

Agenda

as of October 18, 2021

Friday, June 24, 2022

3:00 PM–6:00 PM Registration Open Regency Foyer

Saturday, June 25, 2022

7:30 AM–6:00 PM Registration Open Regency Foyer

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

8:30 AM–12:00 Noon **Education Course Session 1**
Embryology and Toxicology of the Developing
Respiratory System
(Separate Registration Required) Regency Ballroom E
Organized by the Education Committee
Chairperson: Katie J. Turner, Janssen R&D, LLC

Development of the respiratory system is a continuous process beginning early in utero with continued maturation after birth. This course will begin with an overview of normal and abnormal morphological development of the respiratory system. This will be followed by a talk discussing the functional maturation of the respiratory system providing some insight into comparative differences among species and considerations for the conduct of juvenile toxicity studies. This will be followed by an overview of agents known to cause developmental toxicity to the developing lung.

8:30 AM–8:40 AM Welcome
*BDRP President, Susan L. Makris, National
Center for Environmental Assessment, US EPA*

8:40 AM–8:45 AM Course Overview
*Education Committee, Chairperson Katie J.
Turner, Janssen R&D, LLC*

8:45 AM–9:30 AM	Morphological Development of the Respiratory System <i>Terry C. Hrubec, E. Via Virginia College of Osteopathic Medicine</i>
9:30 AM–10:15 AM	Functional Development of the Respiratory System <i>Geertje Lewin, Consultant</i>
10:15 AM–10:30 AM	Break—Regency Ballroom E
10:30 AM–11:15 AM	Developmental Toxicity of the Lung <i>John M. Rogers, US EPA (retired)</i>
11:15 AM–12:00 Noon	TBA

12:00 Noon–1:30 PM

Lunch on Your Own

1:30 PM–5:00 PM

Education Course Session 2
Birth Defects: Causes and Mechanisms
(Separate Registration Required)

Regency Ballroom E

Organized by the Education Committee

Chairperson: Chairperson: Katie J. Turner, Janssen R&D, LLC

There are multiple ways that birth defects may arise during development. This course will begin with an overview of genetic alterations resulting in developmental anomalies and their diagnosis. This will be followed by separate talks on understanding teratogenesis due to disruption of cell-signaling pathways and abnormal embryo-fetal development due to maternal disease nutritional deficiencies. Since the causes of birth defects can be multifactorial, the final talk will discuss the interaction of genetic variations with environmental exposures in the etiology of birth defects.

1:30 PM–1:35 PM	Course Overview <i>Education Committee, Chairperson, Chairperson: Katie J. Turner, Janssen R&D, LLC</i>
1:35 PM–2:25 PM	Congenital Abnormalities: Common Birth Defects, Genetic Mechanisms, and Diagnosis <i>Sura Alwan, University of British Columbia</i>
2:25 PM–3:15 PM	Understanding Teratogenesis Due to Disruption of Cell Signaling <i>Elaine M. Faustman, University of Washington</i>
3:15 PM–3:30 PM	Break—Regency Ballroom E
3:30 PM–4:15 PM	TBA



4:15 PM–5:00 PM Gene-Environment Interactions and Birth Defects
Christine Curran, Northern Kentucky University

2:00 PM–7:00 PM **Speaker Ready Room** Windsor

5:00 PM–7:00 PM **Council 1 Meeting** Seymour
Committee Reports

Sunday, June 26, 2022

7:00 AM–6:00 PM **Registration Open** Regency Foyer

7:00 AM–4:00 PM **Speaker Ready Room** Windsor

7:00 AM–8:00 AM **2023 Program Committee Meeting** Plaza Ballroom C

7:30 AM–8:00 AM **Morning Coffee** Regency Foyer
(Joint with DNTS)

8:00 AM–8:15 AM **President's Welcome** Regency Ballroom E
BDRP President, Susan L. Makris, US Environmental Protection Agency

