

**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 November 20, 2022***

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  
*Nicola S Powles-Glover, AstraZeneca*

10:15 AM–10:30 AM      Break

10:30 AM–11:15 AM      Nonclinical Experiences with the Otic System: Case Studies  
*Chris Toscano, Center for Drug Evaluation and Research, US FDA*

11:15 AM–12:00 Noon      Clinical Experiences  
*Richard Harell, TBA*

**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

*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**

**7:00 AM–8:00 AM**

**2024 Program Committee Meeting**

**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**

**TBD**

*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*

**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	Membership Committee Meeting		
1:30 PM–2:00 PM	F. Clarke Fraser New Investigator Award <i>Chairperson: Joshua F. Robinson, University of California, San Francisco</i>		
2:00 PM–2:30 PM	James G. Wilson Publication Award <i>Chairperson: Russell S. Kirby, USF College of Public Health</i>		
2:35 PM–3:35 PM	Innovator Award Finalists Platform Session 2 <i>Chairperson: Joshua F. Robinson, University of California, San Francisco</i>		
3:35 PM–3:50 PM	Break		
3:50 PM–5:20 PM	The HEALthy Brain and Child Development Study Symposium (Joint with DNTS) <i>Chairpersons: Christina D. Chambers, University of California San Diego and Ludmila Bakhireva, University of New Mexico</i>		
3:50 PM–4:10 PM	S1	The HEALthy Brain and Child Development Study: Why This and Why Now? <i>Michelle Freund, National Institute on Drug Abuse</i>	
4:10 PM–4:30 PM	S2	Study Design and Recruitment <i>Christina D. Chambers, University of California San Diego</i>	
4:30 PM–4:50 PM	S3	Selection of Measures and Pilot Results for Biospecimens <i>Ludmila Bakhireva, University of New Mexico</i>	
4:50 PM–5:10 PM	S4	Selection of Measures and Pilot Results for Neuroimaging <i>Chris Smyser, University of Washington</i>	
5:10 PM–5:20 PM		Discussion	
5:25 PM–5:55 PM	Patricia Rodier Mid-Career Award for Research and Mentoring (Joint with DNTS)		
6:00 PM–7:30 PM	Poster Session 1 and Exhibits Attended (Joint with DNTS and OTIS)		
7:30 PM–9:30 PM	Graduate Student and Postdoctoral Fellows Career Event Hosted by Middle Atlantic Reproduction and Teratology Association (MARTA)		
<u>Monday, June 26, 2023</u>			
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**

*Chairperson: Anthony M. DeLise, Novartis Pharmaceuticals Corporation*

**9:05 AM–12:05 PM**

**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 Philip Lupo, Baylor College of Medicine*

9:05 AM–9:15 AM

Introduction

9:15 AM–9:45 AM

S5

CHD Surveillance and Risk Factors  
*Russell S. Kirby, USF College of Public Health*

9:45 AM–10:15 AM

S6

Neurocognitive Outcomes in CHD  
*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

Lifecourse Approach to CHD Surveillance, Prevention, and Outcomes  
*Jill Glidewell, Centers for Disease Control and Prevention*

11:30 AM–12:00 Noon

Discussion

**9:05 AM–12:00 Noon**

**Platform Session 3**

**12:00 Noon–2:00 PM**

**Lunch on Your Own**

**12:05 PM–1:45 PM**

**Grant Development Lunch Workshop**  
(RSVP Required)

*Organized by the Student Affairs Committee*

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

Discussants: Jonathan Cherry, March of Dimes  
James N. Coulombe, NICHD, NIH  
Christine P. Curran, Northern Kentucky University  
Joshua F. Robinson, University of California, San Francisco

12:05 PM–12:10 PM

Lunch Pick-Up

12:10 PM–1:45 PM

Open Discussion

**2:00 PM–2:30 PM**

**Agnish Fellowship Lecture**

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

**2:35 PM–6:00 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 Mechanisms of  
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–5:15 PM

S12

Introduction to Bioinformatics and Machine  
Learning  
*Qingling Duan, Queen's University*

5:15 PM–6:00 PM

Discussion

**6:00 PM–7:30 PM**

**Poster Session 2 and Exhibits Attended**  
(Joint with DNTS)

**Tuesday, June 27, 2023**

**7:00 AM–3:30 PM**

**Registration Open**

**7:00 AM–8:00 AM**

**Diversity, Equity, and Inclusion Workgroup 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**  
(Joint with OTIS)

*Chairperson: Anthony M. DeLise, Novartis Pharmaceuticals Corporation*

**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, Riverside and  
Vinita Leedom, South Carolina Department of Health and Environmental Control*

