Health Science Center, Department of Anatomy & Neurobiology, Memphis, TN, USA. ⁴University of Tennessee Health Science Center, Department of Radiology, Memphis, TN, USA. ⁵University of Memphis, Animal Care, Memphis, TN, USA. ⁶University of Memphis, School of Health Studies, Memphis, TN, USA

DNTS P7: Inorganic Arsenic (iAs) in Drinking Water Decreases Gestational Water Intake in Sprague-Dawley Rats

*Sherry Ferguson*¹, *Charles Law*¹, *Christopher Moore*¹, *Suzanne Fitzpatrick*², *Timothy Flanigan*¹; ¹Neurotoxicology, NCTR, US FDA, Jefferson, AR, USA; ²CFSAN, College Park, MD, USA

DNTS P8: Developmental Inorganic Arsenic (iAs) Exposure Delays Developmental Milestones in Sprague-Dawley Rats

*Timothy Flanigan*¹, *Charles Law*¹, *Christopher Moore*¹, *Suzanne Fitzpatrick*², *Sherry Ferguson*¹; ¹National Center for Toxicological Research, US FDA, Jefferson, AR, USA; ²CFSAN, US FDA, College Park, MD, USA

DNTS P9: Developmental Deltamethrin Exposure Alters Dopaminergic Activity and Long-Term Potentiation in Rats

Travel Award

Emily Pitzer, *Michael Williams*, *Charles Vorhees*; Cincinnati Children's Research Foundation, University of Cincinnati College of Medicine, Cincinnati, OH, USA

DNTS P10: Early Chronic Lead Exposure Reduces C-C Chemokine Receptor 7 in Hippocampal Microglia in Young Mice

*Mayra Gisel Flores-Montoya*¹, *Charlotte Vines*², *Bill Colin*², *Christina Sobin*²; ¹Carleton College, Northfield, MN, USA; ²The University of Texas at El Paso, El Paso, TX, USA

DNTS P11: Evaluation of *In Utero* Exposures to Environmental Pollutants and Considerations for Neurodevelopmental Risk Estimation

*Andrew Hotchkiss*¹, *John Cowden*¹, *Dustin Kapraun*¹, *Renee Beardslee*¹, *Ellen Kirrane*¹, *Pradeep Rajan*², *Michelle Cawley*², *Jessica Wignall*², *Reeder Sams*¹; ¹US Environmental Protection Agency, Research Triangle Park, NC, USA; ²ICF, Fairfax, VA, USA

Monday, June 25, 2018

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| 7:30–8:00 | Morning Coffee and Pastries (Joint with TS) | Grand Ballroom Foyer |
| 8:00—9:00 | Keynote Address
DNTS 18: Zika: Florida's Experience Responding to an Emerging Public Health Threat
<i>Celeste Philips, MD, Surgeon General State of Florida, Department of Health</i>
<i>Chairperson: Dana L. Shuey, Incyte</i> | Grand Ballroom D |
| 9:05–12:00 | Symposium
Assessing the Lifelong Impacts of Prenatal and Early-Life Exposure to Air Pollution (Joint with TS) | Grand Ballroom D |

*Chairpersons: Natalie Johnson, Texas A&M School of Public Health and
Peter H. Langlois, Texas Department of State Health Services*

- 9:05–9:10 Introduction
- 9:10–9:45 **DNTS 19:** Using Birth Defects Registries to Identify Developmental Toxicants in Air Pollution
Amy Padula, University of California–San Francisco, San Francisco, CA, USA
- 9:45–10:20 **DNTS 20:** Effects of Ambient Ultrafine Particle Exposure on Brain Development and Behavior: Parallels with Neurodevelopmental Disorders
Deborah Cory-Slechta, University of Rochester Medical School, Rochester, NY, USA
- 10:20–10:35 Break (Grand Ballroom Foyer)
- 10:35–11:10 **DNTS 21:** Prenatal Air Pollution Exposure and Offspring Pulmonary Immunosuppression
Natalie Johnson, Texas A&M School of Public Health, College Station, TX, USA
- 11:10–11:45 **DNTS 22:** Genetic Susceptibility to Developmental PAH Exposure
Christine Perdan Curran, Northern Kentucky University, Highland Heights, KY, USA
- 11:45–12:00 Discussion
- 12:00–1:30 Lunch on Your Own**
- 1:30–2:00 Special Presidential Lecture** **Grand Ballroom G**
DNTS 23: The Adolescent Brain Cognitive Development (ABCD) Study: Teen Brains. Today’s Science. Brighter Future
Gayathri Dowling, National Institute on Drug Abuse, Bethesda, MD, USA
- 2:05–5:20 Symposium** **Grand Ballroom G**
Opiates: Impact on Pregnancy and Child Development (Joint with TS)
*Chairpersons: Diana Dow-Edwards, SUNY Downstate Medical Center and
Grace S. Lee, US Food and Drug Administration*
- 2:05–2:10 Introduction
- 2:10–2:45 **DNTS 24:** Maternal and Child Health Impact of the US Prescription Opioid Epidemic: Combined Public Health–Clinical Response
Cheryl S. Broussard, Centers for Disease Control and Prevention, Atlanta, GA, USA
- 2:45–3:20 **DNTS 25:** Pharmacotherapy of Pregnant Women with Opioid Use Disorder
Hilary S. Connery, Harvard Medical School, Boston, MA, USA
- 3:20–3:35 Break (Grand Ballroom Foyer)
- 3:35–4:10 **DNTS 26:** Nonclinical Assessment of the Effects of Opioids on Development: Challenges and Limitations
Elizabeth A. Bolan, US Food and Drug Administration, Silver Spring, MD, USA

