

# WELCOME TO THE 6<sup>TH</sup> MEETING OF THE



**THE UNIVERSITY OF MINNESOTA**

**THE CAMPUS CLUB**

**MINNEAPOLIS, MN**

**OCTOBER 9–11<sup>TH</sup>, 2022**

# US DOHaD Society 6<sup>th</sup> Annual Meeting

October-9-11<sup>th</sup>, 2022

The Campus Club,  
University of Minnesota, Minneapolis, MN 55455

## **Scientific Program Officer:**

Danielle Christifano, PhD

## **Organizing Committee:**

Phu Tran, PhD

Kaela Varberg, PhD

Elizabeth Martin, PhD

Linda Adair, PhD

Carmen Marable, MPH

Megan Knuth, PhD

Suzanne Fenton, PhD

## **Acknowledgments:**

This meeting is supported, in part, by the NIEHS through a R13 grant (1R13ES034643) awarded to the US DOHaD Society. We are grateful for the support from the Healthy Environment and Endocrine Disruptors (HEEDS) organization for the trainee awards and Trainee Day activities.

We thank the University of Minnesota Department of Pediatrics for their support of the meeting and reception dinner. We would also like to thank the administrative staff from the University for their assistance.

We acknowledge October 10<sup>th</sup> as Indigenous Peoples' Day. This is a day to honor our diverse history and the Indigenous People who shape our nation. The University of Minnesota is a land-grant University that sits on the homelands of the Dakhóta Oyáte.

## **TRAINEE DAY: Sunday (October 9, 2022)**

9 - 9:45am	<b>Breakfast for trainees</b>
9 - 9:45am	<b>Arrival &amp; Informal Networking</b>
9:45 - 11:15am	<b>Who's Who &amp; What Do They Do?</b> <b><i>Exploring careers in science</i></b> <ul style="list-style-type: none"><li>● Thad Schug, PhD – Health Scientist Administer, Population Health Branch, NIEHS</li><li>● Catherine Bulka– Assistant Professor, College of Public Health, University of South Florida</li><li>● Terrie Livingston, PharmD- Head of Patient Outcomes and Solutions at EMD Serono</li><li>● Dara Wilson- Grant – Associate Director, Office of Postdoctoral Affairs, UNC-Chapel Hill</li></ul>
11:20 - 12:20pm	<b>Trainee Grants Session</b> <ul style="list-style-type: none"><li>● Industry Fellowships- Rulaiha Taylor -PhD Candidate in Pharmacology &amp; Toxicology, Rutgers University</li><li>● F31/F32/K99 Grants – Kaela Varberg, PhD – Research Assistant Professor, University of Kansas Medical Center; US DOHaD Society Treasurer</li><li>● Industry/Foundation Awards – Danielle Christifano - Assistant Professor, Department of Dietetics and Nutrition, University of Kansas Medical Center; US DOHaD Vice-President</li></ul>
12:30 - 2:00pm	Lunch/Networking: <b>Get your mentor(ship) up!</b> <ul style="list-style-type: none"><li>● Headshot photo session</li></ul>
2:10 - 3:10pm	<b>Written &amp; Oral Communications for a Lay Audience</b> <ul style="list-style-type: none"><li>● Humphrey Yao, PhD – Senior Principal Investigator, Reproductive and Developmental Biology Laboratory, NIEHS</li></ul>
3:15 - 4:15pm	<b>Recognizing and Responding to Bias and Microaggressions</b> <ul style="list-style-type: none"><li>● Tynslei Spence-Mitchell, DPA, MA - Equity, Diversity &amp; Inclusion Research Fellow for the Association of American Medical Colleges</li></ul>
4:15 - 4:30pm	<b>Concluding Remarks/ Feedback (QR code survey)</b> <ul style="list-style-type: none"><li>● Kaela Varberg - 2023 Meeting Announcement</li></ul>
7:00 - 10pm	<b>Trainee Evening Event in Minneapolis:</b> <b>Dinner/Mixer</b> <ul style="list-style-type: none"><li>● NOLO's Kitchen &amp; Bar</li></ul>

