



Developmental Neurotoxicology Society

47th Annual Meeting

JUNE 24-28, 2023

CHARLESTON MARRIOTT

CHARLESTON, SC

Saturday June 24, 2023

2:00 PM - 5:00 PM
Emerald Prefunction

Registration Open

3:00 PM - 5:00 PM
Yellow Topaz

Council Meeting

Sunday June 25, 2023

8:00 AM - 1:30 PM
Emerald Prefunction

Registration Open

8:45 AM - 9:00 AM
Emerald Three

President's Welcome

9:05 AM - 12:05 PM
Emerald Three

**DNTS Symposium: Developmental Outcomes Following
Neuroinflammatory Exposures**

Chairpersons

Laura M. Carlson, US Environmental Protection Agency

Tim Anderson, US Environmental Protection Agency

9:05 AM - 9:35 AM

Overview of the Role of the Immune System in Brain Development and Function

Sarah Blossom

University of New Mexico

9:35 AM - 10:05 AM

Pregnancy-Dependent Neuroimmune and Endocrine Effects of Endocrine Disrupting Chemical Mixtures: Implications for Maternal Health and Fetal Development

Marissa Sobolewski

University of Rochester

10:35 AM - 10:50 AM

Break

10:50 AM - 11:20 AM

The Lasting Impact of Maternal Immune Activation During Gestation and Neurodevelopment

Judy Van de Water

University of California Davis

11:50 AM - 12:05 PM

Discussion

12:05 PM - 1:30 PM

Lunch on your own

1:30 PM - 2:30 PM

Emerald Three

DNTS Elsevier Distinguished Lecture

Climate Change, Fossil-Fuel Pollution, and Children's Health and Development

Chairperson

Patricia Janulewicz Lloyd, Boston University

Lecturer

Frederica Perera, Columbia Mailman School of Public Health

2:30 - 2:50 PM

Break

2:50 PM - 3:50 PM

Emerald Three

DNTS Strategic Planning Meeting

3:50 PM - 5:20 PM

Crystal Ballroom A

The HEALTHy Brain and Child Development Study Symposium

(Joint with BDRP)

Chairpersons

Christina D. Chambers, University of California San Diego

Ludmila Bakhireva, University of New Mexico

3:50 PM - 4:10 PM

The HEALTHy Brain and Child Development Study: Why This and Why Now?

Michelle Freund

National Institute on Drug Abuse

4:10 PM - 4:30 PM

Overview of the HBCD Study Design and Plan for Data Release

Christina D. Chambers

University of California San Diego

4:30 PM - 4:50 PM

Selection of Measures and Pilot Results for Biospecimens in the HBCD Study

Ludmila Bakhireva

University of New Mexico

4:50 PM - 5:10 PM

Selection of Measures and Pilot Results for Neuroimaging

Chris Smyser

University of Washington

5:10 PM - 5:20 PM

Discussion

5:25 PM - 5:55 PM

Crystall Ballroom A

Patricia Rodier Mid-Career Award for Researching and Mentoring Interactions Between Early Postnatal Experience, Gut Microbiota, and Adult Neurobehavior in a Rodent Model

(Joint with BDRP)

Lori Driscoll

Colorado College

6:00 PM - 7:30 PM

Crystal Ballroom D

Poster Session 1 and Exhibits Attended

(Joint with BDRP and OTIS)

E-cigarette aerosol exposure decreases GABA neuron migration in the embryonic brain

Amber Parnell, Deirdre McCarthy, Mia Trupiano, Pradeep Bhide

Florida State University, Tallahassee, USA

An apparent increase in medial frontal cortical glutamatergic neurons following loss of the dopamine D2R in a GABAergic interneuron subpopulation

Yasmeena Thabet, Gregg Stanwood

Florida State University, Tallahassee, USA

Reductions in neocortical parvalbumin expression due to iodine deficiency and ammonium perchlorate exposure