8:15 AM–9:00 AM **Josef Warkany Lecture** Regency Ballroom E
TBD
(Joint with OTIS)
Chairperson: Susan L. Makris, US Environmental Protection Agency
Lecturer: David C. Bellinger, Harvard Medical School

9:05 AM–12:05 PM **Graduate Student and Postdoctoral Fellow** Regency Ballroom E
Platform Session 1
Organized by the Student Affairs Committee
Chairperson: Melissa J. Beck, Cedarville University

12:05 PM–1:30 PM **Lunch on Your Own**

12:05 PM –1:30 PM **Past Presidents' and Honorees' Luncheon** Plaza Ballroom C
(By Invitation Only)

1:30 PM–2:00 PM **F. Clarke Fraser New Investigator Award** Regency Ballroom E
TBD
Chairperson: Kembra L. Howdeshell, National Toxicology Program, NIEHS
Lecturer: TBD

2:00 PM–2:30 PM **James G. Wilson Publication Award** Regency Ballroom E
TBD
Chairperson: Russell S. Kirby, USF College of Public Health
Lecturer: TBD



2:35 PM–4:30 PM

Briggs Research Symposium: Regency Ballroom E
Can Experimental Animal Studies Be Used in Counseling?

(Joint with OTIS)

Chairpersons: Sarah Gloria Običan, University of South Florida and Tony Scialli, Reproductive Toxicology Center

Can Experimental Animal Studies Be Used in Counseling? 1) What experimental animal testing is used to evaluate the developmental toxicity of drugs and other chemicals? 2) How are experimental animal test results used to inform product approval and labeling? 3) Can experimental animal results be used in counseling patients? This session is aimed at clinicians who must interpret data for patients concerned about reproductive or developmental effects of exposures, particularly in the absence of human data. The primary interest to regulators and industry scientists who deal with product labeling will also benefit from hearing how the consumer responds to the nonclinical data that are required for most products

2:35 PM–2:40 PM

Introduction

2:40 PM–3:05 PM

What Experimental Animal Testing Is Used to Evaluate the Developmental Toxicity of Drugs and Other Chemicals?
Lori Dostal, Lori Dostal Consulting LLC

3:05 PM–3:30 PM

How Are Experimental Animal Test Results Used to Inform Product Approval and Labeling?
Melissa Tassinari, Consultant

3:30 PM–3:45 PM

Break—Regency Foyer

3:45 PM–4:05 PM

Can Experimental Animal Results Be Used in Counseling Patients?—No
Sarah Gloria Običan, University of South Florida

4:05 PM–4:30 PM

Can Experimental Animal Results Be Used in Counseling Patients?—Yes
Tony Scialli, Reproductive Toxicology Center

2:35 PM–4:30 PM

Platform Session 2

Plaza Ballroom A

Chairpersons: TBD

4:35 PM–5:00 PM

**Patricia Rodier Mid-Career Award
for Research and Mentoring**
TBD

Regency Ballroom E

(Joint with DNTS)

Chairpersons: Kembra L. Howdeshell, National Toxicology Program, NIEHS and Mary E. Gilbert, US Environmental Protection Agency

Lecturer: TBD



5:10 PM–6:45 PM **Welcome Reception, Poster Session 1, and Exhibits Attended** **Regency Ballroom A**
(Joint with DNTS)

7:00 PM–9:00 PM **MARTA Graduate Students and Postdoctoral Fellows Career Event** **TBD**
(Open to the BDRP, DNTS, and OTIS Graduate Students and Postdoctoral Fellows)

Monday, June 27, 2022

7:00 AM–6:00 PM **Registration Open** **Regency Foyer**

7:00 AM–4:00 PM **Speaker Ready Room** **Windsor**

8:00 AM–9:00 AM **Keynote Lecture** **Regency Ballroom E**
TBD
(Joint with DNTS and OTIS)
Chairperson: Bruce K. Beyer, Sanofi US, Inc.
Speaker: Bekim Sadikovic, Western University