## **DAY 1: Monday (October 10, 2022)**

<b>8:00 - 8:10 AM</b>	<b>Welcome and Introduction:</b> Phu Tran, PhD, Associate Professor, University of Minnesota (Presiding President of US DOHaD Society)
<b>8:10 - 8:45 AM</b>	<b>Opening Talk:</b> Michael Georgieff, MD, Professor, University of Minnesota, "DOHaD: The Mental Health Version"
<b>8:45 - 9:00 AM</b>	<b>Coffee Break</b>
<b>9:00 - 11:15 AM</b>	<b>Theme 1: Toxicology</b>
	<u>Session Chair:</u> Suzanne Fenton, PhD, NIEHS
9:00 - 9:30	1.a. <u>ECHO Speaker:</u> Elena Colicino, PhD, Assistant Professor, Icahn School of Medicine at Mt Sinai. "Cross-cohort mixture analysis: a data integration with the hierarchical Bayesian Weighted Quantile Sum Regression"
9:30 - 10:00	1.b. <u>Jr Investigator:</u> Elizabeth Martin, PhD, NIEHS, "What about moms? Pregnancy as a window of epigenetic reprogramming in response to environmental exposures"
10:00 - 10:30	1.c. <u>Keynote Speaker:</u> Lida Chatzi, MD, PhD, Professor, University of Southern California, "Developmental Exposure to Forever Chemicals and Child Liver Disease"
	<u>Platform Session I</u>
10:30 - 10:45	1.d. Donghai Liang, PhD, MPH, Emory University, Assistant Professor, "Newborn Metabolomic Signatures of Maternal Serum Per- and Polyfluoroalkyl Substance Levels and Reduced Length of Gestation: A Prospective Analysis in the Atlanta African American Maternal-Child Cohort"
10:45 - 11:00	1.e. Brandon Goldson, St. George's University School of Medicine MD Candidate, Mount Sinai Icahn School of Medicine Clinical Research Associate, ECHO Speaker, "Associations among prenatal exposure to a metal mixture, lifetime maternal stress and child sex in relation to internalizing problems in preschool aged children"
11:00 - 11:15	1.f. Jan Dye, DVM, PhD, US EPA, "Consequences of early gestational ozone exposure and fetal growth restriction on lung morphological changes in peri-adolescent rats: Influence of offspring sex"
<b>11:15 – 11:45 PM</b>	<b>Pitch Presentation Session I</b> (see pg 7)
<b>11:45 – 12:45 PM</b>	<b>Lunch and Pitch Presentation Q&amp;A</b>
<b>12:45 - 2:30 PM</b>	<b>Theme 2: Developmental Biomarkers</b>
	<u>Session Chair:</u> Robert Lane, MD, MS, Executive Vice President, Physician-in-Chief, Children's Mercy
12:45 - 1:15	2.a. <u>Keynote Speaker:</u> Ramkumar Menon, PhD, Professor, UT Medical Branch at Galveston, "Using Exosomes as Biomarkers of Environmental Exposures during Pregnancy"
1:15 – 1:45	2.b. <u>ECHO Speaker:</u> Michael O'Shea, MD, MPH, UNC Chapel Hill "Extreme Prematurity: The Prenatal and Placental Environment, Neonatal Inflammation, and Brain-related Outcomes"
	<u>Platform Session II</u>

1:45 – 2:00	2.c. Kaela Varberg, PhD, Research Assistant Professor, University of Kansas Medical Center, “Generating Patient-specific In Vitro Models to Study Placental Development”
2:00-2:15	2.d. Katelyn Huff, BS, UNC Chapel Hill, ECHO Speaker, “Evaluation of Associations Between Pre-pregnancy Maternal Health, Pregnancy Complications, and Placental Epigenetic Gestational Aging”
2:15 – 2:30	2.e. Megan Beetch, PhD, Postdoctoral Fellow, University of Minnesota, “Placental mTORKO adult offspring have enhanced response to hepatic insulin action preceding high-fat diet induced insulin resistance in mice”
<b>2:30 – 3:00 PM</b>	<b>Pitch Presentation Session II</b> (see page 7)
<b>3:00 – 5:00 PM</b>	<b>Theme 3: Nutritional and Placental Implications in Pregnancy and Lactation</b> <u>Session Chair:</u> Antonio Marc Paes, PhD, Associate Professor, Universidade Federal do Maranhão, Brazil, President of DOHaD Latin America Chapter
3:00 - 3:30	3.a. <u>Keynote Speaker:</u> Geetu Tuteja, PhD, Associate Professor, Iowa State University, “Using -Omics Based Approaches to Identify Key Regulators of Placental Development”
3:30 - 4:00	3.b. <u>Jr Investigator:</u> Sarbattama Sen, MD, Assistant Professor of Pediatrics, Harvard Medical School, Boston, “Lactational programming: underlying mechanisms and implications for child health”
	<u>Platform Session III</u>
4:00 - 4:15	3.c. Kelsey Johnson, PhD, Postdoctoral Fellow, University of Minnesota, “The effects of maternal genetic variation on milk gene expression and the composition of human milk oligosaccharides”
4:15 - 4:30	3.d. Annalee Furst, MS, Staff Research Associate, UC San Diego, “Gestational Diabetes is Associated with Differences in Human Milk Oligosaccharide Concentrations”
4:30 - 4:45	3.e. Emilyn Alejandro, PhD, Associate Professor, University of Minnesota “Fetal Programming of Obesity and Type 2 Diabetes by Nutrient Sensing in the Placenta”
4:45 - 5:00	3.f. Lindsay Williams, PhD, MPH, Assistant Professor, University of Minnesota, “Vegetation density as a measure of greenness in association with childhood cancer incidence in Texas”
<b>5:00 - 5:30 PM</b>	<b>Pitch Presentation Session III</b> (see pg 7)
<b>5:30 - 7:30 PM</b>	<b>Reception Dinner (Weisman Art Museum) with Pitch Presentation Q&amp;A and Award Recognition</b>