4:10–4:45 **DNTS 27:** Non-Opiate Treatment for Neonatal Abstinence Syndrome (NAS): Clinical and Preclinical Data
Henrietta S. Bada, University of Kentucky, Lexington, KY, USA

4:45–5:20 **DNTS 28:** Opioid Effects in the Infant Brain: Animal-Human Correlation
Dusica Bajic, Harvard Medical School, Boston, MA, USA

5:30—7:30 **Poster Session 2 and Exhibits** **Grand Ballroom E**

Presenting author is underlined.

DNTS P12: Does Adolescent WIN-55 Exposure Affect Brain and Social Behaviour in Rats: Assessing Play Interactions and Neuroanatomy

Palix Travel Award

Claire Niehaus, Candace Burke, Robbin Gibb; *University of Lethbridge, Lethbridge, AB, Canada*

DNTS P13: Developmental Neurotoxicology in Juvenile Animal Studies: Implications for Infant Safety Assessment for Food Contact Materials

Travel Award

Queenster Nartey^{1,2}, Jason Aungst², Federica Basso³, Ikram Elayan³, Jie Liu¹, Arippa Ravindran³, Yen-Ching Wu², April Neal-Kluever²; ¹*Oak Ridge Institute of Science and Education, Oak Ridge, TN, USA*; ²*US Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA*; ³*US Food and Drug Administration, Center for Drug Evaluation and Research, White Oak, MD, USA*

DNTS P14: Perinatal Exposure to the Selective Serotonin Reuptake Inhibitor (SSRI) Citalopram Alters Serotonergic Circuitry in the Hippocampus

Jenna Sprowles^{1,2}, Emily Pitzer³, Samantha Regan³, Michael Williams^{3,1}, Charles Vorhees^{3,1}; ¹*Cincinnati Children's Research Foundation, Cincinnati, OH, USA*; ²*Rhodes College, Memphis, TN, USA*, ³*University of Cincinnati College of Medicine, Department of Pediatrics, Cincinnati, OH, USA*

DNTS P15: Executive Function in Young Adults with Prenatal Cocaine Exposure

Sonia Minnes, Meeyoung O. Min, Jung-Yung Kim, Adelaide Lang, Paul Weishampel, Elizabeth J. Short, Lynn T. Singer; *Case Western Reserve University, Cleveland, OH, USA*

DNTS P16: Adult Cognitive Sequelae of Prenatal Cocaine Exposure

Lynn Singer, Meeyoung O. Min, Barbara Lewis, Adelaide Lang, June-Yung Kim; *Case Western Reserve University, Cleveland, OH, USA*

DNTS P17: Neurocognitive Effects of Postnatal (+)-Methamphetamine Administration Combined with a Dopamine D1 Receptor antagonist in Sprague-Dawley Rats

Michael Williams^{1,2}, Sarah Jablonski^{1,2}, Charles Vorhees^{1,2}; ¹*University of Cincinnati College of Medicine, Cincinnati, OH, USA*; ²*Cincinnati Children's Research Foundation, Cincinnati, OH, USA*

DNTS P18: Latrophilin-3 (*Lphn3*) and ADHD: A rat knockout model

Travel Award

Samantha Regan^{1,2}, Chiho Sugimoto¹, Michael T. Williams^{1,2}, and Charles V. Vorhees^{1,2}, ¹*Cincinnati Children's Research Foundation, Cincinnati, OH, USA*
²*University of Cincinnati College of Medicine, Cincinnati, OH, USA*

