

Society for Birth Defects Research and Prevention (BDRP)
63rd Annual Meeting
Improving Pregnancy Outcomes through Collaborative Research
Charleston Marriott
Charleston, SC
June 24–28, 2023

As of June 19, 2023

The times listed are in Eastern Daylight Time.

Friday, June 23, 2023

3:00 PM–6:00 PM **Registration Open**

Saturday, June 24, 2023

7:30 AM–5:00 PM **Registration Open**

8:00 AM–8:30 AM **Education Course Coffee and Pastries**
(Education Course Session 1 Registrants Only)

8:30 AM–12:00 Noon **Education Course Session 1**
Special Sensory Systems: The Ear
(Separate Registration Required)
Organized by the Education Committee
Chairperson: Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA

8:30 AM–8:40 AM Welcome
BDRP President, Bruce K. Beyer, Sanofi U.S. Inc.

8:40 AM–8:45 AM Course Overview
Education Committee Chairperson, Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA

8:45 AM–9:30 AM Embryology and Development of the Otic System: Normal and Abnormal Development
Terry C. Hrubec, E. Via Virginia College of Osteopathic Medicine

9:30 AM–10:15 AM Animal Models of the Otic System
Matthew W. Kelley, National Institute on Deafness and Other Communication Disorders

10:15 AM–10:30 AM Break

10:30 AM–11:15 AM Nonclinical Assessment of Ototoxicity: A Regulatory Perspective
Christopher D. Toscano, Center for Drug Evaluation and Research, US FDA

11:15 AM–12:00 Noon Clinical Experiences of an Audiologist
Dakota Sharp, The Children’s Cochlear Implant Center at UNC

12:00 Noon–1:30 PM

Lunch on Your Own

1:30 PM–5:00 PM

**Education Course Session 2
Gene Editing and Gene Therapy**
(Separate Registration Required)

Organized by the Education Committee

Chairperson: Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA

1:30 PM–1:35 PM

Course Overview
Education Committee Chairperson, Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA

1:35 PM–2:25 PM

Molecular Basics of Gene Editing and Gene Therapy
Sidra Shafique, Queen's University

2:25 PM–3:15 PM

Methodology and Models for Preclinical Research with AAV
Kathleen Meyer, The Ohio State University

3:15 PM–3:30 PM

Break

3:30 PM–4:15 PM

Developing Gene Therapy Products: Nonclinical Considerations
Shubhra Chaudhuri, Janssen R&D, LLC

4:15 PM–5:00 PM

Clinical Applications of Gene Therapy and Gene Editing
Jagdeep S Walia, Queen's University

5:00 PM–7:00 PM

Council 1 Meeting

(Includes incoming Council members and committee chairs and vice-chairs)

Sunday, June 25, 2023

7:00 AM–6:00 PM

Registration Open

8:00 AM–8:15 AM

President's Welcome

BDRP President, Bruce K. Beyer, Sanofi U.S. Inc.

8:15 AM–9:00 AM

Josef Warkany Lecture (L1)

**Building the Future of Developmental and Reproductive Toxicology Testing:
Our Legacy, Our Responsibility**

Chairperson: Bruce K. Beyer, Sanofi U.S. Inc.

Lecturer: Stephen B. Harris, Stephen B. Harris Group

9:05 AM–12:05 PM

Graduate Student and Postdoctoral Fellow Platform Session 1

Organized by the Student Affairs Committee

Chairperson: Nicole Principato, Organon

Presenting author is underlined.