MaryAnn Hawks^{1 2}, Kiersten Bell^{1 2}, Ryne Thomas^{1 2}, Jermaine Ford³, Mary Gilbert¹

¹Center for Public Health and Environmental Assessment, Research Triangle Park, USA. ²Oak Ridge Institute for Science and Education, Oak Ridge, USA. ³National Center for Computational Toxicology, Research Triangle Park, USA

Prevalence of periventricular heterotopia within adult rats following developmental exposure to perchlorate and dietary iodine deficiency

Ryne Thomas^{1 2}, Kiersten Bell^{1 2}, Cal Riutta^{1 2}, Maryann Hawks^{1 2}, Jermaine Ford^{1 2}, Mary Gilbert^{1 2}

¹Centre for Public Health and Environmental Assessment, RTP, USA. ²Oak Ridge Institute for Student Education, Oak Ridge, USA

Targeted proteomics analysis for parvalbumin in rat brain tissue

Jermaine Ford, Mary Gilbert

US Environmental Protection Agency, Research Triangle Park, USA

7:30 PM - 9:30 PM

Yellow Topaz

Graduate Student and Postdoctoral Fellows Career Event

Hosted by Middle Atlantic Reproduction and Teratology Association (MARTA)

Monday
June 26, 2023

8:00 AM - 12:00 PM
Emerald Prefunction

Registration Open

8:00 AM - 9:00 AM
Crystal Ballroom A

Keynote Lecture
Protecting Mothers and Babies: A Time for Change
(Joint with BDRP and OTIS)

Christina Bucci-Rechtweg
Novartis Pharmaceuticals Corporation

9:05 AM - 12:00 PM
Emerald Three

DNTS Platform Session 1

Chairperson
Diana Dow-Edwards, State University of New York

9:05 AM - 9:30 AM

Prenatal Cannabis Use During the Second Trimester of Pregnancy in the YoungMoms Project
Natacha De Genna
University of Pittsburgh

9:30 AM - 9:55 AM

Examining the Relationship of Acetaminophen Use During Pregnancy with Early Language Development in Children
Megan Woodbury
University of Illinois Urbana-Champaign

9:55 AM - 10:20 AM

Associations of Prenatal Triclosan Exposure with Parent-Reported Behavioral Problems in Two- and Three-Year-Old Children
Patricia Cintora
University of Illinois Urbana-Champaign

10:20 AM - 10:35 AM

Break

10:35 AM - 11:00 AM

Associations Between a Prenatal Stress Mixture and Preschoolers' Temperament: Impact of Race/Ethnicity
Francheska Merced-Nieves
Ichan School of Medicine at Mount Sinai

11:00 AM - 11:25 AM

Do Infant Behaviors Mediate the Relationship of Prenatal Cocaine Exposure (PCE) to Adult Perceptual Reasoning Deficits?
Lynn Singer
Case Western Reserve University

11:25 AM - 11:45 AM

Discussion

11:45 AM - 2:00 PM

Lunch on your own

12:00 PM - 2:00 PM
Opal One

NTT Editorial Board Working Lunch

2:35 PM - 5:30 PM
Emerald Three

DNTS Platform Session 2

Chairperson
Melissa Bailey, Emporia University

2:35 PM - 3:00 PM

Thyroid Hormone System Adverse Outcome Pathways and
Developmental Neurotoxicity
Mary Gilbert
US Environmental Protection Agency

3:00 PM - 3:25 PM

Developmental Trajectories of Locomotor Effects Following
Embryonic Toxicant Exposures in Zebrafish
Andrew Hawkey
Midwestern University

3:25 PM - 3:50 PM

Selective Deficits in Frontal Cortical Parvalbumin Containing GABA
Neurons Following Developmental Nicotine Exposure
Mia Trupiano
Florida State University College of Medicine

