Welcome to the 6th Meeting of the U.S. DOHaD Society

The University of Minnesota
The Campus Club
Minneapolis, MN

October 9–11th, 2022
US DOHaD Society 6th Annual Meeting

October-9-11th, 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 10th 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)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9 - 9:45am</td>
<td>Breakfast for trainees</td>
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<td>9 - 9:45am</td>
<td>Arrival &amp; Informal Networking</td>
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<tr>
<td></td>
<td>● Thad Schug, PhD – Health Scientist Administer, Population Health</td>
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<td>Branch, NIEHS</td>
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<td>● Catherine Bulka– Assistant Professor, College of Public Health,</td>
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<td>University of South Florida</td>
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<td>● Terrie Livingston, PharmD- Head of Patient Outcomes and Solutions at EMD Serono</td>
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<td>● Dara Wilson- Grant – Associate Director, Office of Postdoctoral Affairs, UNC-Chapel Hill</td>
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<td>11:20 - 12:20pm</td>
<td>Trainee Grants Session</td>
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<td>● Industry Fellowships- Rulaiha Taylor -PhD Candidate in Pharmacology &amp; Toxicology, Rutgers University</td>
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<td>● F31/F32/K99 Grants – Kaela Varberg, PhD – Research Assistant Professor, University of Kansas Medical Center; US DOHaD Society Treasurer</td>
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<td>● Industry/Foundation Awards – Danielle Christifano - Assistant Professor, Department of Dietetics and Nutrition, University of Kansas Medical Center; US DOHaD Vice-President</td>
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<td>12:30 - 2:00pm</td>
<td>Lunch/Networking: Get your mentor(ship) up!</td>
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<td>● Headshot photo session</td>
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<td>2:10 - 3:10pm</td>
<td>Written &amp; Oral Communications for a Lay Audience</td>
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<td>● Humphrey Yao, PhD – Senior Principal Investigator, Reproductive and Developmental Biology Laboratory, NIEHS</td>
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<td>3:15 - 4:15pm</td>
<td>Recognizing and Responding to Bias and Microaggressions</td>
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<td>● Tynslei Spence-Mitchell, DPA, MA - Equity, Diversity &amp; Inclusion Research Fellow for the Association of American Medical Colleges</td>
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<td>4:15 - 4:30pm</td>
<td>Concluding Remarks/ Feedback (QR code survey)</td>
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<td>● Kaela Varberg - 2023 Meeting Announcement</td>
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<tr>
<td>7:00 - 10pm</td>
<td>Trainee Evening Event in Minneapolis:</td>
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<td>Dinner/Mixer</td>
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<td>● NOLO’s Kitchen &amp; Bar</td>
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DAY 1: Monday (October 10, 2022)

8:00 - 8:10 AM  Welcome and Introduction: Phu Tran, PhD, Associate Professor, University of Minnesota (Presiding President of US DOHaD Society)

8:10 - 8:45 AM  Opening Talk: Michael Georgieff, MD, Professor, University of Minnesota, “DOHaD: The Mental Health Version”

8:45 - 9:00 AM  Coffee Break

9:00 - 11:15 AM  Theme 1: Toxicology

  Session Chair: Suzanne Fenton, PhD, NIEHS

  9:00 - 9:30  1.a. ECHO Speaker: 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. Jr Investigator: 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. Keynote Speaker: Lida Chatzi, MD, PhD, Professor, University of Southern California, “Developmental Exposure to Forever Chemicals and Child Liver Disease”

  Platform Session I

  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 periadolescent rats: Influence of offspring sex”

11:15 – 11:45 PM  Pitch Presentation Session I (see pg 7)

11:45 – 12:45 PM  Lunch and Pitch Presentation Q&A

12:45 - 2:30 PM  Theme 2: Developmental Biomarkers

  Session Chair: Robert Lane, MD, MS, Executive Vice President, Physician-in-Chief, Children’s Mercy

  12:45 - 1:15  2.a. Keynote Speaker: Ramkumar Menon, PhD, Professor, UT Medical Branch at Galveston, “Using Exosomes as Biomarkers of Environmental Exposures during Pregnancy”