9:05 AM–9:40 AM

S13

Correlation of Contaminant Exposure and  
Inadequate Food Sources on Birth Defects within  
Communities of Color  
*Maida Galvez, Mount Sinai Hospital*

9:40 AM–10:15 AM	S14	Disparities and Opportunities in Global Prevention and Care of Folate-Sensitive Spina Bifida <i>Vijaya Kancherla, Emory University</i>
10:15 AM–10:30 AM		Break
10:30 AM–11:05 AM	S15	TBA <i>TBA</i>
11:05 AM–11:45 AM	S16	TBD <i>Michelle Myer, SC Department of Health and Environmental Control</i>
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–9:40 AM	S17	Consideration of Study Quality in Evidence-Based Assessments to Streamline Workflow on Rapid and Systematic Reviews <i>Danielle Wikoff, ToxStrategies</i>
9:40 AM–10:15 AM	S18	The PFAS Tox Database <i>Katie Pelch, Natural Resources Defense Council</i>
10:15 AM–10:30 AM		Break
10:30 AM–11:05 AM	S19	EFSA AOPs Development Experience Using a Systematic Approach with Focus on Developmental Neurotoxicity Pathways <i>Iris Mangas, European Food Safety Authority (EFSA)</i>
11:05 AM–11:40 AM	S20	Scoping the landscape of developmental and reproductive toxicants at the Division of the National Toxicology Program <i>Kembra L. Howdeshell, National Institute of Environmental Health Sciences</i>
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
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12:10 PM–12:50 PM                      New Reproductive Technologies: New Ethical Issues?  
*Anne Drapkin Lyerly, University of North Carolina at Chapel Hill*

12:50 PM–1:30 PM                      Onward and Upward in Human Reproduction? Ethical Issues in Reproductive Gene Editing  
*Megan Allyse, Mayo Clinic*

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                      S21    The Effects of COVID-19 and the COVID-19 Vaccines on Pregnancy  
*Sonja A. Rasmussen, Johns Hopkins University*

2:25 PM–2:50 PM                      S22    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                      S23    Findings from the ECHO Cohorts Regarding the Effects of the COVID-19 p  
*Leonardo Trasande, New York University Grossman School of Medicine*

3:15 PM–3:30 PM                      Break

3:30 PM–3:55 PM                      S24    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                      S25    COVID-19 in Pregnancy: What Do We Know Now?  
*Torri Metz, University of Utah*

4:20 PM–4:45 PM                      S26    Ethics, Evidence and Vaccination in Pregnancy: Lessons from COVID-19  
*Anne Drapkin 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*

**6:30 PM–8:00 PM**      **Poster Session 3 and Exhibits Attended**

**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**  
*Chairpersons: Bruce K. Beyer, Sanofi U.S. Inc. and TBA*

**European Teratology Society**  
*TBA*

**BDRP**  
*TBA*

**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, Toxy B.V. and*  
*Jessica A. Palmer, Stemina Biomarker Discovery, Inc.*

9:05 AM–9:40 AM      S27      Current and Future Opportunities for US  
Regulatory Application of Developmental Toxicity  
NAMs  
*Nicole C. Kleinstreuer, NIEHS/NICEATM*

9:40 AM–10:15 AM      S28      Practical Application of New Approach Methods  
(NAMs) in Developmental Toxicity Testing  
*Kathryn Wolton or Ramya Rajagopal, Unilever*  
*Safety and Environmental Assurance Centre*

10:15 AM–10:45 AM      Warkany Tea

10:45 AM–11:15 AM      S29      The Use of Zebrafish Alternative Animal Model  
for Developmental Toxicity Assay  
*Arantza Muriana, Biobide USA*

11:15 AM–11:45 AM      S30      ReproTracker as an in vitro alternative to animal  
models for developmental toxicity testing  
*Amer Jamalpoor, Toxy B.V.*

11:45 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 Occurrence in Children <i>Sonja A. Rasmussen, Johns Hopkins University</i>	
1:40 PM–2:15 PM	S32	Characteristics, Treatments, and Outcomes for US Children with Multisystem Inflammatory Syndrome <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 <i>Mary Prahl, University of California, San Francisco</i>	
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 <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		
5:45 PM–6:45 PM	Council 2 Meeting (2023–2024 Council members.)		
7:00 PM–9:00 PM	Closing Celebration		