3:50 PM - 4:05 PM

Break

4:05 PM - 4:30 PM

Stress-Related Adaptations Following Loss of Dopamine D1
Receptors in Cerebral Cortical Interneurons
Nella Delva
Florida State University

11:00 AM - 11:25 AM

Interaction of Latrophilin-3, an ADHD Risk Gene, and Deltamethrin
in Sprague Dawley Rats on Learning and Memory
Charles Vorhees
Cincinnati Children's Hospital Medical Center

4:55 PM - 5:20 PM

A Pilot Study to Determine if Exercise Can Mitigate the Effects of
Benzo[a]pyrene Developmental Neurotoxicity
Christine Curran
Northern Kentucky University

5:20 PM - 5:30 PM

Discussion

5:30 PM - 7:00 PM
Crystal Ballroom D

Poster Session 2 and Exhibits Attended
(Joint with BDRP)

Results from the IRIS systematic review of methylmercury:
Developmental neurotoxicology (DNT) outcomes evaluated in the literature

Deborah Segal, Rebecca Nachman, Elizabeth Radke, Leonid Kopylev
U.S. EPA, Washington, DC, USA

Prenatal cocaine exposure and self-reported behavioral adjustments
from ages 12 to 21: Environmental pathways

Meeyoung Min¹, Jeffrey Albert², Sonia Minnes², June-Yung Kim³, Sun-Kyung Kim², Gregory Powers², Lynn Singer²

¹University of Utah, Salt Lake City, USA. ²Case Western Reserve University, Cleveland, USA. ³University of North Dakota, Grand Forks, USA

Cognitive and behavioral effects of whole brain conventional or high dose rate (FLASH) proton irradiation in a neonatal Sprague Dawley rat model

Michael Williams^{1, 2}, Chiho Sugimoto², Samantha Regan¹, Emily Pitzer¹, Adam Fritz², Mathieu Sertorio¹, Anthony Mascia¹, Ralph Vatner¹, John Perentesis^{1, 2}, Charles Vorhees^{1, 2}

¹University of Cincinnati, Cincinnati, USA. ²Cincinnati Children's Hospital Medical Center, Cincinnati, USA

In utero fentanyl exposure results in long-term functional deficits
Gregg Stanwood, Chioma Uchegbu, Kimberly Blankenship, Trinity

Nguyen, Inayat Sood, Devon Graham

Florida State University College of Medicine, Tallahassee, USA

Rural children's health: Intersectional studies of vulnerability to environmental stressors

Alicia Hellman¹, Laurie Abbott¹, Jessica Bahorski¹, Claire Berryman², Joseph Grzywacz¹, Robert Hickner¹, Gregg Stanwood¹

¹Florida State University, Tallahassee, USA. ²Louisiana State University, Baton Rouge, USA

Tuesday June 27, 2023

8:00 AM - 12:00 PM
Emerald Prefunction

Registration Open

8:00 AM - 9:00 AM
Crystal Ballroom A

Robert L. Brent Lecture - Teratogen Update
The Effects of the Dobbs Decision on Teratology: The Effects on Research
(Joint with BDRP and OTIS)

Chairperson

Anthony M. DeLise, Novartis Pharmaceuticals Corporation

Lecturer

Anne D. Lyerly, University of North Carolina at Chapel Hill

9:05 AM - 12:00 PM

Health Disparities within Communities of Color Symposium

Crystal Ballroom A

(Joint with BDRP and OTIS)
Organized by BDRP Diversity, Equity, and Inclusion Workgroup

Chairpersons

Madeline Vera-Colon, University of California Riverside
Vinita Leedom, South Carolina Department of Health and Environmental Control

9:05 AM - 9:40 AM

What You Need to Know about Children's Health and Environmental Exposures Through the Diet
Gredia Huerta-Montañez
Northeastern University

9:40 AM - 10:15 AM

Disparities and Opportunities in Global Prevention and Care of Folate-Sensitive Spina Bifida
Vijaya Kancherla
Emory University

