

**Teratology Society 2018 Annual Meeting  
Mechanisms, Models, Mothers and Babies:  
Bringing Birth Defects Research into Practice  
Hilton Clearwater Beach Resort  
Clearwater Beach, Florida  
June 23–27, 2018**

Only sessions designated with **CME** are eligible for Continuing Medical Education credit.

**Friday, June 22, 2018**

<b>3:00 PM–6:00 PM</b>	<b>Registration Open</b>	<b>Grand Ballroom Foyer</b>
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**Saturday, June 23, 2018**

<b>7:30 AM–6:00 PM</b>	<b>Registration Open</b>	<b>Grand Ballroom Foyer</b>
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<b>8:00 AM–8:30 AM</b>	<b>Education Course Coffee and Pastries</b> <i>(Education Course Session 1 Registrants Only)</i>	<b>Grand Ballroom D</b>
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<b>8:30 AM–12:00 Noon</b>	<b>Education Course Session 1</b> <b>Embryology and Development of Central Nervous System: From Prenatal Period to Adolescence</b> <i>(Separate Registration Required)</i>	<b>Grand Ballroom D</b>
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*Organized by the Education Committee, Chairperson, Julia Y. Hui, Celgene Corporation*

8:30 AM–8:40 AM	Welcome <i>Teratology Society President, Alan M. Hoberman, Charles River Laboratories</i>
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8:40 AM–8:45 AM	Course Overview <i>Education Committee Chairperson, Julia Y. Hui, Celgene Corporation</i>
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8:45 AM–9:30 AM	Pre- and Postnatal Development of the Central Nervous System <i>John M. DeSesso, Exponent, Inc.</i>
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9:30 AM–10:15 AM	Development of Central Nervous System: Differences/Comparisons in Mammalian Species <i>Christine Charvet, Cornell University</i>
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10:15 AM–10:30 AM	Break
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10:30 AM–11:15 AM	Pre- and Postnatal Development and Assessment of Central Nervous System Functions in Human and Animals <i>Gregg D. Stanwood, Florida State University</i>
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11:15 AM–12:00 Noon	Susceptibility to Disruptions of Normal Central Nervous System Development by Toxicants and Other Factors <i>Christine Perdan Curran, Northern Kentucky University</i>
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<b>12:00 Noon–1:30 PM</b>	<b>Lunch on Your Own</b>	
<b>1:30 PM–5:00 PM</b>	<b>Education Course Session 2</b> <b>Assessment and Management of Developmental Effects</b> <b>on the Central Nervous System: From the Molecular</b> <b>Level to the Clinical Setting</b> (Separate Registration Required) <i>Organized by the Education Committee, Chairperson, Julia Y. Hui,</i> <i>Celgene Corporation</i>	<b>Grand Ballroom D</b>
1:30 PM–1:35 PM	Course Overview <i>Education Committee, Chairperson, Julia Y. Hui,</i> <i>Celgene Corporation</i>	
1:35 PM–2:20 PM	Brain Extracellular Space: A Molecular Highway for Cell Communication in Development <i>Sabina Hrabetova, SUNY Downstate Medical</i> <i>Center</i>	
2:20 PM–3:05 PM	Developmental Neurotoxicity: <i>In Vivo</i> Preclinical Assessment and Models of Disease <i>Ellen McGlinchey, Charles River Laboratories</i>	
3:05 PM–3:20 PM	Break	
3:20 PM–4:05 PM	Developmental Neurotoxicology: The Continuum from <i>In Vivo</i> to <i>In Vitro</i> and Alternate Approaches <i>William Slikker Jr., US Food and Drug</i> <i>Administration</i>	
4:05 PM–4:50 PM	Clinical Assessments and Management of Developmental Effects on the Central Nervous System <i>Claire D. Coles, Emory University School of</i> <i>Medicine</i>	
4:50 PM–5:00 PM	Discussion	
<b>5:30 PM–7:30 PM</b>	<b>Student and Postdoctoral Fellow Mixer</b>	<b>Flamingo Deck</b>
<b>6:30 PM–9:00 PM</b>	<b>Council 1 Meeting</b> Committee Reports	<b>Waters Edge</b>
<b><u>Sunday, June 24, 2018</u></b>		
<b>7:00 AM–6:00 PM</b>	<b>Registration Open</b>	<b>Grand Ballroom Foyer</b>
<b>7:00 AM–8:00 AM</b>	<b>2019 Program Committee Meeting</b>	<b>Waters Edge A</b>
<b>7:30 AM–8:00 AM</b>	<b>Morning Coffee and Pastries</b> (Joint with DNTS)	<b>Grand Ballroom Foyer</b>
<b>8:00 AM–8:15 AM</b>	<b>President's Welcome</b> <i>Teratology Society President, Alan M. Hoberman, Charles River Laboratories</i>	<b>Grand Ballroom D</b>

8:15 AM–9:00 AM

**Josef Warkany Lecture**  
**The Arrogance of Teratology (L1)**  
(Joint with DNTS)

**Grand Ballroom D**

*Chairperson: Alan M. Hoberman, Charles River Laboratories*

*Lecturer: John M. DeSesso, Exponent, Inc.*

9:05 AM–12:05 PM

**Graduate Student and Postdoctoral Fellow**  
**Platform Session 1**

**Grand Ballroom D**

*Organized by the Student Affairs Committee*

*Chairperson: Dinesh J. Stanislaus, GlaxoSmithKline*

**Presenting author is underlined.**

9:05 AM–9:10 AM

Introduction

*Dinesh J. Stanislaus, GlaxoSmithKline*

9:10 AM–9:30 AM

1

A Mechanistic Agent-Based Model for Brain Angiogenesis and Developmental Neurovascular Toxicity

*Zurlinden TJ<sup>1</sup>, Saily KS<sup>1</sup>, Spencer RS<sup>2</sup>, Baker NC<sup>3</sup>, Knudsen TB<sup>1</sup>. <sup>1</sup>US Environmental Protection Agency, ORD, National Center for Computational Toxicology, Research Triangle Park, NC, United States, <sup>2</sup>ARA, Research Triangle Park, NC, United States, <sup>3</sup>Leidos, Research Triangle Park, NC, United States.*

9:30 AM–9:50 AM

2

Transcriptomic Profiling of Flame Retardant Exposures in Human Embryonic Stem Cell Neural Progenitors

*Chen H, Iyer N, Yan CD, Robinson JF. University of California, San Francisco, San Francisco, CA, United States*

9:50 AM–10:10 AM

3

Intrinsic and Ethanol-Enhanced Fetal DNA Damage and Neurodevelopmental Deficits in *Brca1* Knockout Progeny Associated with Decreased Brain BRCA1 Levels


*Drake DM<sup>1</sup>, Or B<sup>2</sup>, Wells PG<sup>2,3</sup>. <sup>1</sup>Department of Pharmaceutical Sciences and the Centre for Pharmaceutical Oncology, University of Toronto, Toronto, ON, Canada, <sup>2</sup>Department of Pharmacology and Toxicology, Faculty of Medicine, University of Toronto, Toronto, ON, Canada, <sup>3</sup>Department of Pharmaceutical Sciences and the Centre for Pharmaceutical Oncology, University of Toronto, Toronto, ON, Canada.*