9:05 AM–12:00 Noon **Novel Approaches for Assessment of Complex Chemical Mixtures in Evaluations of Reproductive and Developmental Effects Symposium** **Regency Ballroom E**
(Joint with DNTS)
Chairpersons: Catheryne Chiang, Office of Research and Development, US EPA and Krista Christensen, Office of Research and Development. US EPA

Developmental and reproductive health is impacted by many different and co-occurring chemical exposures. According to US Environmental Protection Agency (EPA) guidance, preferred risk assessment methods for environmental chemical mixtures utilize whole mixture approaches relative to individual component approaches. However, there are challenges in assessing mixture effects in toxicological and epidemiological studies, where detailed information on whole mixtures is often not available. The objective of this symposium is to explore methodological approaches to characterize health effects of exposure to mixtures observed in human and animal studies. Multiple analytic and statistical approaches have been applied in epidemiology and toxicology studies to identify which substances (possibly among a large number measured), are associated with health effects of interest. Mathematical techniques to identify and use data for “sufficiently similar” mixtures or mixture components have also been developed to address data gaps. Novel methods such as these will continue to support informed assessments of chemical mixtures in data poor scenarios. Speakers will demonstrate use of their methods assessing developmental and reproductive health on a variety of environmental chemical mixtures including disinfection byproducts, polychlorinated biphenyls, phthalates, flame retardants, and phenols. From this session, attendees will become more familiar with these



novel methods of assessment of complex mixtures and how they can and have been applied to human and animal evaluations.

9:05 AM–9:15 AM	Introduction
9:15 AM–9:45 AM	Exploration of Disinfection Byproduct Mixture Methods in an Epidemiological Study of Birth Defects <i>J. Michael Wright, US Environmental Protection Agency</i>
9:45 AM–10:15 AM	Application of Sufficient Similarity Analyses for Complex Polychlorinated Biphenyl Mixtures <i>Catheryne Chiang, US Environmental Protection Agency</i>
10:15 AM–10:30 AM	Break—Regency Ballroom A
10:30 AM–10:55 AM	Impact of Prenatal Exposure to Phthalate Mixture on Uterine Function in Female Offspring <i>Indrani Bagchi, University of Illinois at Urbana Champaign</i>
10:55 AM–11:30 AM	Prenatal Consumer Product Chemical Mixtures and Size-for-Gestational Age at Birth <i>Paige Bommarito, National Institute of Environmental Health Sciences</i>
11:30 AM–11:55 AM	Association between Exposure to a Metal Mixture and Neurobehavior at Six to Seven Years of Age <i>Francheska M. Merced-Nieves, Icahn School of Medicine at Mount Sinai</i>
11:55 AM–12:00 Noon	Discussion

9:05 AM–12:00 Noon **Platform Session 3** **Georgia Ballroom**
Chairperson: TBA

12:00 Noon–2:00 PM **Lunch on Your Own**

12:05 Noon–1:45 PM **Professional Development Workshop** **TBD**
TBD
(Separate Registration Required, Boxed Lunch Provided)
Organized by the Student Affairs Committee
Chairpersons: Melissa J. Beck, Cedarville University

2:00 PM–2:30 PM **Agnish Fellowship Lecture** **Regency Ballroom E**
TBA
Chairperson: Katie J. Turner, Janssen R&D, LLC



Speaker: TBA

2:35 PM–5:55 PM

The Legacy of Dr. Robert L. Brent: Accurate Assessment and Communication of Teratogen Risks Symposium

Regency Ballroom E

(Joint with DNTS and OTIS)

Chairpersons: Janine E. Polifka, Retired and Christine Perdan Curran, Northern Kentucky University

This symposium was established to honor the scientific legacy of Dr. Robert L. Brent, a founding member and past president of the Society who was a long-time proponent of rigorous research into the causes of birth defects and clear, careful communication about the risks of medications and other exposures.

