

Education

- May 2006 BS (Biopsychology and Cognitive Science), University of Michigan
May 2011 MPH (Occupational and Environmental Epidemiology), University of Michigan School of Public Health
May 2014 PhD (Environmental Health Sciences), University of Michigan School of Public Health (Dissertation: Environmental phthalate exposure, oxidative stress, and preterm birth)

Brief Chronology of Employment

- 2014-2015 Postdoctoral research fellow and NIEHS P30 center scientist, Department of Environmental Health Sciences, University of Michigan School of Public Health, Ann Arbor, MI
2015-2015 Research Assistant Professor, Department of Environmental Health Sciences, University of Michigan School of Public Health, Ann Arbor, MI
2016-2022 Tenure track investigator, Epidemiology Branch, Division of Intramural Research, National Institute of Environmental Health Sciences, Research Triangle Park, NC
2016-date Adjunct Assistant Professor, Department of Environmental Health Sciences, University of Michigan School of Public Health, Ann Arbor, MI
2016-date Adjunct Assistant Professor, Department of Epidemiology, University of North Carolina (UNC) Gillings School of Global Public Health, Chapel Hill, NC
2018-date Adjunct appointment, Curriculum in Toxicology, UNC, Chapel Hill, NC
2022-date Senior investigator, Epidemiology Branch, Division of Intramural Research, National Institute of Environmental Health Sciences, Research Triangle Park, NC
2023-date Deputy Branch Chief, Epidemiology Branch, Division of Intramural Research, National Institute of Environmental Health Sciences, Research Triangle Park, NC

Honors and Scientific Recognition

- University of Michigan Rackham Regents' Fellowship, 2011-2014
Blue Cross Blue Shield of Michigan Excellence in Student Research Award, 2014
NIH Pediatric Loan Repayment Program, 2014-2016
NIH Intramural Loan Repayment Program, 2016-2020
Collaborative on Health and the Environment's 20 Pioneers Under 40 in Environmental Public Health, 2017
NIEHS Mentor of the Year Award, 2018
Lou Guillette, Jr. Outstanding Young Investigator Award, 2020
NIEHS Cross-divisional funding award, 2021 (120k)
NIEHS Extramural Paper of the Month (N=3, see notation under *Research Papers*)
NIEHS Extramural Paper of the Year (N=1, see notation under *Research Papers*)
NIEHS Intramural Paper of the Month (N=20, see notation under *Research Papers*)
NIEHS Intramural Paper of the Year (N=4, see notation under *Research Papers*)
ISEE Best Environmental Epidemiology Paper 2024 (Welch et al. 2024)

Memberships

- International Society for Environmental Epidemiology
Society for Pediatric and Perinatal Epidemiologic Research
Society for Redox Biology and Medicine
Society of Toxicology

Research Interests

- Environmental chemical exposure assessment; fetal growth; preterm birth; maternal prenatal and postnatal health; non-persistent chemical exposure biomarkers; chemical

exposures mixtures; phenotyping adverse pregnancy outcomes; biomarkers of inflammation and oxidative stress; developmental origins of health and disease; placental development and function; statistical methods for longitudinal data and analysis of exposure mixtures.

Current Studies with NIEHS Intramural Funding

Consumer product chemical exposures in pregnancy and their cumulative impact on disorders of fetal growth. Role: PI. Grant number: ZIA- ES103321. This is a case-cohort study nested within the LIFECODES birth cohort (PI: Thomas McElrath) designed to investigate consumer product chemical exposures during pregnancy in relation to disorders of fetal growth. The study will also examine the role of inflammation as a potential mediator in these relationships.

The Generation R birth cohort as an NIEHS resource. Role: PI. Grant number: ZIA- ES101575. Under this project, we collaborate with investigators at Erasmus Medical Center (PI: Vincent Jaddoe) and elsewhere to investigate questions pertaining to environmental chemical exposures and fetal growth within the Generation R cohort. In the next phase of this project, we will perform metabolomics analyses on prenatal plasma samples to investigate novel markers of inflammation related to environmental chemical exposures and fetal and child growth endpoints.

Prenatal phthalate and phthalate replacement exposures and fetal-placental development. Role: PI. Grant number: ZIA-ES103344. This study is a collaboration with an NICHD-funded Human Placenta Project cohort (PIs: Alfred Abuhamad, George Saade) in which we are collecting urine specimens and questionnaire data at 8 visits during pregnancy that coincide with ultrasound measurements that capture novel information on development of the fetus and placenta. The study will investigate phthalate and phthalate replacement exposure sources and associations with adverse developmental endpoints in pregnancy within a diverse population.

Nontargeted perfluoroalkyl substance exposures and sources and maternal prenatal and postnatal health in the HOPE 1000 cohort. Role: PI. Grant number: pending. In this effort we are applying a novel approach to capture legacy and novel perfluoroalkyl substance exposures in a diverse population of pregnant women from Durham, North Carolina. We will characterize exposure sources and estimate associations with adverse maternal prenatal and postnatal health outcomes.