DNTS P19: Altered MK-801 Sensitivity, Spatial Learning and Parvalbumin Cell Density Following Developmental Loss of Dopamine D2 Receptors in GABAergic Interneurons
Gloria Lee, Devon Graham, Deirdre McCarthy, Gregg Stanwood; Florida State University College of Medicine, Tallahassee, FL, USA

DNTS P20: Brain and Behavioral Consequences of Developmental Nicotine Exposure in a GAD67-GFP Mouse Model

Travel Award

Melissa M. Martin, Mia X. Trupiano, Deirdre M. McCarthy, Pradeep G. Bhide; Center for Brain Repair, Department of Biomedical Sciences, Florida State University, Tallahassee, FL, USA

DNTS P21: Thyroid Hormone Disruption in the Fetal and Neonatal Rat: Predictive Hormone Measures and Bioindicators of Hormone Action in the Developing Cortex

Katherine O'Shaughnessy^{1,2}, Carmen Wood², Richard Ford^{1,2}, Patricia Kosian³, Michelle Hotchkiss², Sigmund Degitz³, Mary Gilbert²; ¹Oak Ridge Institute for Science Education, Oak Ridge, TN, USA, ²US Environmental Protection Agency, Research Triangle Park, NC, USA, ³US Environmental Protection Agency, Duluth, MN, USA

DNTS P22: Examining the Interaction Between Circadian Disruption and Chlorpyrifos Exposure in a Rodent Model.

Paul Eubig, Emma Sullivan, Kai Kobayashi, Margaret Richards, Rekha Balachandran, Katherine Hatcher, Megan Mahoney; University of Illinois Urbana-Champaign, Urbana, USA

Tuesday, June 26, 2018

7:30–8:00 **Morning Coffee and Pastries** (Joint with TS) **Grand Ballroom Foyer**

8:00—9:00 **Platform Session III** **Grand Ballroom G**
Chairperson: Mary Gilbert, US Environmental Protection Agency, Research Triangle Park, NC, USA

Presenting author is underlined.

8:00–8:20 **DNTS 29:** Associations of Prenatal Exposure to Bisphenols with Visual Recognition Memory in 7.5-Month-Old Infants

Travel Award

Kelsey Dzwilewski, University of Illinois at Urbana-Champaign, Urbana, IL, USA

8:20–8:40 **DNTS 30:** Associations of Phthalates Found in Personal Care Products with Cognitive Function in 4.5-Month-Old Infants

Travel Award

Francheska Merced-Nieves, University of Illinois Urbana-Champaign, Urbana, IL USA

8:40–9:00 **DNTS 31:** Application of Hair and Nail Cortisol Measurements to Developmental Research
Jerrold Meyer, University of Massachusetts, Amherst, MA, USA

9:05–12:00 **Symposium** **Grand Ballroom D**

The Teratology of Autism: An Update and Understanding from Different Perspectives

(Joint with TS)

Chairpersons: Chris J Stodgell, University of Rochester and Susan L. Makris, US Environmental Protection Agency

- 9:05–9:10 Introduction
- 9:10–9:45 **DNTS 32: Clinical Characteristics of Autism Spectrum Disorders**
Loisa Bennetto, University of Rochester, Rochester, NY, USA
- 9:45–10:20 **DNTS 33: Maternal Anxiety and Stress and Its Effect on Fetal and Childhood Development: An Extrapolation to Autism**
Thomas G. O'Connor, University of Rochester, Rochester, NY, USA
- 10:20–10:35 Break (Grand Ballroom Foyer)
- 10:35–11:10 **DNTS 34: Placental Development: Vascularization of the Placenta in Children with Autism**
Carolyn Margaret Salafia, Placental Analytics, New Rochelle, NY, USA
- 11:10–11:45 **DNTS 35: Animal Models of Autism**
Craig Powell, The University of Texas Southwestern Medical Center, Dallas, TX, USA
- 11:45–12:00 Discussion
- 12:00–1:00 Lunch on Your Own**
- 1:00–2:00 Elsevier Distinguished Lecture** **Grand Ballroom G**
DNTS 36: Molecular Dissection of Cannabinoid Sensitivity during Pre- and Postnatal Development
Tibor Harkany, Karolinska Institutet, Stockholm, Sweden and Center for Brain Research, Medical University of Vienna, Vienna, Austria
- 2:00–5:00 DNTS Symposium** **Grand Ballroom G**
Experience During Adolescence Shapes Brain Development: From Synapses and Networks to Normal and Pathological Behavior
Funded by National Science Foundation
Chairperson: Diana Dow-Edwards, SUNY Downstate Medical Center
- 2:00–2:05 Introduction
- 2:05–2:35 **DNTS 37: Experience-Dependent Plasticity in Adolescent Brain Development**
Bradley S. Peterson, University Southern California, Los Angeles, CA. USA
- 2:35–3:05 **DNTS 38: Building the Adolescent Brain**
Frank P. MacMaster, Alberta Health Services, Calgary, AB, Canada
- 3:05–3:20 Break (Grand Ballroom Foyer)
- 3:20–3:50 **DNTS 39: Adolescent Brain Maturation, the Endogenous Cannabinoid System, and the Neurobiology of Cannabis-Induced Schizophrenia**
Raymond J.M. Niesink, Drug Monitoring & Policy, Da Costakade, Utrecht, Netherlands