He published a classic paper in 2007, “How Does a Physician Avoid Prescribing Drugs & Medical Procedures that have Reproductive and Developmental Risks?” exploring medical and legal issues spanning half a century. In addition to discussing the impact of non-meritorious litigation related to birth defects, he also discussed mechanisms, biological plausibility, and the principles of teratology. Dr. Brent concluded that “determining the reproductive risks of an exposure during pregnancy is not a simple process.” Rigor demands “the careful analysis of the medical and scientific literature pertaining to the reproductive & developmental toxicity of an exposure in both humans and animals as well as a review of the scientific literature pertaining to genetic and environmental causes of the malformation in question. An abridged or superficial evaluation based on incomplete analyses is not acceptable.”

Dr. Brent was also a leader in training new clinicians and developing communication tools to share the state of the science with all concerned. Speakers will review Dr. Brent’s impact on the science of teratology and explore how the increasing use of digital technology and social media can help teratogen information services meet the needs of physicians and their patients without compromising these important standards for assessing teratogenic risk.

Following the talks, short comments and memories will be shared by Dr. Brent’s colleagues and collaborators.

2:35 PM–3:00 PM

Tribute to Dr. Robert L. Brent: Let the Yolk Sac Speak: A Small Drop in the Deep Water of Bob’s Legacy in Science
Asher Ornoy, Hebrew University, Hadassah Medical School, Adelson School of Medicine, Ariel University

3:00 PM–3:25 PM

Radiation Risks and Information Needs of Pregnant and Lactating Women
Fred Mettler, University of New Mexico School of Medicine



3:25 PM–4:00 PM	Professionally Responsible Counseling of Pregnant Women about COVID-19 Vaccination <i>Frank Chervenak, Lenox Hill Hospital</i>
4:00 PM–4:15 PM	Break—Regency Ballroom A
4:15 PM–4:40 PM	Use of supervised learning methods to create prediction models based on narrative descriptions of fetal risk. <i>Elizabeth Ailes, Centers for Disease Control and Prevention</i>
4:40 PM–5:05 PM	Bob Brent: Medical Expert, Expert Medical Witness, and Expert on Medical Expert Witnessing. Jan M. Friedman, University of British Columbia
5:05 PM–5:55 PM	Sharing Memories of Dr. Robert L. Brent

2:35 PM–5:55 PM

The Key Characteristics Approach for Hazard Identification: Alternative Perspectives Symposium

Georgia Ballroom

Chairpersons: Donna Farmer, Bayer Crop Science and John DeSesso, Exponent

There is currently great interest in enhanced strategies and best practices for assessing both new and existing chemicals for a variety of types of effects, including carcinogenicity, genotoxicity, teratogenicity, and developmental toxicity, reproductive toxicity, and endocrine disruption. Recently, an approach has been recommended, and is now being applied, that portends to identify chemicals that cause various types of toxicity according to certain key characteristics. Although this approach is being presented at the BDRP 2021 Annual Meeting, there is a need to continue the discussion and vetting of this approach, as several alternative perspectives exist as to its mechanistic foundations, utility, validation status, and replicability. This session will endeavor to explain these various alternative perspectives on the Key Characteristics approach, beginning with the arena in which it was first developed and applied—carcinogenicity—and extending to areas most relevant to BDRP, including statistical issues inherent to measuring various biological effects, endocrine disruption, and genotoxicity and gene expression.

2:35 PM–2:40 PM	Introduction
2:40 PM–3:20 PM	Carcinogenicity: General Concepts and Case Study <i>James E. Klaunig, Indiana University</i>
3:20 PM–4:00 PM	Statistical Issues and Concepts for Endpoint Measurement and Dose Extrapolation <i>Claudio Fuentes, Oregon State University</i>
4:00 PM–4:15 PM	Break—Regency Ballroom A



4:15 PM–4:55 PM Endocrine Disruption: Conceptual and Mechanistic Issues
Christopher J. Borgert, University of Florida College of Veterinary Medicine and APT, Inc.