10:15 AM - 10:30 AM

Break

10:30 AM - 11:05 AM

Traumatic Brain Injury in Women: The Case of Sex/Gender as Social Determinants of Health
Martina Anto-Ocrah
University of Pittsburgh

11:05 AM - 11:45 AM

Medical and Developmental Effects of Prenatal and Early Childhood Lead Exposure
Michelle Myer
SC Department of Health and Environmental Control

11:45 AM - 12:00 PM

Discussion

12:00 PM - 2:00 PM

Lunch on your own

2:00 PM - 5:00 PM

Crystal Ballroom A

COVID-19 and Pregnancy: An Update and Planning for the Future Symposium

(Joint with BDRP)

Chairpersons

Vijaya Kancherla, Emory University
Sonja A. Rasmussen, Johns Hopkins University

2:00 PM - 2:25 PM

COVID-19 in Pregnancy: Maternal, Placental, and Fetal Complications
Andrea Edlow
Mass General Research Institute

2:25 PM - 2:50 PM

COVID-19 in Pregnancy: An Update from the US Centers for Disease Control and Prevention

Suzanne Gilboa

National Center on Birth Defects and Developmental Disabilities, CDC

2:50 PM - 3:15 PM

Findings from the ECHO Cohorts Regarding the Effects of the COVID-19 Pandemic

Leonardo Trasande

New York University Grossman School of Medicine

3:15 PM - 3:30 PM

Break

3:30 PM - 3:55 PM

COVID-19 in Early Pregnancy: Clinical Implications and Methodological Considerations

Sonia Hernandez-Diaz

Harvard T.H. Chan School of Public Health

3:55 PM - 4:20 PM

COVID-19 in Pregnancy: What Do We Know Now?

Malavika Prabhu

Mass General Hospital

4:20 PM - 4:45 PM

Ethics, Evidence, and Vaccination in Pregnancy: Lessons from COVID-19

Anne Drapkin Lysterly

University of North Carolina at Chapel Hill

4:45 PM - 5:00 PM

Discussion

6:00 PM - 8:00 PM

DNTS Social

**Wednesday
June 28, 2023**

8:00 AM - 9:00 AM

Emerald Three

Richard Butcher New Investigator Research Award

Samantha L. Regan

University of Michigan

9:05 AM - 12:00 PM

Crystal Ballroom A

Applications of New Approach Methods in Developmental and Reproductive Toxicology Symposium

(Joint with BDRP)

Chairpersons

Amer Jamalpoor, Toxy B.V.

Jessica A. Palmer, Stemina Biomarker Discovery Inc.

9:05 AM - 9:40 AM

Establishing Confidence in NAMs for Developmental and Reproductive Toxicity
Nicole C. Kleinstreuer
NIEHS/NICEATM

9:40 AM - 10:15 AM

Practical Application of New Approach Methods (NAMs) in Developmental Toxicity Testing
Kathryn Wolton/Ramya Rajagopal
Unilever Safety and Environmental Assurance Centre

10:15 AM - 10:45 AM

Warkany Tea

10:45 AM - 11:10 AM

How to Gain Confidence for Using NAMs in the Regulatory Arena of DART Testing
Steven Van Cruchten
Antwerp University

11:10 AM - 11:30 AM

The Use of Zebrafish Alternative Animal Model to Predict Human Developmental and Reproductive Toxicity According to the ICH S5 R3 Guideline
Arantza Muriana
Biobide USA

11:30 AM - 11:50 AM

ReproTracker as an *In Vitro* Alternative to Animal Models for Developmental Toxicity Testing
Amer Jamalpoor
Toxy B.V.

12:30 PM - 2:00 PM
Emerald Three

DNTS Business Meeting

2:00 PM

DNTS Meeting Adjourn

See you next year in
Pittsburgh, PA!
June 22–26, 2024