9:05 AM–9:10 AM		Introduction <i>Nicole Principato, Organon</i>
9:10 AM–9:30 AM	1	Identifying TRAP-Induced Alterations of Placental m6A Epitranscriptomic Regulators in the JEG-3 Cell Line <u>Ferris A</u> , Caria M, Kupsco A, Wu H, Herbstman JB, Baccarelli AA, Maya Deyssenroth M. Columbia University, New York City, NY, United States
9:30 AM–9:50 AM	2	Disruptions in Prenatal Care Visits during the Pandemic: A Population-Based Cohort Study in Manitoba, Canada <u>Aboulatta L</u> ¹ , Kowalec K ¹ , Delaney J ¹ , Leong C ¹ , Alessi-Severini S ¹ , Raimondi C ¹ , Kearns K ¹ , Boucoiran I ¹ , Peymani P ¹ , Lavu A ¹ , Haidar L ¹ , Farooq F ¹ , Akinola PS ¹ , Lix L ¹ , Tadrous M ² , Tan Q ¹ , Eltonsy S ¹ . ¹ University of Manitoba, Winnipeg, MB, Canada. ² University of Toronto, Toronto, ON, Canada
9:50 AM–10:10 AM	3	Enrichment of De Novo Variants in 491 Cleft Palate Trios <u>Robinson K</u> ¹ , Curtis S ¹ , Beaty TH ² , Butali A ³ , Cutler DJ ¹ , Epstein MP ¹ , Buxó-Martinez CJ ⁴ , Shaw GM ⁵ , Hecht JT ⁶ , Moreno Uribe L ³ , Murray JC ³ , Brand H ⁷ , Weinberg SM ⁸ , Marazita ML ⁸ , Leslie EJ ¹ . ¹ Emory University, Atlanta, GA, United States. ² Johns Hopkins University, Baltimore, MD, United States. ³ University of Iowa, Iowa City, IA, United States. ⁴ University of Puerto Rico, San Juan, PR, United States. ⁵ Stanford University, Stanford, CA, United States. ⁶ University of Texas Medical School at Houston, Houston, TX, United States. ⁷ Massachusetts General Hospital, Boston, MA, United States. ⁸ University of Pittsburgh, Pittsburgh, PA, United States
10:10 AM–10:30 AM	4	Developing and Deploying a Cell-Based, Whole-Pathway Sonic Hedgehog Inhibition Assay to Screen for Environmental Risk Factors in Birth Defect Etiology <u>Beames TG</u> , Lipinski RJ. University of Wisconsin–Madison, Madison, WI, United States
10:30 AM–10:45 AM		Break

- 10:45 AM–11:05 AM 5 The Utility of Including Both Maternal and Fetal Pharmacokinetics in Developmental Toxicity Studies
Tseligka ED¹, Augey F², Marsden E², Bestgen B¹, Tornesi B¹. ¹Medicines for Malaria Venture (MMV), Geneva, Switzerland. ²Charles River Laboratories, Lyon, France
- 11:05 AM–11:25 AM 6 Evaluation of Chemical Exposures on Trophoblast Fusion *In Vitro*
Park SS^{1,2}, Hunter, III ES¹. ¹Center for Computational Toxicology and Exposure, Office of Research and Development, US Environmental Protection Agency, Durham, NC, United States. ²Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, TN, United States
- 11:25 AM–11:45 AM 7 Mitochondrial Haplogroups and Associations with Clinical Outcomes among Proband with Congenital Heart Disease
Politis MD^{1,2}, Shadrina M¹, Wallace DC³, Singh LN⁴, Gelb BD¹. ¹The Mindich Child Health and Development Institute, Icahn School of Medicine, New York, NY, United States, ²Department of Environmental Medicine and Public Health, Icahn School of Medicine of Mount Sinai, New York, NY, United States, ³Center for Mitochondrial and Epigenomic Medicine, Children's Hospital of Philadelphia and Department of Pediatrics, Division of Human Genetics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States, ⁴Department of Pediatrics, Children's Hospital of Philadelphia, Philadelphia, PA, United States
- 11:45 AM–12:05 PM 8 *In Utero* Azathioprine Exposure and Neurodevelopmental Disorders in the Offspring
Mainbourg S¹, Sheehy O², Bérard A^{1,2}. ¹Université de Montréal, Montréal, QC, Canada, ²Centre de Recherche CHU Sainte Justine, Montréal, QC, Canada