4:55 PM–5:35 PM Case Study on Glyphosate: Key Characteristics versus Weight of Evidence
Donna Farmer, Bayer Crop Science

5:35 PM–5:55 PM Discussion

6:00 PM–7:30 PM **Poster Session 2 and Exhibits Attended** **Regency Ballroom A**
(Joint with DNTS and OTIS)

Tuesday, June 28, 2022

7:00 AM–5:00 PM **Registration Open** **Regency Foyer**

7:00 AM–4:00 PM **Speaker Ready Room** **Windsor**

7:30 AM–8:00 AM **Morning Coffee** **Regency Foyer**
(Joint with DNTS)

8:00 AM–9:00 AM **Robert L. Brent Lecture—Teratogen Update** **Regency Ballroom E**
TBA
(Joint with OTIS)
Chairperson: Bruce K. Beyer, Sanofi US, Inc.
Lecturer: Matthew W. Gillman, MD, SM, National Institutes of Health)

9:05 AM–12:00 Noon **Disparities in Pregnancy and Birth Outcomes Symposium** **Regency Ballroom E**
(Joint with DNTS and OTIS)
Organized by the Diversity, Equity, and Inclusion Workgroup
Chairpersons: José Cordero, University of Georgia and Nicole Sparks, University of California, Riverside

Adverse pregnancy and birth outcomes, such as infant mortality (including infant mortality due to birth defects), preterm birth, developmental disabilities, environmental exposures, and maternal mortality and morbidity occur more frequently among people of color and other groups who have been under-served and affected by historical inequality, unconscious bias, and poverty. Compounding these disparities, research into these issues and efforts to address them are more poorly funded in the US than other maternal and infant health areas. This symposium will provide an understanding of the experience of BIPOC women during pregnancy, illustrate the racial and ethnic disparities that exist in reproductive health, and describe the social and public health need to address and prevent them.



9:05 AM–9:40 AM	Disparities in Research Funding for Health Issues that Affect People of Color <i>José Cordero, University of Georgia</i>
9:40 AM–10:15 AM	Disparities in Maternal Health and Neurodevelopmental Outcomes <i>Natacha De Genna and Gale Richardson, University of Pittsburgh</i>
10:15 AM–10:30 AM	Break—TBD
10:30 AM–11:05 AM	Disparities in Reproductive Outcomes for Aboriginal Peoples in Canada <i>Laura Arbour, BC Children’s Hospital</i>
11:05 AM–11:45 AM	Advocacy and/or Interventions to Address Disparities <i>Renee Mehra, University of California, San Francisco</i>
11:45 AM–12:00 Noon	Discussion

9:05 AM–12:00 Noon

The DARTable Genome: Bringing Molecular and Developmental Biology to DART Symposium

Plaza Ballroom A

Organized by the Science Committee

Chairpersons: Thomas B. Knudsen, US Environmental Agency and Richard Currie, Syngenta, Jealott’s Hill International Research Centre

The conservation of developmental processes permits the application of quantitative adverse outcome pathway (AOP) models to predict threshold doses that result in teratogenic effects. This workshop focuses on the use of three data-rich reference chemicals (retinoic acid, thalidomide, valproic acid) as tool compounds to investigate the molecular pathways and developmental processes underlying developmental toxicity, and to build and test predictive models encompassing *in silico*, *in vitro*, and *in vivo* approaches. Apical endpoints as adverse outcomes of exposure in pregnant animal models helped us to be able to use each of these agents safely as therapeutic drugs. Understanding how these agents work at the molecular and cellular level has provided valuable insight into understanding DART at a genomic level.