10:10 AM–10:30 AM	4	<p>Transient Maternal Hypothyroidism Alters Neural Progenitors and Results in Abnormal Brain Development  <u>O'Shaughnessy KL</u><sup>1,2</sup>, <u>Thomas SE</u><sup>1,2</sup>, <u>Ford JL</u><sup>2</sup>, <u>Ford RL</u><sup>1,2</sup>, <u>Gilbert ME</u><sup>2</sup>. <sup>1</sup>Oak Ridge Institute for Science Education (ORISE), Oak Ridge, TN, United States, <sup>2</sup>US Environmental Protection Agency, ORD, National Health and Environmental Effects Research Laboratory, Toxicity Assessment Division, Research Triangle Park, NC, United States.</p>
10:30 AM–10:45 AM		Break—Grand Ballroom Foyer
10:45 AM–11:05 AM	5	<p>Increased Risk of Necrotizing Enterocolitis in Offspring of Toxicant-Exposed Mice  <u>Mokshagundam S</u><sup>1</sup>, <u>Ding T</u><sup>1</sup>, <u>Wilson AJ</u><sup>1</sup>, <u>Dallas ML</u><sup>2</sup>, <u>Osteen KG</u><sup>1</sup>, <u>Bruner-Tran KL</u><sup>1</sup>. <sup>1</sup>Vanderbilt University Medical Center, Nashville, TN, United States, <sup>2</sup>Vanderbilt University, Nashville, TN, United States.</p>
11:05 AM–11:25 AM	6	<p>Medically Assisted Reproduction and the Risk of Preterm Birth  <u>Gorgui J</u><sup>1,2</sup>, <u>Sheehy O</u><sup>2</sup>, <u>Trasler J</u><sup>3</sup>, <u>Fraser W</u><sup>4</sup>, <u>Bérard A</u><sup>1,2</sup>. <sup>1</sup>University of Montréal, Montréal, QC, Canada, <sup>2</sup>CHU Sainte-Justine Research Center, Montréal, QC, Canada, <sup>3</sup>McGill University, Montréal, QC, Canada, <sup>4</sup>University of Sherbrooke, Sherbrooke, QC, Canada.</p>
11:25 AM–11:45 PM	7	<p>Surveillance of Microcephaly and Neurotropic Infections Using Healthcare Databases  <u>Messinger CJ</u><sup>1,2</sup>, <u>He M</u><sup>2</sup>, <u>Huybrechts KF</u><sup>2</sup>, <u>Bateman B</u><sup>2</sup>, <u>Hernandez-Diaz S</u><sup>3</sup>. <sup>1</sup>Harvard Medical School, Boston, Massachusetts, United States, <sup>2</sup>Division of Pharmacoepidemiology and Pharmacoeconomics, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, <sup>3</sup>Harvard TH Chan School of Public Health, Boston, MA, United States.</p>

11:45 PM–12:05 PM 8 Noninvasive Screening of Fetal Anomalies: The Serum Metabolomic Way  
*Troisi J*<sup>1,2,3</sup>, *Sarno L*<sup>4</sup>, *Richards SM*<sup>5,6</sup>, *Symes SJ*<sup>6,7</sup>, *Adair DC*<sup>6</sup>, *Scala G*<sup>2</sup>, *Taylor RS*<sup>8</sup>, *McCowan LM*<sup>8</sup>, *Fasano A*<sup>9,10</sup>, *Martinelli P*<sup>4</sup>, *Guida M*<sup>1,2</sup>.  
<sup>1</sup>Department of Medicine, Surgery, and Dentistry, Scuola Medica Salernitana, University of Salerno, Salerno, SA, Italy, <sup>2</sup>Theoreo srl–Spin-Off Company of the University of Salerno, Salerno, SA, Italy, <sup>3</sup>European Biomedical Research Institute of Salerno (EBRIS), Salerno, SA, Italy, <sup>4</sup>Department of Neurosciences, Reproductive, and Dentistry Sciences, University of Naples Federico II, Naples, NA, Italy, <sup>5</sup>Department of Biology, Geology and Environmental Sciences, University of Tennessee at Chattanooga, Chattanooga, TN, United States, <sup>6</sup>Department of Obstetrics and Gynecology, University of Tennessee, College of Medicine, Chattanooga, TN, United States, <sup>7</sup>Department of Chemistry and Physics, University of Tennessee at Chattanooga, Chattanooga, TN, United States, <sup>8</sup>Department of Obstetrics and Gynaecology, Faculty of Medical and Health Science, The University of Auckland, Auckland, NZ, New Zealand, <sup>9</sup>Harvard Medical School, Boston, MA, United States, <sup>10</sup>Mass General Hospital for Children, Department of Pediatrics, Basic, Clinical and Translational Research, Boston, MA, United States.

<b>12:05 PM–1:30 PM</b>	<b>Lunch on Your Own</b>	
<b>12:05 PM –1:30 PM</b>	<b>Past Presidents' and Honorees' Luncheon</b> <i>(By Invitation Only)</i>	<b>Starfish</b>
<b>12:30 PM–1:30 AM</b>	<b>Constitution and Bylaws Committee Meeting</b>	<b>Tarpon</b>
<b>12:30 PM–1:30 AM</b>	<b>Membership Committee Meeting</b>	<b>Dolphin</b>
<b>1:30 PM–2:00 PM</b>	<b>F. Clarke Fraser New Investigator Award</b> <b>Cancer Risk in Children with Birth Defects: Developing a Research Program in the Epidemiology of Rare Complex Traits (L2)</b> <i>Chairperson: Julia M. Gohlke, Virginia Polytechnic Institute and State University</i> <i>Lecturer: Philip Lupo, Baylor College of Medicine</i>	<b>Grand Ballroom D</b>
<b>2:00 PM–2:30 PM</b>	<b>James G. Wilson Publication Award</b> <b>Genetic Vulnerabilities to Prenatal Alcohol Exposure: Limb Defects in Sonic Hedgehog and GLI2 Heterozygous Mice</b> <i>Chairperson: Brian Enright, AbbVie Inc.</i> <i>Lecturer: Eric W. Fish, University of North Carolina–Chapel Hill</i>	<b>Grand Ballroom D</b>

2:35 PM–5:30 PM

**Organotypic Culture Models (OCMs) and  
Microphysiological Systems (MPS) for Human  
Development: New Platforms for Mechanistic Evaluation  
of Developmental Toxicity Symposium** 

**Grand Ballroom D**

*Chairpersons: Brian Johnson, University of Wisconsin-Madison and  
Thomas B. Knudsen, National Center for Computational Toxicology, US EPA*

2:35 PM–2:40 PM

Introduction

2:40 PM–3:15 PM

S1

An Engineered Organoid Culture Model That  
Incorporates Human Mesenchymal and Epithelial  
Cells to Model Palatal Fusion  
*Barbara D. Abbott, US Environmental Protection  
Agency*

3:15 PM–3:45 PM

S2

Engineering an *In Vitro* and *In Silico* Model of  
Human Neural Tube Development for Analysis of  
Molecular Pathways  
*Randolph S. Ashton, University of Wisconsin*