12:05 PM–1:30 PM

Lunch on Your Own

12:05 PM–1:30 PM

Past Presidents' and Honorees' Luncheon
(By Invitation Only)

12:30 PM–1:30 PM

Education Committee Meeting

12:30 PM–1:30 PM

Diversity, Equity, and Inclusion Workgroup Meeting

1:30 PM–2:00 PM

F. Clarke Fraser New Investigator Award
Water Fleas to Women of Childbearing Potential: A Career Path Focused on Application of Developmental and Reproductive Toxicology Data to Human Health Risk Assessment

Chairperson: Joshua F. Robinson, University of California, San Francisco

Lecturer: Bethany R. Hannas, Eli Lilly and Company

2:00 PM–2:30 PM

James G. Wilson Publication Award
Quantitative in vitro to in vivo extrapolation for developmental toxicity potency of valproic acid analogues

Chairperson: Russell S. Kirby, USF College of Public Health

Lecturer: Xiaoqing Chang, Inotiv-RTP

2:35 PM–3:35 PM

Innovator Award Finalists Platform Session 2

Organized by the Awards Committee

Chairperson: Joshua F. Robinson, University of California, San Francisco

2:35 PM–2:55 PM

9

Screening for Elevated Congenital Malformation Risk Following Prenatal Antipsychotic Exposure Using Tree-Based Scan Statistics for Signal Identification

Straub L¹, Wang SV¹, Hernandez-Diaz S², Vine S¹, Russo M¹, Bateman BT³, Zhu Y¹, Huybrechts KF¹. ¹Brigham and Women's Hospital, Boston, MA, United States, ²Harvard T.H. Chan School of Public Health, Boston, MA, United States, ³Stanford University School of Medicine, Stanford, CA, United States

2:55 PM–3:15 PM

10

No Time to Lose: Prenatal Exposure to Teratogenic Medications and New Abortion Laws in the United States

Winterstein AG^{1,2,3}, Wang Y¹, Smolinski NE¹, Thai TN¹, Ewig C¹, Rasmussen SA⁴. ¹Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, FL, United States, ²Center for Drug Evaluation and Safety (CoDES), University of Florida, Gainesville, FL, United States, ³Department of Epidemiology, College of Medicine and College of Public Health and Health Professions, University of Florida, Gainesville, FL, United States, ⁴Department of Genetic Medicine, School of Medicine, Johns Hopkins University, Baltimore, MD, United States

3:15 PM–3:35 PM

11

High-Throughput Detection of Craniofacial Defects in Fluorescent Zebrafish

Everson JL, Tseng Y-C, Eberhart JK. University of Texas at Austin, Austin, TX, United States

3:35 PM–3:50 PM

Break

3:50 PM–5:20 PM

The HEALthy Brain and Child Development Study Symposium

(Joint with DNTS)

Chairpersons: Christina D. Chambers, University of California San Diego and Ludmila Bakhireva, University of New Mexico

3:50 PM–4:10 PM

S1

The HEALthy Brain and Child Development Study: Why This and Why Now?
Michelle Freund, National Institute on Drug Abuse, NIH

4:10 PM–4:30 PM

S2

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

S3

Selection of Measures and Pilot Results for Biospecimens in the HBCD Study
Ludmila Bakhireva, University of New Mexico

4:50 PM–5:10 PM

S4

Selection of Measures and Pilot Results for Neuroimaging
Doug Dean III, University of Wisconsin-Madison

5:10 PM–5:20 PM

Discussion

5:25 PM–5:55 PM

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

(Joint with DNTS)

Chairpersons: Joshua F. Robinson, University of California, San Francisco and Stephanie A Godleski, Rochester Institute of Technology

Lecturer: Lori L. Driscoll, The Colorado College

6:00 PM–7:30 PM

Poster Session 1 and Exhibits Attended

(Joint with DNTS and OTIS)