The goal of the HESI DARTable Genome Working Group is to build a comprehensive framework of molecular initiating events (MIEs) and key event biomarkers that result in teratogenicity, which could reduce the need for mammalian animal testing. This workshop will provide a status update of the project and how vast data and information on data-rich reference chemicals can be used to build quantitative relationships between toxicokinetics, toxicodynamics, and interactions with key pathways and processes in the patterning and metabolism of the embryo-fetus. A key challenge for science and technology is to translate information on chemical-biological interactions using *in silico*



predictions, in vitro assays, and in vivo models into a human-relevant quantitative threshold of maternal systemic exposure necessary to produce a teratogenic effect.

- 9:05 AM–9:40 AM Overview of the DARTable Genome
Richard Currie, Syngenta, Jealott's Hill International Research Centre
- 9:40 AM–10:15 AM Retinoic Acid Signaling in Developmental and Reproductive Toxicology: *In Vitro* and *In Silico* Approaches to Assess Toxicity
Joshua F. Robinson, University of California, San Francisco
- 10:15 AM–10:30 AM Break—TBD
- 10:30 AM–11:05 AM Thalidomide: Historical Perspective and New Insights into Molecular Mechanisms of Teratogenicity
David Belair, AbbVie
- 11:05 AM–11:45 AM Valproic Acid: Linking In Vitro and In Silico Techniques to Understand and Predict Developmental Toxicity
Nicole Churchill Kleinstreuer, NIEHS, NICEATM
- 11:45 AM–12:00 Noon Discussion

12:00 Noon–1:45 PM

Lunch and Learn Mini Course

Regency Ballroom E

New Technologies for Developmental and Reproductive Toxicity Testing: Microphysiological Systems
(Separate Registration Required)

Organized by the Education Committee

Chairperson: Katie J. Turner, Janssen R&D, LLC

Microphysiological systems (MPS) are *in vitro* platforms (such as tissues/organs on chips) that mimic the biochemical and mechanical properties of organ or tissue function. These new methodologies hold promise for advancing our understanding of the mechanisms of disease and predicting toxicity. The purpose of this mini course is to provide an introduction to MPS models and some examples of their application for reproductive and developmental toxicology testing.

- 12:00 Noon–12:10 PM Boxed Lunch Pick-Up
- 12:10 PM–12:40 PM Advances in the Development of Microphysiological Systems and Application to the Developing Embryo
Sid Hunter, US Environmental Protection Agency



- 12:40 PM–1:10 PM A Human Brain Spheroid Model for Developmental Neurotoxicity Testing
Lena Smirnova, Johns Hopkins University Center for Alternatives to Animal Testing
- 1:10 PM–1:40 PM Bioengineered Ovarian Models for Female Reproductive Toxicity Testing
Shuo Xiao, Rutgers University, Ernest Mario School of Pharmacy
- 1:40 PM–1:45 PM Discussion

12:00 Noon–2:00 PM

Lunch on Your Own

2:00 PM–5:00 PM

Per- and Polyfluoroalkyl Substances (PFAS) and Children's Health Symposium
(Joint with DNTS)

Regency Ballroom E

Organized by the Public Affairs Committee

Chairpersons: Suzanne E Fenton, National Toxicology Program, NIEHS and Tamarra James-Todd Harvard T.H. Chan School of Public Health

Per- and polyfluoroalkyl substances (PFAS) are man-made, persistent chemicals used to render consumer products water-, friction- or grease-proof. Some PFAS are well-known for their adverse health effects in humans and animal models. PFAS transfer across the placenta and in breast milk, making these chemicals a priority for child health. Currently the National Academies are undergoing Town Hall meetings across the US to understand citizens' concerns regarding PFAS exposure, health effects, testing, and clinical guidance, including the impact on child health. Endocrine disruption, immune effects, cancer, and neurobehavioral and metabolic disease endpoints are recurring themes. This session introduces PFAS chemicals and their associations with adverse birth outcomes and persistent child health effects in humans and rodent models. Concordance across species, consistency of health effects, and sex-specific trends in health effects are evident. Policy change for PFAS chemicals that protects developing child health, in utero and during breastfeeding, will also be discussed.