  Platform Session II
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”


2:15 – 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”

2:30 – 3:00 PM  **Pitch Presentation Session II** (see page 7)

3:00 – 5:00 PM  **Theme 3: Nutritional and Placental Implications in Pregnancy and Lactation**
  
  **Session Chair:** Antonio Marc Paes, PhD, Associate Professor, Universidade Federal do Maranhão, Brazil, President of DOHaD Latin America Chapter

  3:00 - 3:30  3.a. **Keynote Speaker:** 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. **Jr Investigator:** Sarbattama Sen, MD, Assistant Professor of Pediatrics, Harvard Medical School, Boston, “Lactational programming: underlying mechanisms and implications for child health”

  **Platform Session III**

  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”

5:00 - 5:30 PM  **Pitch Presentation Session III** (see pg 7)

5:30 - 7:30 PM  **Reception Dinner (Weisman Art Museum) with Pitch Presentation Q&A and Award Recognition**
### DAY 2: Tuesday (October 11, 2022)

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>8:00 - 8:15 AM</td>
<td><strong>Milestones of the US DOHaD Society</strong>&lt;br&gt;Address by Past President: Cheryl Rosenfeld, DMV PhD, College of Veterinary Medicine, University of Missouri, <em>virtual presenter</em></td>
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<td>8:15 - 8:30 AM</td>
<td><strong>NIH/NICHD and DOHaD-Related Research</strong>&lt;br&gt;Andrew Bremmer, MD, PhD, NICHD, NIH, <em>virtual presenter (pre-recorded)</em></td>
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<td>8:30 - 10:30 AM</td>
<td><strong>Theme 4: DOHaD and Health Disparities</strong>&lt;br&gt;<strong>Session Chair:</strong> Craig Bierle, PhD, Assistant Professor, University of Minnesota&lt;br&gt;8:30 - 9:00 4.a. <strong>ECHO Speaker:</strong> Cristiane S. Duarte, PhD, MPH, Division of Child and Adolescent Psychiatry, Columbia University, “Intergenerational Transmission of Adverse Childhood Experiences”&lt;br&gt;9:00 - 9:30 4.b. <strong>Jr Investigator:</strong> 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.”&lt;br&gt;Platform Session IV&lt;br&gt;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”&lt;br&gt;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”&lt;br&gt;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” - <em>virtual presenter</em>&lt;br&gt;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” - <em>virtual presenter</em></td>
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<td>10:30 – 10:45 AM</td>
<td><strong>Coffee Break</strong></td>
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<td>10:45 - 11:15 AM</td>
<td><strong>Pitch Presentation Session IV</strong> (see pg 7)</td>
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<td>11:15 – 12:45 PM</td>
<td><strong>Lunch break with Pitch Presentation Q&amp;A</strong>&lt;br&gt;11:20-11:30 Save the Date: September 17-19: 2023 DOHaD Meeting: Kansas City&lt;br&gt;11:45-12:15 Working lunch: US DOHaD Membership Business Meeting</td>
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<td>12:45 - 2:15 PM</td>
<td><strong>Theme 5: Emerging Exposures during Pregnancy in Susceptible Populations</strong>&lt;br&gt;<strong>Session Chair:</strong> Emilyn Alejandro, PhD, Associate Professor, University of Minnesota&lt;br&gt;12:45 - 1:15 5.a. <strong>Keynote Speaker:</strong> Sonja Rasmussen, MD, MS, Professor, John Hopkins University, “COVID during pregnancy”&lt;br&gt;Platform Session V</td>
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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” - virtual presenter
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”

2:15 - 3:00 PM  Pitch Presentation Session V (see pg 7)
3:00 - 3:30 PM  Networking break with Pitch Presentation Q&A
3:30 - 3:45 PM  Closing Remarks
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](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. Adrianne Griebel-Thompson, PhD, MS, RD, LD CLC – Children’s Mercy Hospital - *virtual presenter*