BDRP Posters P1–P20 and LB1

DNTS Posters 1–4

OTIS Posters 1–2

7:30 PM–9:30 PM

Graduate Student and Postdoctoral Fellows Career Event

Hosted by Middle Atlantic Reproduction and Teratology Association (MARTA)

Monday, June 26, 2023

7:00 AM–4:30 PM

Registration Open

7:00 AM–8:00 AM

***Birth Defects Research* Journal Editorial Board Meeting**

7:00 AM–8:00 AM

Communications Coordination Committee Meeting

8:00 AM–9:00 AM

Keynote Lecture (L2)

Protecting Mothers and Babies Through Research: A Time for Change
(Joint with DNTS and OTIS)

Chairperson: Anthony M. DeLise, Novartis Pharmaceuticals Corporation

Speaker: Christina Bucci-Rechtweg, Novartis Pharmaceuticals Corporation

9:05 AM–12:00 Noon

A Lifecourse Perspective on the Epidemiology of Congenital Heart Disease: Surveillance, Risk Factors, Outcomes, and Future Directions Symposium
(Joint with OTIS)

Chairpersons: Russell S. Kirby, USF College of Public Health and Sherry L. Farr, Centers for Disease Control and Prevention

9:05 AM–9:15 AM

Introduction

9:15 AM–9:45 AM

S5

Congenital Heart Defects: Surveillance, Prevalence and Risk Factors

Russell S. Kirby, USF College of Public Health

9:45 AM–10:15 AM

S6

Neurocognitive Outcomes in Congenital Heart Defects

Wendy Nembhard, University of Arkansas for Medical Sciences

10:15 AM–10:30 AM

Break

10:30 AM–11:00 AM

S7

Co-occurring Health Conditions: Cancer Risk in Children with CHDs

Jeremy Schraw, Baylor College of Medicine

11:00 AM–11:30 AM

S8

Surveillance and Outcomes among Children, Adolescents, and Adults with Congenital Heart Defects

Sherry L. Farr, Centers for Disease Control and Prevention

11:30 AM–12:00 Noon

Discussion

9:05 AM–12:00 Noon

Platform Session 3

Chairpersons: Christina D. Chambers, University of California San Diego and Suzanne E. Fenton, Mechanistic Toxicology Branch, NIEHS, NIH

Presenting author is underlined.

9:05 AM–9:15 AM

Introduction

9:15 AM–9:30 AM

12

Genome-Wide Association Study of Nonsyndromic Anotia/Microtia in a Predominantly Hispanic Population

Schraw JM¹, Richard MA¹, Jaime E¹, Yang W², Lei Y¹, Finnell RH¹, Ehli EA³, Canfield MA⁴, Shaw GM². ¹Baylor College of Medicine, Houston, TX, United States, ²Stanford University, Stanford, CA, United States, ³Avera Institute for Human Genetics, Sioux Falls, SD, United States, ⁴Texas