3:45 PM–4:15 PM

S3

Recapitulating Human Endocardial Cushion  
Morphogenesis with Organotypic Culture Models  
and Microfluidics  
*E. Sid Hunter, US Environmental Protection  
Agency*

4:15 PM–4:30 PM

Break—Grand Ballroom Foyer

4:30 PM–5:00 PM

S4

Building an Integrated Fetal Organotypic  
Membrane on a Chip (IFMOC) for Predictive  
Toxicology  
*Kevin G. Osteen, Vanderbilt University School of  
Medicine*

5:00 PM–5:30 PM

S5

Paracrine Sonic Hedgehog Gradients in a  
Microphysiological System for Predictive  
Toxicology  
*Brian Johnson, University of Wisconsin-Madison*

2:35 PM–5:30 PM

**Current Topics and Updates for Pregnancy  
Registries Workshop**

**Waters Edge**

*Chairpersons: Christina D. Chambers, University of California–San Diego  
and Lewis B. Holmes, MassGeneral Hospital for Children*

2:35 PM–2:55 PM

W1

Collecting Patient-Reported Data via a Mobile  
App for Studies of Pregnancy Exposures and  
Outcomes: A Pilot Study  
*Sascha Dublin, Kaiser Permanente Washington  
Health Research Institute*

2:55 PM–3:15 PM

W2

Sample Size and Power Issues for Pregnancy  
Registries  
*Sonia Hernandez-Diaz, Harvard School of Public  
Health*

3:15 PM–3:35 PM	W3	Drugs in Breastmilk: Addition of a Human Breast Milk Tissue Repository Sample Collection and Associated Data Appended to a Set of US/Canadian Pregnancy Registries <i>Christina D. Chambers, University of California San Diego</i>
3:35 PM–3:55 PM	W4	Recruitment in the Age of Social Media: A CRO Perspective <i>Nicole Hurst, Pharmaceutical Product Development, LLC</i>
3:55 PM–4:15 PM	W5	To Count or Not Count: Cardiac Defects in Pregnancy Registries <i>Thieu Nguyen, Johns Hopkins All Children's Heart Institute</i>
4:15 PM–4:30 PM		Break—Grand Ballroom Foyer
4:30 PM–4:50 PM	W6	US Food and Drug Administration Updates <i>Leyla Sahin, US Food and Drug Administration</i>
4:50 PM–5:05 PM	W7	Update from the United States Zika Pregnancy and Infant Registry <i>Baez-Santiago MA<sup>1</sup>, Carr C<sup>1</sup>, Ellington S<sup>1</sup>, Jones AM<sup>1</sup>, Fulton A<sup>1</sup>, Reynolds M<sup>1</sup>, Gilboa SM<sup>1</sup>, Honein MA<sup>2</sup>, USZPAIR Collaborators<sup>1</sup>. <sup>1</sup>Division of Congenital and Developmental Disorders, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>2</sup>Division of Congenital and Developmental Disorders, National Center on Birth Defects and Developmental Disabilities, CDC, Atlanta, GA, United States.</i>
5:05 PM–5:20 PM	W8	High Prevalence of Selected Birth Defects in Ensenada Baja California, Mexico <i>Santos-Burgoa L<sup>1</sup>, Pallares ME<sup>1</sup>, Rosenthal J<sup>2</sup>, Santos-Burgoa C<sup>3</sup>. <sup>1</sup>Departamento de Pediatría, Hospital General de Ensenada, Instituto de Salud, Ensenada, BC, Mexico, <sup>2</sup>Division of Congenital and Developmental Disorders, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>Milken Institute School of Public Health, Department of Global Health, The George Washington University, Washington, DC, United States.</i>
5:20 PM–5:30 PM		Discussion

**5:35 PM–6:00 PM**      **Patricia Rodier Mid-Career Award  
for Research and Mentoring**      **Grand Ballroom D**  
**Assessing Addiction Risk in Rodents Following Perinatal Exposure to  
PCBs: Behavioral and Neurochemical Indicators**  
(Joint with DNTS)  
*Chairpersons: Julia M. Gohlke, Virginia Polytechnic Institute and State University  
and Michael T. Williams, Cincinnati Children’s Research Foundation*  
*Lecturer: Helen J.K. Sable, University of Memphis*

**6:00 PM–7:30 PM**      **Welcome Reception, Poster Session 1,  
and Exhibits Attended**      **Grand Ballroom E**  
(Joint with DNTS)  
Teratology Society Posters P1–P22 and LB1–LB3  
DNTS Posters 1–11

**7:30 PM–8:00 PM**      **New Member "Sundae" Night Social**      **Starfish**  
(By Invitation Only)

**Monday, June 25, 2018**

**7:00 AM–6:00 PM**      **Registration Open**      **Grand Ballroom Foyer**

**7:00 AM–8:00 AM**      **Breakfast with the Teratology Mentors**      **Starfish**  
(Advance Signup Is Required)

**7:00 AM–8:00 AM**      **Nominations and Elections Committee Meeting**      **Coral**

**7:00 AM–8:00 AM**      **Publications Committee Meeting**      **Dolphin**

**7:00 AM–8:00 AM**      **Science Committee Meeting**      **Tarpon**

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

**8:00 AM–9:00 AM**      **Keynote Lecture**      **Grand Ballroom D**  
**Zika: Florida’s Experience Responding to an Emerging  
Public Health Threat (L3)**  
(Joint with DNTS)  
*Chairpersons: Dana L. Shuey, Incyte*  
*Speaker: Celeste Philip, Florida Department of Health*

**9:05 AM–12:00 Noon**      **Assessing the Lifelong Impacts of Prenatal and  
Early-Life Exposure to Air Pollution Symposium**      **Grand Ballroom D**  
(Joint with DNTS)      **CME**  
*Chairpersons: Natalie Johnson, Texas A&M School of Public Health and  
Peter H. Langlois, Texas Department of State Health Services*

9:05 AM–9:10 AM      Introduction



9:10 AM–9:45 AM	S6	Using Birth Defects Registries to Identify Developmental Toxicants in Air Pollution <i>Gary M. Shaw, Stanford University</i>
9:45 AM–10:20 AM	S7	Effects of Ambient Ultrafine Particle Exposure on Brain Development and Behavior: Parallels with Neurodevelopmental Disorders <i>Deborah Cory-Slechta, University of Rochester Medical School</i>
10:20 AM–10:35 AM		Break
10:35 AM–11:10 AM	S8	Prenatal Air Pollution Exposure and Offspring Pulmonary Immunosuppression <i>Natalie Johnson, Texas A&amp;M School of Public Health</i>
11:10 AM–11:45 AM	S9	Genetic Susceptibility to Developmental PAH Exposure <i>Christine Perdan Curran, Northern Kentucky University</i>
11:45 AM–12:00 Noon		Discussion