## **DAY 2: Tuesday (October 11, 2022)**

- 8:00 - 8:15 AM**                    **Milestones of the US DOHaD Society**  
Address by Past President: Cheryl Rosenfeld, DMV PhD, College of Veterinary Medicine, University of Missouri, *virtual presenter*
- 8:15 - 8:30 AM**                    **NIH/NICHD and DOHaD-Related Research**  
Andrew Bremmer, MD, PhD, NICHD, NIH, *virtual presenter (pre-recorded)*
- 8:30 - 10:30 AM**                    **Theme 4: DOHaD and Health Disparities**  
Session Chair: Craig Bierle, PhD, Assistant Professor, University of Minnesota
- 8:30 - 9:00                    4.a. ECHO Speaker: Cristiane S. Duarte, PhD, MPH, Division of Child and Adolescent Psychiatry, Columbia University, “Intergenerational Transmission of Adverse Childhood Experiences”
- 9:00 - 9:30                    4.b. Jr Investigator: Anita Randolph, PhD, Assistant Professor, University of Minnesota, “Comparing Resting-State Functional Connectivity of Methamphetamine and Alcohol use disorders and the relationship with impulsive choice.”
- Platform Session IV
- 9:30 - 9:45                    4.c. Candace Lewis, PhD Assistant Professor, Arizona State University, ECHO speaker “Increasing Sample Heterogeneity in Biological Research: At Home Dried Blood Spot Collection”
- 9:45 - 10:00                    4.d. Izzuddin Aris, PhD, Assistant Professor, Harvard Medical School, ECHO Speaker, “Neighborhood Opportunity and Vulnerability, and Trajectories of Child Body Mass Index and Obesity: A Nationwide US Multicohort Study”
- 10:00 10:15                    4.e. Amy Smith, PhD, Postdoctoral Fellow, Children’s Mercy Research Institute, “Exploring the association between home characteristics and the language environment of infants from low-SES families” - *virtual presenter*
- 10:15-10:30                    4.f. Xiaoyu Liang, PhD, Assistant Professor, The University of Tennessee Health Science Center, ECHO Speaker, “Cord Blood Metabolomic Profiles Mediate the Effect of Prenatal Metabolites on Early Childhood Growth Outcomes” - *virtual presenter*
- 10:30 – 10:45 AM**                    **Coffee Break**
- 10:45 - 11:15 AM**                    **Pitch Presentation Session IV** (see pg 7)
- 11:15 – 12:45 PM**                    **Lunch break with Pitch Presentation Q&A**  
11:20-11:30                    Save the Date: September 17-19: 2023 DOHaD Meeting: Kansas City  
11:45-12:45                    Working lunch: US DOHaD Membership Business Meeting
- 12:45 - 2:15 PM**                    **Theme 5: Emerging Exposures during Pregnancy in Susceptible Populations**  
Session Chair: Emilyn Alejandro, PhD, Associate Professor, University of Minnesota
- 12:45 - 1:15                    5.a. Keynote Speaker: Sonja Rasmussen, MD, MS, Professor, John Hopkins University, “COVID during pregnancy”
- Platform Session V