*Department of State Health Services, Austin, TX,
United States*

- 9:30 AM–9:45 AM 13 Utilization of Antihypertensives Before, During, and After Pregnancy
Wang Y^{1,2}, Smolinski NE¹, Ewig C¹, Thai TN¹, Winterstein AG^{1,3,4}. ¹Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, FL, United States, ²Department of Health Outcomes and Biomedical Informatics, College of Medicine, University of Florida, Gainesville, FL, United States, ³Department of Epidemiology, College of Medicine and College of Public Health and Health Professions, University of Florida, Gainesville, FL, United States, ⁴Center for Drug Evaluation and Safety (CoDES), University of Florida, Gainesville, FL, United States
- 9:45 AM–10:00 AM 14 Improving Pregnancy Outcomes through Collaboration: Updates from FDA
Sahin L. FDA, Silver Spring, MD, United States
- 10:00 AM–10:15 AM 15 Crowdsourcing AOP Development: Leveraging the Thesis Literature Review to Identify Knowledge Gaps and Facilitate Research Translation
Johnson BP, Reynolds J. Michigan State University, East Lansing, MI, United States
- 10:15 AM–10:30 AM Break
- 10:30 AM–10:45 AM 16 Updated Real-World Safety of the Pfizer-BioNTech COVID-19 Vaccine in Pregnancy: Data from the Organization of Teratology Information Specialists (OTIS) Pregnancy Registry
Chambers CD¹, Jones KL¹, Johnson DL¹, Xu R¹, Luo Y¹, Schatz M². ¹University of California San Diego, La Jolla, CA, United States, ²Kaiser Permanente San Diego, San Diego, CA, United States
- 10:45 AM–11:00 AM 17 Postnatal Developmental Toxicity Studies Following Repeated Dose Administration of Various Gadolinium (Gd) Based Contrast Agents (GBCAs) to Gestating Mice to Evaluate Effects of Long-Term Presence of Gd in the Brain of F1 Offspring
Hoberman AM¹, Lewis EM¹, Guenther C², Bussi S³, Coppo A³, Jones P⁴, Hirani E⁴, Fretellier N⁵. ¹Charles River Laboratories, Inc., Horsham, PA, United States, ²Bayer AG, Berlin, Germany, ³Bracco Imaging Spa, Milano, Italy, ⁴GE HealthCare, Chalfont St Giles, United Kingdom, ⁵Guerbet, Roissy, France

- 11:00 AM–11:15 AM 18 Transcriptomic Profiles of Murine Placental Gene Expression Following Developmental Exposure to PFOA or GenX in CD-1 Mice
Blake BE¹, Chappell VA², Miller CN¹, Nguyen H¹, Phadke DP³, Balik-Meisner MR³, Fenton SE².
¹US EPA, Research Triangle Park, NC, United States, ²MTB/DTT/NIEHS, Research Triangle Park, NC, United States, ³Sciome, Durham, NC, United States
- 11:15 AM–11:30 AM 19 DNA Methylation Disruption in the Cranial Neural Crest Causes Orofacial Clefts
Lipinski RJ, Ulschmidt C, Sun M. University of Wisconsin, Madison, WI, United States
- 11:30 AM–11:45 AM 20 QAC Exposure Causes Infertility by Altering Endocrine Signaling and Gametogenesis
Hrubec TC^{1,2}, Kirkpatrick Z², Melin VE². *¹E. Via College of Osteopathic Medicine, Blacksburg, VA, United States, ²VA-MD College of Veterinary Medicine, Blacksburg, VA, United States*
- 11:45 AM–12:00 Noon 21 Two Categories of Toxicants Override Naïve Pluripotent ESC into Two Imbalanced Cell Fates: The Search for Pan-Stress Markers that Enable the Best High-Throughput Screen (HTS)
Singh A^{1,2}, Ruden XL^{2,3}, Marben T⁴, Awonuga AO², Ruden DM^{1,2,5}, Puscheck EE^{2,3,6}, Rappolee DA^{2,3,6}, Tang W⁷, Feng H⁷. *¹Center of Molecular Medicine and Genomics, Wayne State University, Detroit, MI, United States, ²C. S. Mott Center for Human Growth and Development, Wayne State University, Detroit, MI, United States, ³Reproductive Stress Inc, Grosse Pointe Farms, MI, United States, ⁴University of Detroit Mercy, Detroit, MI, United States, ⁵Institute of Environmental Health Sciences, Wayne State University, Detroit, MI, United States, ⁶Invia Infertility, Detroit, MI, United States, ⁷Department of Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH, United States*

12:00 Noon–2:00 PM

Lunch on Your Own

12:05 PM–1:45 PM

Grant Development Lunch Workshop

(Separate Registration Required)

Organized by the Student Affairs Committee

Chairpersons: Nicole Principato, Organon and Christopher J. Bowman, Pfizer Inc.