**9:05 AM–12:00 Noon**


**Application of New Genomic Technologies  
in the Understanding of Birth Defects Symposium ** **Grand Ballroom G**

*Chairperson: Jan M. Friedman, University of British Columbia*

9:05 AM–9:30 AM	S10	Introduction: Current Status of Genomic Testing to Identify Causes of Birth Defects <i>Jan M. Friedman, University of British Columbia</i>
9:30 AM–10:00 AM	S11	Identifying Structural Variants and the Genes that Cause Birth Defects <i>Evan Eichler, University of Washington</i>
10:00 AM–10:30 AM	S12	Mutations that Alter Splicing <i>Daniel MacArthur, The Broad Institute</i>
10:30 AM–10:45 AM		Break
10:45 AM–11:15 AM	S13	Genomic Dark Matter: Regulatory Variants <i>Peter Robinson, The Jackson Laboratory for Genomic Medicine</i>
11:15 AM–11:45 AM	S14	The Importance and Challenges of Data Sharing <i>Bartha M. Knoppers, McGill University</i>
11:45 AM–12:00 Noon		Discussion

Chairpersons: Nelson Pace, Exponent, Inc. and Kary Ellen Thompson, Bristol-Myers Squibb

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| 9:05 AM–9:15 AM   |    | Introduction   |
| 9:15 AM–9:30 AM   | 9  | Early Pregnancy Ondansetron Exposure and Risk of Structural Birth Defects<br><i>Kirby R<sup>1</sup>, Zambelli-Weiner A<sup>2</sup>, Via C<sup>2</sup>, Yuen M<sup>2</sup>, Weiner D<sup>2</sup>. <sup>1</sup>University of South Florida, Tampa, FL, United States, <sup>2</sup>Translational Technologies International, Hampstead, MD, United States.</i>  |
| 9:30 AM–9:45 AM   | 10 | Ondansetron and the Risk of Congenital Malformations<br><i>Huybrechts KF<sup>1</sup>, Hernandez-Diaz S<sup>2</sup>, Straub L<sup>1</sup>, Gray K<sup>3</sup>, Patorno E<sup>1</sup>, Desai R<sup>1</sup>, Mogun H<sup>1</sup>, Bateman B<sup>1,4</sup>. <sup>1</sup>Division of Pharmacoepidemiology and Pharmacoeconomics, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, <sup>2</sup>Harvard TH Chan School of Public Health, Boston, MA, United States, <sup>3</sup>Division of Maternal-Fetal Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, <sup>4</sup>Department of Anesthesiology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States.</i> |
| 9:45 AM–10:00 AM  | 11 | Maternal ADHD Medication Use during Pregnancy and the Risk of ADHD in Children<br><i>Lemelin M<sup>1</sup>, Sheehy O<sup>2</sup>, Bérard A<sup>1,2</sup>. <sup>1</sup>Faculty of Pharmacy, University of Montréal, Montréal, QC, Canada <sup>2</sup>Research Center, CHU Sainte-Justine, Montréal, QC, Canada.</i>   |
| 10:00 AM–10:15 AM | 12 | Evidence That Nevirapine Causes Harmful Fetal Effects<br><i>Zash R<sup>1,2,3</sup>, Diseko M<sup>3</sup>, Mayondi G<sup>3</sup>, Mmalane M<sup>3</sup>, Makhema J<sup>3</sup>, Lockman S<sup>2,3,4</sup>, Holmes LB<sup>5</sup>, Shapiro RL<sup>2,3</sup>. <sup>1</sup>Beth Israel Deaconess Medical Center, Boston, MA, United States, <sup>2</sup>Harvard TH Chan School of Public Health, Boston, MA, United States, <sup>3</sup>Botswana Harvard AIDS Institute Partnership, Gaborone, Gaborone, Botswana, <sup>4</sup>Division of Infectious Diseases, Brigham and Women's Hospital, Boston, MA, United States, <sup>5</sup>MassGeneral Hospital for Children, Boston, MA, United States.</i>   |

<b>10:35 AM–12:00 Noon</b>	<b>When Does the Presence of Medication in Mothers Milk Become a Risk to the Child Workshop</b>	<b>Waters Edge</b>
	<i>Chairpersons: Melissa Sherman Tassinari, and Belen Tornesi, Abbvie Inc.</i>	
10:35 AM–10:40 AM		Introduction
10:40 AM–11:10 AM	W9	The More Chemicals, the Worse the Milk? Risks of Maternal Medications during Lactation <i>Jason Sauberan, Neonatal Research Institute</i>
11:10 AM–11:40 AM	W10	Challenges and Successes in Running a Lactation Study <i>Marie Teil, UCB Farchim S.A.</i>
11:40 AM–12:00 Noon		Discussion
<b>12:00 Noon–1:30 PM</b>	<b>Lunch on Your Own</b>	
<b>12:00 Noon–1:30 PM</b>	<b>BDR Editorial Board Meeting</b>	<b>Dolphin</b>
<b>12:00 Noon–1:30 PM</b>	<b>Building a Professional Scientific Presence Using Social Media Workshop</b> <i>(Separate Registration Required, Boxed Lunch Provided)</i>	<b>Grand Ballroom D</b>
	<i>Chairpersons: Elise M. Lewis, Charles River Laboratories, and Dinesh J. Stanislaus, GlaxoSmithKline</i>	
12:00 Noon–12:10 PM		Boxed Lunch Pick-Up
12:10 PM–12:40 PM	W11	Social Media for Scientists: Professional Networking and Creating Impact for Your Work <i>Paige Jarreau, FromTheLabBench</i>
12:40 PM–1:30 PM		Discussion
<b>1:30 PM–2:00 PM</b>	<b>Agnish Fellowship Lecture Causation (L4)</b>	<b>Grand Ballroom D</b>
	<i>Chairperson: Julia Y. Hui, Celgene Corporation</i>	
	<i>Speaker: Anthony R. Scialli, Scialli Consulting LLC</i>	
<b>2:05 PM–5:20 PM</b>	<b>Public Affairs Symposium  Infectious Diseases during Pregnancy and Sequelae for the Mother and Baby</b>	<b>Grand Ballroom D</b>
	<i>Chairpersons: Evi Struble, US Food and Drug Administration and Susan L. Makris, US Environmental Protection Agency</i>	
2:05 PM–2:10 PM		Introduction <i>Evi Struble, US Food and Drug Administration</i>
2:10 PM–2:50 PM	S15	An Update on Zika Virus As a Cause of Birth Defects <i>Sonja A. Rasmussen, Centers for Disease Control and Prevention</i>

2:50 PM–3:30 PM	S16	Vaccine Development to Prevent Congenital Cytomegalovirus Infection <i>Haruhiko Murata, US Food and Drug Administration</i>
3:30 PM–3:45 PM		Break
3:45 PM–4:25 PM	S17	Parvovirus B19 Infection during Pregnancy: Are We Underestimating the Fetal Risks? <i>Asher Ornoy, Hebrew University Medical School</i>
4:25 PM–4:45 PM	S18	Developing Safe and Effective Drugs for Viral Infections during Pregnancy: The US Food and Drug Administration Perspective <i>Yodit Belew, US Food and Drug Administration</i>
4:45 PM–5:05 PM	S19	Regulatory Considerations for Developing Drugs for Use in Pregnant Women <i>Nneka McNeal-Jackson, US Food and Drug Administration</i>
5:05 PM–5:20 PM		Discussion