- 3:50–4:20 **DNTS 40:** Peer Influence on Adolescent Decision Making: Dissection of Relevant Constructs
B.R. Braams, Harvard, Boston, MA, USA
- 4:20–4:50 **DNTS 41:** Exposure to Stimulants During Development: Translational Studies and Implications
Susan Andersen, McLean Hospital/Harvard Medical School, Boston, MA, USA
- 5:00–6:00 **DNTS Business Meeting and Awards Presentations** **Grand Ballroom G**
- 7:00--- **DNTS Social Event**

Wednesday, June 27, 2018

- 7:30–8:00 **Morning Coffee and Pastries** (Joint with TS) **Grand Ballroom Foyer**
- 8:00–10:30 **Platform Session IV** **Grand Ballroom G**
Chairperson: Michael Williams, University of Cincinnati College of Medicine, Cincinnati, OH, USA
- Presenting author is underlined.**
- 8:00–8:25 **DNTS 42:** Adult Activity in the Zebrafish is Altered by Low-Dose Organophosphate Exposures that Spare Larval Motility
Travel Award
Andrew Hawkey, Lilah Glazer, Kathryn Odamah, Meghan Drastal, Mamta Behl, Edward Levin; Duke University, Durham, NC, USA
- 8:25–8:50 **DNTS 43:** A Preliminary Study of Microbiome Changes in *Cyp1a2*(+/+) Wildtype and *Cyp1a2*(-/-) Mice following Gestational and Lactational Exposure to a PCB Mixture
Christine Curran, Pamela Dickson, Nick Brinkman, Shelby Caudill, Joshua Cooper; Northern Kentucky University, Highland Heights, KY, USA
- 8:50–9:15 **DNTS 44:** Ammonium Perchlorate Perturbs the Thyroid Axis and Induces a Cortical Malformation in Developing Rats.
Mary Gilbert¹, Katherine O'Shaughnessy^{1,2}, Iman Hassan¹, Susan Thomas^{1,2}, Stephanie Spring^{1,2}, Jermaine Ford¹; ¹US Environmental Protection Agency, Research Triangle Park, NC, USA; ²ORISE, Oak Ridge, TN, USA
- 9:15–9:40 **DNTS 45:** Modulation of the GLP-1R in Depression-Like Tasks and Hippocampal-Dependent Learning and Memory
Devon Graham, Taylor Trammell, Gregg Stanwood; Florida State University College of Medicine, Tallahassee, FL, USA
- 9:40–10:05 **DNTS 46:** Effects of Maternal Preconception Nicotine Exposure and Environmental Manipulation on Offspring Rat Brain, Behavior, and Epigenome throughout the Lifespan
Serena Jenkins, Allonna Harker, Robbin Gibb; University of Lethbridge, Lethbridge, AB, Canada
- 10:05–10:30 **DNTS 47:** Father: An Essential Element: Preconception Paternal Experience—Epigenetic Transmission of Male Experience Through the Germline
Palix Award

Allonna Harker, Serena Jenkins, Bryan Kolb, Robbin Gibb; University of Lethbridge, Lethbridge, AB, Canada

10:30–11:00 Warkany Tea

11:00–12:00 Special Presidential Lecture

DNTS 48: Unique Behavioral, Genetic, and Molecular Characteristics of Angelman Syndrome
Edwin Weeber, University of South Florida, Tampa, FL, USA

12:00 Close of Meeting