12:05 PM–12:10 PM

Lunch Pick-Up

12:10 PM–12:20 PM

Identifying Funding Sources and Improving Persuasive Writing Skills

Christine P. Curran, Northern Kentucky University

12:20 PM–12:30 PM Steps to Identify Collaborators for a Successful Grant Application
Joshua F. Robinson, University of California, San Francisco

12:30 PM–12:55 PM Navigating the NIH Grant Submission Process
James N. Coulombe, NICHD, NIH

12:55 PM–1:05 PM Foundations of Foundation Grant Writing: What You Need to Know When Working with a Donor-Funded Organization
Jonathan Cherry, March of Dimes

1:05 PM–1:15 PM Endowment-Based Philanthropies: Identifying Organizational Niches Before You Apply
Paige Cooper Byas, The Burroughs Wellcome Fund

1:15 PM–1:45 PM Panel Discussion

2:00 PM–2:30 PM

**Agnish Fellowship Lecture
Knowledge, Education, and Computational Intelligence**

Chairperson: Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA
Speaker: Thomas B. Knudsen, US Environmental Protection Agency

2:35 PM–5:30 PM

Machine Learning Applications in Understanding Embryogenesis and the Mechanisms of Birth Defects Symposium

Chairpersons: Sidra Shafique, Queens University and Brian Cox, University of Toronto

2:35 PM–2:40 PM Introduction

2:40 PM–3:20 PM S9 AI-Assisted Insights into Developmental Disruption
Nicole C. Kleinstreuer, NIEHS/NICEATM

3:20 PM–4:00 PM S10 Working While Growing Up: The Developing Role of the Placenta in Maternal Adaptation to Pregnancy and Fetal Development
Brian Cox, University of Toronto

4:00 PM–4:15 PM Break

4:15 PM–4:45 PM S11 Epigenomic Techniques and Machine Learning Approaches to Predict Pregnancy Complications
Samantha Wilson, McMaster University

4:45 PM–5:30 PM Discussion

5:30 PM–7:00 PM

Poster Session 2 and Exhibits Attended

(Joint with DNTS)

BDRP Posters P21–P40 and LB2–LB3

DNTS Posters 5–9

Chat with a Grant Mentor

5:30 PM–6:15 PM *James Coulombe, NICHD, NIH; Paige Cooper Byas, Burroughs Wellcome Fund; and Joshua F. Robinson, University of California, San Francisco*

6:15 PM–7:00 PM *Jonathan Cherry, March of Dimes and Christine P. Curran, Northern Kentucky University*

Tuesday, June 27, 2023

7:00 AM–3:30 PM

Registration Open

7:00 AM–8:00 AM

BDRP and DNTS Leadership Meeting

7:00 AM–8:00 AM

Membership Committee Meeting

7:00 AM–8:00 AM

Publications Committee Meeting

7:00 AM–8:00 AM

Science Committee Meeting

8:00 AM–9:00 AM

Robert L. Brent Lecture—Teratogen Update (L3)

Teratology Research in the Shadow of the *Dobbs* Decision

(Joint with DNTS 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 Noon

Health Disparities within Communities of Color Symposium

(Joint with DNTS and OTIS)

Organized by the Diversity, Equity, and Inclusion Workgroup

Chairpersons Madeline Vera-Colon, University of California, Irvine and

Vinita Leedom, South Carolina Department of Health and Environmental Control

9:05 AM–9:40 AM

S12

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

S13

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

S14

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 S15 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 Noon Discussion

9:05 AM–12:00 Noon

Characterizing Developmental and Reproductive Hazards Using Rapid Review Tools Symposium

Chairpersons: Laura Carlson, US Environmental Protection Agency and Erin Yost, US Environmental Protection Agency

9:05 AM–9:10 AM Introduction
Laura Carlson, US Environmental Protection Agency and Erin Yost, US Environmental Protection Agency