**2:05 PM–5:20 PM**

**Opiates: Impact on Pregnancy and Child Development Symposium** **CME**  
(Joint with DNTS)

**Grand Ballroom G**

*Chairpersons: Diana Dow-Edwards, SUNY Downstate Medical Center and Grace S. Lee, US Food and Drug Administration*

2:05 PM–2:10 PM		Introduction
2:10 PM–2:45 PM	S20	Maternal and Child Health Impact of the US Prescription Opioid Epidemic: Combined Public Health–Clinical Response <i>Cheryl S. Broussard, Centers for Disease Control and Prevention</i>
2:45 PM–3:20 PM	S21	Pharmacotherapy of Pregnant Women with Opioid Use Disorder <i>Hilary S. Connery, Harvard Medical School</i>
3:20 PM–3:35 PM		Break
3:35 PM–4:10 PM	S22	Nonclinical Assessment of the Effects of Opioids on Development: Challenges and Limitations <i>Elizabeth A. Bolan, US Food and Drug Administration</i>
4:10 PM–4:45 PM	S23	Nonopiate Treatment for Neonatal Abstinence Syndrome (NAS): Clinical and Preclinical Data <i>Henrietta S. Bada, University of Kentucky</i>
4:45 PM–5:20 PM	S24	Opioid Effects in the Infant Brain: Animal-Human Correlation <i>Dusica Bajic, Harvard Medical School</i>

Chairpersons: Barbara F. Hales, McGill University and Linda G. Roberts

- |                 |    |  |
|-----------------|----|--|
| 2:05 PM–2:20 PM |    | Introduction   |
| 2:20 PM–2:35 PM | 13 | <p>Preterm Birth and Heat Waves: Influence of the Spatial Resolution of the Exposure Estimate in Determining the Association<br/><i>Wu YY<sup>1</sup>, Zaitchik BF<sup>2</sup>, Swarup S<sup>3</sup>, Gohlke JM<sup>1</sup>.</i><br/><sup>1</sup>Department of Population Health Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA, United States, <sup>2</sup>Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD, United States, <sup>3</sup>Network Dynamics Simulation Science Laboratory, Biocomplexity Institute of Virginia Polytechnic Institute and State University, Blacksburg, VA, United States.</p>  |
| 2:35 PM–2:50 PM | 14 | <p>Arsenic Exposure Alters Folate Metabolism Causing Genomic Instability and Neural Tube Defects in a Dose-Dependent Manner<br/><i>Lachenauer ER<sup>1</sup>, Kamynina E<sup>1</sup>, Krämer L<sup>2</sup>, DiRisio AC<sup>1</sup>, Stabler SP<sup>3</sup>, Brosnan ME<sup>4</sup>, Brosnan JT<sup>4</sup>, Hiller K<sup>2,5</sup>, Field MS<sup>1</sup>, Stover PJ<sup>1</sup>.</i> <sup>1</sup>Cornell University, Ithaca, NY, United States, <sup>2</sup>Technische Universität Braunschweig, Braunschweig, Lower Saxony, Germany <sup>3</sup>University of Colorado, Aurora, CO, United States, <sup>4</sup>Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, Canada <sup>5</sup>Helmholtz Centre for Infection Research, Braunschweig, Lower Saxony, Germany.</p> |
| 2:50 PM–3:05 PM | 15 | <p>Repression of the Autophagy Gene AMBRA1 in the Developing Neuroepithelium Is a Novel Mechanism Underlying Diabetic Embryopathy<br/><i>Chen X.</i> University of Maryland School of Medicine, Baltimore, MD, United States.</p>  |
| 3:05 PM–3:20 PM | 16 | <p>Restoring BMP4 Expression in Vascular Endothelial Progenitors Ameliorates Maternal Diabetes-Induced Neural Tube Defects<br/><i>Cao S.</i> University of Maryland, Baltimore, MD, United States.</p>   |
| 3:20 PM–3:35 PM |    | Break  |

- 3:35 PM–3:50 PM 17 Tris(1,3-dichloro-2-propyl) Phosphate Exposure during Early-Blastula Alters the Normal Trajectory of Zebrafish Embryogenesis  
*Dasgupta S<sup>1</sup>, Cheng V<sup>2</sup>, Vliet SM<sup>2</sup>, Mitchell CA<sup>2</sup>, Volz DC<sup>1</sup>. <sup>1</sup>Department of Environmental Sciences, University of California, Riverside, CA, United States, <sup>2</sup>Environmental Toxicology Graduate Program, University of California, Riverside, CA, United States.*
- 3:50 PM–4:05 PM 18 Gene-Ethanol Interactions and Their Impact on Craniofacial Development  
*Lovely CB<sup>1,2</sup>, Swartz ME<sup>2</sup>, McCarthy N<sup>2</sup>, Norrie J<sup>2</sup>, Henegar T<sup>2</sup>, Eberhart JK<sup>2</sup>. <sup>1</sup>University of Louisville, Louisville, KY, United States, <sup>2</sup>University of Texas at Austin, Austin, TX, United States.*
- 4:05 PM–4:20 PM 19 Quaternary Ammonium Compounds Temporarily Alter the Gut Microbiome  
*Hrubec T<sup>1,2</sup>, McDonald V<sup>3</sup>, Shan L<sup>1</sup>, Luo X<sup>2</sup>. <sup>1</sup>E. Via College of Osteopathic Medicine–Virginia Campus, Blacksburg, VA, United States, <sup>2</sup>VA-MD College of Veterinary Medicine, Virginia Polytechnic Institute and State University, Blacksburg, VA, United States, <sup>3</sup>Department of Biological Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA, United States.*
- 4:20 PM–4:35 PM 20 Maternal and Infant Genetic Variants in Folate, Homocysteine and Trans-Sulfuration Pathways, Folic Acid Supplementation and Risk of Congenital Heart Defects among Women Taking Selective Serotonin Reuptake Inhibitors during Pregnancy  
*Nembhard WN<sup>1</sup>, Tang X<sup>1</sup>, Hu Z<sup>1</sup>, MacLeod S<sup>1</sup>, Stowe ZN<sup>2</sup>, Webber D<sup>1</sup>, National Birth Defects Prevention Study<sup>1</sup>. <sup>1</sup>University of Arkansas for Medical Sciences, Little Rock, AR, United States, <sup>2</sup>University of Wisconsin at Madison, Madison, WI, United States.*
- 4:35 PM–4:50 PM 21 Epigenome-Wide Assessment Identifies Developmental Genes in Differentially Methylated Regions Associated with Hypospadias  
*Lupo PJ<sup>1</sup>, Brown AL<sup>1</sup>, Ehli EA<sup>2</sup>, Kallsen NA<sup>2</sup>, Peyton SA<sup>2</sup>, Davies GE<sup>2</sup>, Patel A<sup>3</sup>, Zamilpa I<sup>3</sup>, Wyatt RA<sup>3</sup>, Hobbs CA<sup>3</sup>, Scheurer ME<sup>1</sup>, Canon S<sup>3</sup>. <sup>1</sup>Baylor College of Medicine, Houston, TX, United States, <sup>2</sup>Avera Institute for Human Genetics, Sioux Falls, SD, United States, <sup>3</sup>University of Arkansas for Medical Sciences, Little Rock, AR, United States.*