- 2:00 PM–2:40 PM Underlying Conditions and PFAS Exposures: A Risky Mix in Pregnancy
Tamarra James-Todd Harvard T.H. Chan School of Public Health
- 2:40 PM–3:15 PM GenX Effects in Pregnant Mice and Persistent Effects in Their Offspring
Suzanne E Fenton, National Toxicology Program, NIEHS
- 3:15 PM–3:30 PM Break—TBD



- 3:30 PM–4:05 PM Cardiometabolic health effects of PFAS exposure in adolescents
Joseph M. Braun, Brown University School of Public Health
- 4:05 PM–4:40 PM Immunity in PFAS-Exposed Children
C. Amalie G. Timmermann, University of Copenhagen {Denmark}
- 4:40 PM–5:00 PM Discussion

2:00 PM–5:00 PM

Predicting and Preparing for the Next Pandemic: Protecting Pregnant Persons, the Fetus, and the Children Workshop

Georgia Ballroom

Organized by the Science Committee

Chairpersons: Anthony R. Scialli, Scialli Consulting LLC and Sonja A. Rasmussen, University of Florida College of Medicine

The next pandemic will come. Understanding how to predict when and what we can do to prepare for it can only be accomplished through understanding lessons learned from previous pandemics. Not only do we have to understand how pandemics start and spread in today's connected world, but we also need to ensure that we can protect special populations, such as pregnant persons, and the next generation. The role of vaccines will be discussed.

- 2:00 PM–2:40 PM Preventing the Next Pandemic
Sonja A. Rasmussen, University of Florida College of Medicine
- 2:40 PM–3:15 PM Special Populations: Pregnant Persons and the Unborn
Sarah Gloria Običan, University of South Florida
- 3:15 PM–3:30 PM Break—TBD
- 3:30 PM–4:05 PM Special Populations: Pediatrics
Srinivas Murthy, The University of British Columbia
- 4:05 PM–4:40 PM Ethical Considerations in the Prevention and Treatment of Disease in Pregnant Persons
Anthony R. Scialli, Scialli Consulting LLC
- 4:40 PM–5:00 PM Discussion



5:05 PM–6:30 PM	Multidisciplinary Research Needs Workshop	Regency Ballroom E
	<i>Chairpersons: Dana L. Shuey, Incyte and William Slikker, Jr., National Center for Toxicological Research, US FDA</i>	
5:05 PM–5:20 PM	Overview of Workshop Goals and Progress from 2021	
5:20 PM–6:00 PM	Concurrent Breakout Sessions	
6:00 PM–6:30 PM	Reassemble to Discuss Progress from Breakout Sessions	

Wednesday, June 29, 2022

6:30 AM–7:30 AM	BDRP 41st Annual Volleyball Game	TBD
7:30 AM–2:30 PM	Registration Open	Regency Foyer
7:30 AM–2:00 PM	Speaker Ready Room	Windsor
7:30 AM–8:00 AM	Morning Coffee (Joint with DNTS)	Regency Foyer
8:00 AM–9:00 AM	BDRP and European Teratology Society Exchange Lecture <i>Chairpersons: TBD</i>	Regency Ballroom E
9:05 AM–12:00 Noon	Wiley Symposium Environmental Justice in Birth Defects Research (Joint with DNTS) <i>Chairpersons: Bevin Blake, US Environmental Protection Agency and Brandy Beverly, National Toxicology Program, NIEHS</i>	Regency Ballroom E

Environmental justice is an ideal that will be achieved when the same degree of protection from environmental health hazards is afforded to all people and all individuals have equal access in the decision-making process towards a healthy environment. These pursuits require research that highlights health and/or exposure disparities across populations and assesses environmental regulation and policies that seek to support environmental justice. It is well documented that historically disadvantaged and marginalized populations experience disproportionately greater levels of exposure to environmental contaminants, and that numerous environmental contaminants are associated with increased risk for adverse pregnancy and early life outcomes. Therefore, pregnant people and their developing offspring within these highly exposed communities and populations are particularly vulnerable to the consequences of environmental injustice. Given the exacerbation of environmental exposure disparities due to global climate change, environmental injustice is a crisis that requires immediate action. The overarching goal of this symposium is to bring environmental justice to the



forefront and facilitate deeper thinking on our role in supporting its attainment as birth defects researchers.