9:10 AM–9:40 AM S16 Scoping of the Landscape of Developmental and Reproductive Toxicants at the Division of Translational Toxicology
Kembra L. Howdeshell, National Institute of Environmental Health Sciences

9:40 AM–10:15 AM S17 Using the PFAS-Tox Database to Streamline Identification of Developmental Hazards
Katie Pelch, Natural Resources Defense Council

10:15 AM–10:30 AM Break

10:30 AM–11:05 AM S18 Consideration of Study Quality in Evidence-Based Assessments to Streamline Workflow on Rapid and Systematic Reviews
Danielle Wikoff, ToxStrategies

11:05 AM–11:40 AM S19 Blood-Brain-Barrier Morphogenesis: A Case Example of Rapid Review Approaches Informing Predictive Toxicity Models
Thomas B. Knudsen, US Environmental Protection Agency

11:40 AM–12:00 Noon Discussion

12:00 Noon–1:45 PM

**Lunch and Learn Mini Course
Ethical Issues and Novel Therapies**

(Separate Registration Required)

Sponsored by Charles River Laboratories

Organized by the Education Committee

Chairperson: Wafa A. Harrouk, Center for Drug Evaluation and Research, US FDA

12:00 Noon–12:10 PM Lunch Pick-Up

12:10 PM–12:50 PM Onward and Upward in Human Reproduction? Ethical Issues in Reproductive Gene Editing
Megan A. Allyse, Mayo Clinic

12:50 PM–1:30 PM Ethical and Legal Considerations of Uterus Transplantation and Artificial Wombs
Chloe Romanis, Durham Law School

1:30 PM–1:45 PM Discussion

12:00 Noon–2:00 PM Lunch on Your Own

2:00 PM–5:00 PM COVID-19 and Pregnancy: An Update and Planning for the Future Symposium
(Joint with DNTS)

Sponsored by the Health and Environmental Sciences Institute (HESI)

Organized by the Public Affairs Committee

*Chairpersons: Vijaya Kancherla, Emory University and
Sonja A. Rasmussen, Johns Hopkins University*

2:00 PM–2:25 PM S20 COVID-19 in Pregnancy: Maternal, Placental, and Fetal Implications
Andrea Edlow, Massachusetts General Hospital, Harvard Medical School

2:25 PM–2:50 PM S21 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 S22 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 S23 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 S24 COVID-19 in Pregnancy: What Do We Know Now?
Malavika Prabhu, Mass General Hospital

4:20 PM–4:45 PM S25 Ethics, Evidence, and Vaccination in Pregnancy: Lessons from COVID-19
Anne D. Lyerly, University of North Carolina at Chapel Hill

4:45 PM–5:00 PM Discussion

5:05 PM–6:30 PM

Multidisciplinary Research Needs Workshop

Organized by the Science Committee

Chairpersons: Dana L. Shuey, Incyte Corporation and Kary E. Thompson, Janssen Pharmaceuticals

5:05 PM–5:10 PM

Introduction and Workshop Objectives
Dana L. Shuey, Incyte Corporation and Kary E. Thompson, Janssen Pharmaceuticals

5:10 PM–5:30 PM

Overview of Research/Funding Priorities
Jonathan Cherry, March of Dimes and James Coulombe, NICHD

5:30 PM–6:15 PM

Breakout Groups

Maternal/Fetal Health in the Wake of the Dobbs Decision

New Approach Methods (NAMs) in Developmental and Reproductive Biology and Toxicology

Making the Most of Our Animal Studies

6:15 PM–6:30 PM

Breakout Summaries

6:30 PM–8:00 PM

Poster Session 3 and Exhibits Attended

BDRP Posters P41–P59 and LB4–LB12

Wednesday, June 28, 2023

6:30 AM–7:30 AM

BDRP 42nd Annual Volleyball Game

7:30 AM–2:30 PM

Registration Open

8:00 AM–9:00 AM

**BDRP and European Teratology Society Exchange Lecture (L4)
Animal Disease Models for DART Testing: Theory and Practice**