4:50 PM–5:05 PM 22 Copy Number Variants in Hypoplastic Right Heart Syndrome  
*Giannakou A<sup>1</sup>, Sicko RJ<sup>2</sup>, Kay DM<sup>2</sup>, Zhang W<sup>1</sup>, Romitti P<sup>3</sup>, Caggana M<sup>2</sup>, Brody L<sup>4</sup>, Shaw GM<sup>5</sup>, Jelliffe L<sup>6</sup>, Mills JL<sup>1</sup>. <sup>1</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, MD, United States, <sup>2</sup>New York State Department of Health, Albany, NY, United States, <sup>3</sup>The University of Iowa, Iowa City, IA, United States, <sup>4</sup>NHGRI, Bethesda, MD, United States, <sup>5</sup>Stanford University, San Francisco, CA, United States, <sup>6</sup>University of California, San Francisco, San Francisco, CA, United States.*

5:05 PM–5:20 PM 23 The Syndrome of Proximal Femur, Fibula, and Midline Metatarsal Long Bone Deficiencies  
*Hootnick DR<sup>1</sup>, Vargesson NA<sup>2</sup>. <sup>1</sup>Departments of Orthopedics, Pediatrics, and Cell and Developmental Biology, SUNY Upstate Medical University, Syracuse, NY, United States, <sup>2</sup>School of Medicine, Medical Sciences and Nutrition, Institute of Medical Sciences, University of Aberdeen, Aberdeen, Scotland, United Kingdom.*

**5:30 PM–7:00 PM** **Poster Session 2 and Exhibits Attended** **Grand Ballroom E**  
 (Joint with DNTS)

Teratology Society Posters P23–P44 and LB4–LB6  
 DNTS Posters 12–22

**7:00 PM–9:30 PM** **Teratology Society and MARTA Graduate Students and Postdoctoral Fellows Career Event** **Sandpiper Deck**  
 (Open to Teratology Society and DNTS Graduate Student and Postdoctoral Fellows)

**Tuesday, June 26, 2018**

**7:00 AM–6:00 PM** **Registration Open** **Grand Ballroom Foyer**

**7:00 AM–8:00 AM** **Communications Coordination Committee Meeting** **Starfish**

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

**8:00 AM–9:00 AM** **Robert L. Brent Lecture—Teratogen Update** **Grand Ballroom D**  
**Progress against Malaria: The Role of Antimalarial Drugs and Their Use in Pregnancy (L5)**

*Chairperson: Alan M. Hoberman, Charles River Laboratories*  
*Lecturer: Robert L. Clark, Artemis Pharmaceutical Research*

**9:05 AM–12:00 Noon**

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

**Grand Ballroom D**

(Joint with DNTS)

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

9:05 AM–9:10 AM		Introduction
9:10 AM–9:45 AM	S25	Clinical Characteristics of Autism Spectrum Disorders <i>Loisa Bennetto, University of Rochester</i>
9:45 AM–10:20 AM	S26	Maternal Anxiety and Stress and Its Effect on Fetal and Childhood Development: An Extrapolation to Autism <i>Thomas G. O'Connor, University of Rochester</i>
10:20 AM–10:35 AM		Break
10:35 AM–11:10 AM	S27	Placental Development: Vascularization of the Placenta in Children with Autism <i>Carolyn Margaret Salafia, Placental Analytics</i>
11:10 AM–11:45 AM	S28	Animal Models of Autism <i>Craig Powell, The University of Texas Southwestern Medical Center</i>
11:45 AM–12:00 Noon		Discussion

**9:05 AM–10:20 AM**

**Hot Topic Symposium  
Acetaminophen**

**Waters Edge**

*Chairpersons: Sarah Gloria Običan, University of South Florida and Sonja A. Rasmussen, Centers for Disease Control and Prevention*

9:05 AM–9:10 AM		Introduction
9:10 AM–9:30 AM	S29	Emerging Clinical Information on Acetaminophen <i>Sarah Gloria Običan, University of South Florida</i>
9:30 AM–9:50 AM	S30	A Review of the Acetaminophen Preclinical Reproductive Toxicology and Postnatal Development Data: Old and New <i>Graham P. Bailey, Janssen Pharmaceutica N.V.</i>
9:50 AM–10:10 AM	S31	Fetal Risks of Maternal Fever in Pregnancy <i>Christina D. Chambers, University of California–San Diego</i>
10:10 AM–10:20 AM		Discussion

**10:20 AM–10:35 AM**

**Break**



10:35 AM–12:00 Noon

**Nongenetic Factors Causing Neural Tube Defects Symposium** 

**Grand Ballroom G**

*Chairpersons: Michael D. Collins, University of California–Los Angeles and Grace S. Lee, US Food and Drug Administration*

10:35 AM–10:40 AM

Introduction

10:40 AM–11:20 AM

S32

Neural Tube Defects: Causation, Embryonic Development, and a New Method for Primary Prevention

*Andrew J. Copp, University College London Institute of Child Health*

11:20 AM–11:40 AM

S33

Utilizing the Sea Urchin Gene Regulatory Network (GRN) As a Molecular Target to Detect the Mechanism of Valproic Acid Teratogenicity  
*Michael D. Collins, University of California–Los Angeles*

11:40 AM–12:00 Noon

S34

Fumonisin B1 (FB1) and Fingolimod (FTY720): Tortilla Toxin and Oral Therapeutic Target Sphingolipid Pathways During Neural Tube Closure

*Janee Gelineau-van Waes, Creighton University School of Medicine*

10:35 AM–11:50 AM

**Platform Session 4  
Clinical Teratology and Epidemiology**

**Waters Edge**

*Chairpersons: Russell S. Kirby, USF College of Public Health and Marie McKenzie, University of Georgia*

10:35 AM–10:50 AM

Introduction

10:50 AM–11:05 AM

24

An Increased Cephalic Index: A Fetal Effect of Valproic Acid, but Not Phenytoin, Phenobarbital, or Carbamazepine  
*Holmes LB<sup>1</sup>, Hunt A-T<sup>2</sup>, Stadelmaier R<sup>3</sup>, Deutsch C<sup>4</sup>, Adams J<sup>5</sup>. <sup>1</sup>MassGeneral Hospital for Children, Boston, MA, United States, <sup>2</sup>Hunt Consulting Associates, Chapel Hill, NC, United States, <sup>3</sup>Albert Einstein College of Medicine, Bronx, NY, United States, <sup>4</sup>The Psychobiology Program at the Eunice Kennedy Shriver Center and Departments of Psychiatry and Pediatrics, University of Massachusetts Medical School, Worcester, MA, United States, <sup>5</sup>Department of Psychology, UMass-Boston, Boston, MA, United States.*