9:05 AM–9:50 AM Traffic Related Air pollution and hypertensive disorders of pregnancy
Brandy Beverly, National Toxicology Program, NIEHS

9:50 AM–10:30 AM TBA

10:30 AM–11:00 AM Warkany Tea—Regency Foyer

11:00 AM–11:30 AM TBA

11:30 AM–12:00 Noon Health Disparities in Pregnancy and Postpartum Care During Public Health Emergencies
Sonja Rasmussen, University of Florida

9:05 AM–10:30 AM Hot Topic Symposium **Plaza Ballroom A**
TBD
Chairpersons: TBD

10:30 AM–11:00 AM Warkany Tea **Regency Foyer**
(Joint with DNTS)

11:00 AM–12:00 Noon Innovator Award Finalists Platform Session 4 **Plaza Ballroom A**
Chairperson: Kembra L. Howdeshell, National Toxicology Program, NIEHS

12:00 Noon–1:30 PM Lunch on Your Own

1:30 PM–4:30 PM Novel Insights into the Genomics of Structural Birth Defects: Findings from the Gabriella Miller Kids First Pediatric Research Program Symposium **Regency Ballroom E**
Chairpersons: Philip Lupo, Baylor College of Medicine and Sonja Rasmussen, University of Florida

The goal of the NIH-funded Gabriella Miller Kids First Pediatric Research Program (Kids First) is to help researchers uncover new insights into the biology of structural birth defects and childhood cancer, including the discovery of shared genetic pathways between these disorders. Kids First is achieving this goal through two initiatives: 1) identifying children with structural birth defects and/or cancer, as well as their families, for whole genome sequencing performed by the Kids First sequencing centers, and 2) developing the Gabriella Miller Kids First Data Resource, a large-scale database of clinical and genetic data from these individuals and their families. Over 2015–2020, the program selected 40 structural birth defects and childhood cancer cohorts for whole genome sequencing through a peer-review process, representing and 16,000 patients and 40,000 genomes. Clinical and genetic data from 19 of the Kids First projects are publicly available through the Gabriella Miller Kids First Data Resource Portal,



a cloud-based platform made up of tools to foster analyses and collaborations between structural birth defect and childhood cancer research communities. Kids First is enabling new findings in birth defects and childhood cancers. The overall objective of this session will be to highlight novel findings from Kids First and describe the resources available to the larger research community.

1:30 PM–1:35 PM	Introduction
1:35 PM–2:10 PM	Genetics of Congenital Diaphragmatic Hernia in Mouse and Man <i>Wendy Chung, Columbia University</i>
2:10 PM–2:45 PM	Genomics of Orofacial Clefts in Diverse Populations <i>Elizabeth Leslie, Emory University</i>
2:45 PM–3:00 PM	Break—Regency Foyer
3:00 PM–3:35 PM	Kids First Data Resource Center: A Platform for Genomic Data-Driven Discovery and Collaboration <i>Adam Resnick, Children's Hospital of Philadelphia</i>
3:35 PM–4:10 PM	The Genomics of Acute Leukemia in Children with Down Syndrome <i>Philip Lupo, Baylor College of Medicine</i>
4:10 PM–4:30 PM	Discussion

4:35 PM–6:30 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 <i>Birth Defects Research</i> Distinguished Scholar Awards Edward W. Carney Distinguished Service Award Recognition of Other Awards Presented throughout the Week Annual Business Meeting	Regency Ballroom E
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7:00 PM–9:00 PM	Closing Celebration	Grouse
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Thursday, June 30, 2022

7:00 AM–9:30 AM	Council 2 Meeting	Constable
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