Chairpersons: Bruce K. Beyer, Sanofi U.S. Inc. and Steven Van Cruchten, Antwerp University

European Teratology Society

Steven Van Cruchten, Antwerp University

BDRP

Kary E. Thompson, Janssen Pharmaceuticals

9:05 AM–12:00 Noon

Applications of New Approach Methods in Developmental and Reproductive Toxicology Symposium
(Joint with DNTS)

Sponsored by the Health and Environmental Sciences Institute (HESI)

Chairpersons: Amer Jamalpoor, Toxys B.V. and Jessica A. Palmer, Stemina Biomarker Discovery, Inc.

9:05 AM–9:40 AM	S26	Establishing Confidence in NAMs for Developmental and Reproductive Toxicity <i>Nicole C. Kleinstreuer, NIEHS/NICEATM</i>
9:40 AM–10:15 AM	S27	Practical Application of New Approach Methods (NAMs) in Developmental Toxicity Testing <i>Kathryn Wolton, Unilever Safety and Environmental Assurance Centre</i>
10:15 AM–10:45 AM		Warkany Tea
10:45 AM–11:10 AM	S28	How to Gain Confidence for Using NAMs in the Regulatory Arena of DART Testing <i>Steven Van Cruchten, Antwerp University</i>
11:10 AM–11:30 AM	S29	The Use of Zebrafish Alternative Model to Predict Human Developmental and Reproductive Toxicity According to the ICH S5 R3 Guideline <i>Arantza Muriana, BBD BioPhenix</i>
11:30 AM–11:50 AM	S30	ReproTracker as an <i>In Vitro</i> Alternative to Animal Models for Developmental Toxicity Testing <i>Sabine Hartvelt, Toxys B.V.</i>
11:50 AM–12:00 Noon		Discussion
12:00 Noon–1:00 PM		Lunch on Your Own
12:00 Noon–1:00 PM		Awards Committee Meeting
12:00 Noon–1:00 PM		Public Affairs Committee Meeting
12:00 Noon–1:00 PM		Student Affairs Committee Meeting
1:05 PM–4:00 PM		Immune Responses during Development and Multi-System Inflammatory Disease in Children Symposium <i>Organized by the Science Committee</i> <i>Chairpersons: Julia Gohlke, Virginia Tech and Sonja A. Rasmussen, Johns Hopkins University</i>
1:05 PM–1:40 PM	S31	Multisystem Inflammatory Syndrome in Children: Characteristics and Epidemiology <i>Sonja A. Rasmussen, Johns Hopkins University</i>
1:40 PM–2:15 PM	S32	Prevention and Treatment of Multisystem Inflammatory Syndrome in Children <i>Elizabeth H. Mack, Medical University of South Carolina</i>
2:15 PM–2:30 PM		Break
2:30 PM–3:05 PM	S33	Immune System Development Processes with Special Emphasis on Relationship to Potential Mechanisms of MIS-C <i>Jamie C. DeWitt, Eastern Carolina University</i>

3:05 PM–3:40 PM S34 Molecular Mechanisms of Immune System
Development: Implications for MIS-C
Mary Prahl, University of California San Francisco

3:40 PM–3:55 PM Discussion

4:15 PM–5:30 PM

Annual Meeting Awards Presentation and Business Meeting

Graduate Student and Postdoctoral Fellow Travel Awards
Wilson Presentation Awards
Marie Taubeneck Award
James C. Bradford Memorial Student Poster Awards
Edward W. Carney Trainee Awards
BDRP Innovator Award
Edward W. Carney Distinguished Service Award
Recognition of Other Awards Presented throughout the Week
Annual Business Meeting

5:45 PM–6:45 PM

Council 2 Meeting
(2023–2024 Council members)

7:00 PM–9:00 PM

Closing Celebration