- 11:05 AM–11:20 AM 25 The Impact of Technology on the Prevalence of Congenital Malformations  
*Straub L<sup>1</sup>, Huybrechts KF<sup>1</sup>, Bateman B<sup>1,2</sup>, Mogun H<sup>1</sup>, Hernandez-Diaz S<sup>3</sup>. <sup>1</sup>Division of Pharmacoepidemiology and Pharmacoeconomics, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, <sup>2</sup>Department of Anesthesiology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, <sup>3</sup>Harvard TH Chan School of Public Health, Boston, MA, United States.*
- 11:20 AM–11:35 AM 26 Surveillance of Microcephaly and Other Congenital Central Nervous System Malformations: The Colombian Experience during the 2015–2016 Zika Virus Epidemic  
*Ospina ML<sup>1</sup>, Mercado M<sup>2</sup>, Galang RR<sup>3</sup>, Moore CA<sup>3</sup>, González M<sup>4</sup>, Valencia D<sup>3</sup>, Cuevas L<sup>4</sup>, Pacheco O<sup>4</sup>, Bermudez A<sup>5</sup>, Dominguez M<sup>3</sup>, Gilboa SM<sup>3</sup>, Rozo N<sup>4</sup>, Avila G<sup>4</sup>, Honein MA<sup>3</sup>, Prieto F<sup>4</sup>. <sup>1</sup>Dirección General, Instituto Nacional de Salud, Bogotá, Distrito Capital, Colombia, <sup>2</sup>Dirección de Investigación en Salud Pública, Instituto Nacional de Salud, Bogotá, DC, Colombia, <sup>3</sup>Division of Congenital and Developmental Disorders, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>4</sup>Dirección de Vigilancia y Análisis de Riesgo en Salud Pública, Instituto Nacional de Salud, Bogotá, DC, Colombia, <sup>5</sup>Dirección de Redes en Salud Pública, Instituto Nacional de Salud, Bogotá, DC, Colombia.*
- 11:35 AM–11:50 AM 27 Surface Physical Examinations in Resource-Limited Settings: Setting the Standard for Baseline Malformation Rate  
*Nasri H, Holmes LB. MassGeneral Hospital for Children, Boston, MA, United States.*

**12:00 Noon–1:30 PM**

**Lunch and Learn Mini Course  
Role and Function of Placenta in Pregnancy**  
(Separate Registration Required)

**Waters Edge**

*Organized by the Education Committee, Chairperson, Julia Y. Hui, Celgene Corporation*

12:00 Noon–12:10 PM

Boxed Lunch Pick-Up

12:10 PM–12:55 PM

Roles of Placentae as an Anchor, Conduit and Controller during Pregnancy: Implications across Species  
*Richard K. Miller, University of Rochester Medical Center*

12:55 PM–1:30 PM

Human Placenta Models for Reproductive Toxicology: Primary Human Trophoblasts, Microdevices, and Systems-Based Approaches  
*Joshua F. Robinson, University of California–San Francisco*

**12:00 Noon–1:30 PM**

**Lunch on Your Own**

**1:30 PM–4:30 PM**

**Epigenetic Effects of Environmental Exposures during Pregnancy Symposium** 

**Grand Ballroom D**

*Chairpersons: Barbara R. Hales, McGill University and Kembra L. Howdeshell, National Institute of Environmental Health Sciences*

1:30 PM–1:45 PM

Introduction

1:45 PM–2:15 PM

S35 Placental Epi/Genomics As Sensors of the *In Utero* Environment and Predictors of Fetal Development  
*Jia Chen, Mt. Sinai School of Medicine*

2:15 PM–2:45 PM

S36 Epigenetic Impact of Prenatal Exposure to Bisphenol A and Polycyclic Aromatic Hydrocarbons: Sex Differences and Effects on Neuroplasticity  
*Frances A. Champagne, University of Texas–Austin*

2:45 PM–3:15 PM

S37 Transgenerational Inheritance of Neurobehavioral and Physiological Deficits from Developmental Exposure to Benzo[a]Pyrene in Zebrafish  
*Robert L. Tanguay, Oregon State University*

3:15 PM–3:30 PM

Break

3:30 PM–4:00 PM

S38 Molecular Effects of Prenatal Phthalate Exposures on the Epigenome, Childhood BMI, and Obesity  
*Nina T. Holland, University of California–Berkeley*

4:00 PM–4:30 PM


S39 Transgenerational Placental Dysfunction As a Consequence of Paternal Developmental Toxicant Exposure in a Mouse Model  
*Kaylon L. Bruner-Tran, Vanderbilt University School of Medicine*

<b>1:30 PM–4:30 PM</b>	<b>Rare Childhood Diseases and Unmet Medical Needs: The Hope of Innovative Therapies Symposium</b>	<b>Waters Edge</b>
	<i>Chairperson: Kenneth Lyons Jones, UCSD, CA MotherToBaby and Elise Madison Lewis, Charles River Laboratories</i>	
1:30 PM–1:55 PM		Introduction <i>Kenneth Lyons Jones, UCSD, CA MotherToBaby</i>
1:55 PM–2:30 PM	S40	Treating Rare Diseases with Nonplacebo Sugar Pills <i>Hudson H. Freeze, Sanford Burnham Prebys Medical Discovery Institute</i>
2:30 PM–3:05 PM	S41	The Rare Disease Parent's Role in Scientific Collaboration <i>Cristina Might, NGLY1.org</i>
3:05 PM–3:20 PM		Break
3:20 PM–3:55 PM	S42	Natural History, Clinical Studies, and Therapeutic Options in Barth Syndrome <i>Hilary Vernon, Johns Hopkins University School of Medicine</i>
3:55 PM–4:30 PM	S43	The Use of Animal Models for Nonclinical Development of Therapeutics for Orphan Diseases <i>Lorraine Sullivan, BioMarin Pharmaceutical Inc.</i>
<b>4:35 PM–6:00 PM</b>	<b>Multidisciplinary Research Needs Workshop</b>	<b>Grand Ballroom D</b>
	<i>Chairpersons: Peter H. Langlois, Texas Department of State Health Services and William Slikker Jr., National Center For Toxicological Research, US FDA</i>	
4:35 PM–4:45 PM		Introduction
4:45 PM–5:15 PM		Examples of Prior Issues Benefitting from Multidisciplinary Research <i>Speaker TBA</i>
5:15 PM–5:45 PM		Breakout Groups: Discussion of Emerging Issues/Exposures That Could Benefit from Multidisciplinary Research
5:45 PM–6:00 PM		Wrap-Up: Reports from Groups and Discussion
<b>6:00 PM–7:30 PM</b>	<b>Poster Session 3 and Exhibits Attended</b>	<b>Grand Ballroom E</b>
	Teratology Society Posters P45–P76 and LB7–LB12	