1:15 - 1:30	5.b. Eric Brown, BS, PhD Student, UNC Chapel Hill, ECHO Speaker, “Association between Childhood Adversity, Parent-Child Adversity Reporting, and Positive Child Health in Adolescents born Extremely Preterm”
1:30 – 1:45	5.c. Megan Knuth, PhD, Postdoctoral Trainee, UNC Chapel Hill, “Developmental Vitamin D Deficiency Alters Adult Liver Energy Metabolism Pathways”
1:45 - 2:00	5.d. Stephanie Eick, PhD, MPH, Assistant Professor, Emory University, ECHO Speaker, “A pooled analysis of four birth cohorts examining urinary oxidative stress biomarkers and preterm birth” - <i>virtual presenter</i>
2:00 - 2:15	5.e. Carmen Marable, MPH, Doctoral Candidate, UNC Chapel Hill, ECHO Speaker, “Links between early life neonatal inflammation and later in life brain volume”
<b>2:15 - 3:00 PM</b>	<b>Pitch Presentation Session V</b> (see pg 7)
<b>3:00 - 3:30 PM</b>	<b>Networking break with Pitch Presentation Q&amp;A</b>
<b>3:30 - 3:45 PM</b>	<b>Closing Remarks</b>

## **2022 US DOHaD Pitch Presentations**

Check out the supplementary Quad Posters displayed in our virtual showcase on our website!

**Website:** <https://www.usdohad.org/pitch-poster-gallery.html>

**Password:** USDOHaD2022

Please note there will not be a formal Q&A session following the pitch presentations. Instead, we ask that you seek out speakers during coffee and meal breaks to ask questions.

### **DAY 1: Monday (October 10, 2022)**

#### **Session I: Toxicology**

- 1g. Mathia Colwell, PhD – University of Michigan
- 1h. Benjamin Hing, PhD – University of Iowa
- 1i. Daniel Mendez, MS – Department of Pediatrics, University of Minnesota
- 1j. Whitney Kerr, MS, MBE – University of Oklahoma Health Sciences Center - *virtual presenter*
- 1k. Edie Threlkeld, BS – Medical College of Georgia, Augusta University - *virtual presenter*
- 1l. Nadia Saadat, MBBS, MS, PhD – University of Michigan - *virtual presenter*

#### **Session II: Developmental Biomarkers**

- 2f. Serena Gumusoglu, MSC – University of Iowa
- 2g. Alysha Everett, MS – University of Alabama at Birmingham
- 2h. Rose Schrott, PhD – Johns Hopkins Bloomberg School of Public Health
- 2i. Craig Bierle, PhD – University of Minnesota
- 2j. Annemarie Carver, BS – University of Iowa
- 2k. Sara Mitchell, BA – University of Iowa Interdisciplinary Graduate Program in Neuroscience

#### **Session III: Nutritional and Placental Implications in Pregnancy and Lactation**

- 3g. Emily Nagel, PhD, RD – University of Minnesota School of Public Health
- 3h. Seokwon Jo, BS – University of Minnesota
- 3i. Aria Grabowski, MPH, RD – University of Michigan
- 3j. Danielle Christifano, PhD – University of Kansas Medical Center
- 3k. Marie Swanson, MD – University of Minnesota
- 3l. Shirelle Lu, BS – Department of Pediatrics, University of Minnesota

### **DAY 2: Tuesday (October 11th, 2022)**

#### **Session IV: DOHaD and Health Disparities**

- 4g. Grace Chung, MS – University of Minnesota Medical School
- 4h. Zhenjiang Li, MSPH – Emory University

#### **Session V: Emerging Exposures during Pregnancy in Susceptible Populations**

- 5f. Anastasia Freedman, BS – University of North Carolina at Chapel Hill
- 5g. Tenille Fredrickson, BS – Department of Pediatrics, University of Minnesota
- 5h. Mira Malavia, BA – University of Missouri-Kansas City School of Medicine
- 5i. Sara Maurer, PhD – University of Iowa
- 5j. Paula Chandler-Laney, PhD – University of Alabama at Birmingham
- 5k. Michael Cowley, PhD – North Carolina State University
- 5l. David Skaar, PhD – North Carolina State University - *virtual presenter*
- 5m. Adrienne Griebel-Thompson, PhD, MS, RD, LD CLC – Children's Mercy Hospital - *virtual presenter*