**Wednesday, June 27, 2018**

<b>6:30 AM–7:30 AM</b>	<b>Teratology Society 37<sup>th</sup> Annual Volleyball Game</b>	<b>Beach</b>
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<b>7:30 AM–2:30 PM</b>	<b>Registration Open</b>	<b>Grand Ballroom Foyer</b>
<b>7:30 AM–8:00 AM</b>	<b>Morning Coffee and Pastries</b> (Joint with DNTS)	<b>Grand Ballroom Foyer</b>
<b>8:00 AM–9:00 AM</b>	<b>Teratology Society and European Teratology Society Exchange Lecture</b> <b>Are We Ready for Alternative Testing? (L6)</b> <i>Chairpersons: Paul C. Barrow, F. Hoffmann-La Roche Ltd. and Susan L. Makris, US Environmental Protection Agency</i>  <b>European Teratology Society</b> Manon Beekhuijzen, Charles River Laboratories  <b>Teratology Society</b> <i>Nicole Churchill Kleinstreuer, NTP Interagency Center for the Evaluation of Alternative Toxicological Methods, NIEHS</i>	<b>Grand Ballroom D</b>
<b>9:05 AM–12:00 Noon</b>	<b>March of Dimes Symposium</b> <b>Measuring Success in Prevention of Adverse Pregnancy Outcomes</b>  <i>Chairpersons: Jan M. Friedman, University of British Columbia and Godfrey P. Oakley Jr., Emory University</i>	<b>Grand Ballroom D</b>
9:05 AM–9:15 AM	Introduction <i>Godfrey P. Oakley Jr., Emory University</i>	
9:15 AM–9:40 AM	S44 Prematurity Prevention <i>Claudia Holzman, Michigan State University</i>	
9:40 AM–10:05 AM	S45 Measuring the Impact of Maternal Vaccination to Prevent Adverse Pregnancy Outcomes <i>Sonja A. Rasmussen, Centers for Disease Control and Prevention</i>	
10:05 AM–10:30 AM	S46 A 2017 Global Update on Folic Acid-Preventable Spina Bifida and Anencephaly <i>Vijaya Kancherla, Emory University</i>	
10:30 AM–11:00 AM	Warkany Tea	
11:00 AM–11:25 AM	S47 Prevention and FASD: What Can the Clinician Do to Reduce the Prevalence of FASD? <i>Albert E. Chudley, University of Manitoba</i>	
11:25 AM–11:50 AM	S48 US Food and Drug Administration Regulations and Birth Defect Prevention: It's More Than Labeling <i>Tamara Johnson, US Food and Drug Administration</i>	
11:50 AM–12:00 Noon	Discussion	

<b>9:05 AM–12:00 Noon</b>	<b>Changing Susceptibilities throughout Embryofetal Development Symposium</b> 	<b>Waters Edge</b>
	<i>Chairpersons: Katerine Saili, US Environmental Protection Agency and Mary Alice Smith, University of Georgia</i>	
9:05 AM–9:10 AM		Introduction
9:10 AM–9:50 AM	S49	Formation of the Blood-Brain Barrier and Susceptibilities to Toxicants <i>Katerine Saili, US Environmental Protection Agency</i>
9:50 AM–10:30 AM	S50	Leveraging Organ-on-a-Chip Technology to Study the Human Placenta <i>Cassidy Blundell, University of Pennsylvania</i>
10:30 AM–11:00 AM		Warkany Tea
11:00 AM–11:30 AM	S51	Changes in the Developing Gastro-Intestinal Tract: Impacts on Exposure and Susceptibilities <i>John M. DeSesso, Exponent, Inc.</i>
11:30 AM–12:00 Noon	S52	Changes in Susceptibility of the Developing Fetus to Infections: Listeriosis As an Example <i>Mary Alice Smith, University of Georgia</i>
<b>10:30 AM–11:00 AM</b>	<b>Warkany Tea (Joint with DNTS)</b>	<b>Grand Ballroom Foyer</b>
<b>12:00 Noon–1:30 PM</b>	<b>Lunch on Your Own</b>	
<b>12:30 PM–1:30 PM</b>	<b>Awards Committee Meeting</b>	<b>Coral</b>
<b>12:30 PM–1:30 PM</b>	<b>Education Committee Meeting</b>	<b>Dolphin</b>
<b>12:30 PM–1:30 PM</b>	<b>Finance Committee Meeting</b>	<b>Manatee</b>
<b>12:30 PM–1:30 PM</b>	<b>Public Affairs Committee Meeting</b>	<b>Starfish</b>
<b>12:30 PM–1:30 PM</b>	<b>Student Affairs Committee Meeting</b>	<b>Tarpon</b>
<b>1:30 PM–4:30 PM</b>	<b>Wiley Symposium Evaluating the Developmental Reproductive Effects of Botanical Supplements</b>	<b>Grand Ballroom D</b>
	<i>Chairperson: Natasha Catlin, Pfizer, Inc. and Kembra L. Howdeshell, National Institute of Environmental Health Sciences</i>	
1:30 PM–1:35 PM		Introduction
1:35 PM–2:15 PM	S53	Herbal Products Use during Pregnancy: What, When, and Why? <i>James S. McLay, University of Aberdeen</i>
2:15 PM–2:55 PM	S54	Assessing Lead Exposure Risk from Botanicals: Ayurvedics As a Case Study <i>Mary L. Hixon, Gradient</i>

2:55 PM–3:10 PM		Break
3:10 PM–3:50 PM	S55	National Toxicology Program on Botanicals: Case Studies Evaluating Developmental and Reproductive Toxicity in Animal Models <i>Kristen Ryan, National Toxicology Program</i>
3:50 PM–4:30 PM	S56	<i>In Vitro</i> Methods to Evaluate Safety of Botanicals on Reproductive Health <i>Karen M. VanderMolen, The Procter and Gamble Company</i>

**1:30 PM–4:30 PM**

**HESI Symposium** **Grand Ballroom G**  
**Neonatal Pediatric Drug Development: From Bench to Bedside**

*Chairpersons: Connie L. Chen, ILSI Health and Environmental Sciences Institute and Luc M. De Schaepdrijver, Janssen Research and Development*

1:30 PM–1:35 PM		Introduction
1:35 PM–2:15 PM	S57	Drug Development for Neonatal Disease: Setting the Stage <i>Luc M. De Schaepdrijver, Janssen Research and Development</i>
2:15 PM–2:55 PM	S58	Neonatal Opioid Withdrawal Syndrome: Incidence, Diagnosis, Treatment, and Preclinical Models <i>Michelle Ehrlich, Mount Sinai School of Medicine</i>
2:55 PM–3:10 PM		Break
3:10 PM–3:50 PM	S59	Clinical Dosing and Pharmacokinetics Considerations for Neonatal Abstinence Disease Treatment <i>Walter K. Kraft, Thomas Jefferson University</i>
3:50 PM–4:30 PM	S60	Pharmacokinetics in Nonclinical Models and Translation to the Clinic: Challenges and Future Directions <i>Pieter Annaert, KU Leuven</i>

**4:35 PM–6:30 PM**

**Annual Meeting Awards Presentation and  
Business Meeting**

**Grand Ballroom D**

Graduate Student and Postdoctoral Fellow Travel Awards  
Treasure Hung Grand Prize Drawing  
Wilson Presentation Awards  
Marie Taubeneck Award  
FASEB DREAM Awards  
James C. Bradford Memorial Student Poster Awards  
Edward W. Carney Trainee Awards  
Teratology Society Innovator Award  
Edward W. Carney Distinguished Service Award  
Recognition of Other Awards Presented throughout the Week  
Annual Business Meeting

**7:30 PM–9:30 PM**

**Closing Celebration**

**Waters Edge**

**Thursday, June 28, 2018**

**7:00 AM–10:00 AM**

**Council 2 Meeting**

**Starfish**