Previous Studies with NIEHS Intramural Funding

Phthalate and stressful life event exposures and pregnancy outcomes: the role of oxidative stress. Role: PI. Grant number: ZIA-ES103313. This study expanded on The Infant Development and the Environment Study (TIDES; PI Shanna Swan) to examine chemical and non-chemical exposure mixtures and oxidative stress biomarkers in relation to fetal growth and timing of delivery.

Oxidative stress as a mediator of environmental exposure impacts on fertility endpoints. Role: PI. Grant number: ZIA-ES103314. This study expanded on the Environment and Reproductive Health study (EARTH; PI: Russ Hauser) to examine oxidative stress biomarkers in relation to chemical exposures and in vitro fertilization outcomes.

Current Trainees

Danielle Stevens, PhD (NIEHS IRTA postdoctoral fellow 2021-present)

Mentoring role: Primary mentor

Awards: NIEHS Intramural Paper of the Month (2022, 2023, 2024), NIH FARE Award (2022, 2024), K99/R00 Path to Independence Award: *Phthalates and Phthalate*

Alternatives and Early Human Cardiometabolic Development (2023)

Erin McNell, BS (Predoctoral fellow 2021-)

Mentoring role: Co-mentor for dissertation research, Biological & Biomedical Sciences Program (BBSP), UNC

Awards: NIH Graduate Student Research Award (2023)

Amir Lueth, PhD (NIEHS IRTA postdoctoral fellow 2023-present)

Mentoring role: Primary mentor

Awards: NIMHD William G. Coleman Jr., Ph.D., Minority Health and Health Disparities Research Innovation Award (2024)

Sarahna Moyd, PhD (NIEHS IRTA postdoctoral fellow 2024-present)

Mentoring role: Primary mentor

Former Trainees

Ye Yuan, MPH (MPH student 2014-2015, no NIEHS affiliation)

Epidemiology, University of Michigan School of Public Health

Mentoring role: Primary mentor for Master's Thesis

Elizabeth Kamai, MPH (NIEHS summer fellow 2016)

Epidemiology, UNC Gillings School of Global Public Health

Mentoring role: Primary mentor for summer research project

Ellie Lan, MS (MS student 2016-2018, no NIEHS affiliation)

Statistics, UNC

Mentoring role: Primary mentor for Master's Thesis

Lauren Johns, PhD, MPH (PhD student 2012-2017, no NIEHS affiliation)

Environmental Health Sciences, University of Michigan School of Public Health

Mentoring role: Co-mentor for dissertation

Maria Isabel Guadalupe Muñoz, MPH (NIEHS summer fellow 2017)

Mentoring role: Primary mentor for summer research project and Master's thesis

Awards: NIEHS Intramural Paper of the Month.

Stephanie Eick, MPH, PhD (NIEHS summer fellow 2017)

Mentoring role: Primary mentor for summer research project

Erin Sley, MPH (NIEHS summer fellow 2018)

Maternal and Child Health, UNC Gillings School of Global Public Health

Mentoring role: Primary mentor for summer research project and Master's thesis

Thomas J. van t' Erve, PhD (NIEHS IRTA postdoctoral fellow 2018)

Mentoring role: Primary mentor

Current position: Toxicologist, Michigan Public Health Institute and Michigan Department of Health and Human Services, Lansing, MI, USA

Awards: NIEHS Intramural Paper of the Month

Chelsea Clinton, MD (Maternal Fetal Medicine fellow 2016-2019, no NIEHS affiliation)

Duke Hospital

Mentoring role: Primary mentor for research fellowship

Stephani Kim, PhD, MPH (NIEHS IRTA postdoctoral fellow 2017-2019)

Mentoring role: Primary mentor

Current position: Lead Environmental Epidemiologist, Battelle Memorial Institute, Columbus, OH, USA

Awards: NIEHS Intramural Paper of the Month

Olufunmilayo Arogbokun, MPH (NIEHS summer fellow and special volunteer 2019)

Epidemiology, UNC Gillings School of Public Health

Mentoring role: Primary mentor for summer internship and independent study

Angel Davalos, PhD (NIEHS IRTA postdoctoral fellow 2019-2021)

Mentoring role: Co-mentor with Dr. Shanshan Zhao (Biostatistics and Computational Biology Branch, NIEHS)

Current position: NIEHS post-doctoral fellow (Zhao)

Kimi van Wickle, MPH (NIEHS summer fellow 2022)

Maternal and Child Health, UNC Gillings School of Global Public Health

Mentoring role: Primary mentor for summer research project

Awards: Second place, Summer Internship Program Poster competition.

Barrett Welch, PhD (NIEHS IRTA postdoctoral fellow 2019-2022)

Mentoring role: Primary mentor

Current position: Assistant Professor, School of Public Health, University of Nevada, Reno

Awards: NIEHS Intramural Paper of the Month (n=3); NIEHS Intramural Paper of the Year (n=3); NIH FARE Award (2021); ISEE Best Environmental Epidemiology Paper 2024.

Paige Bommarito, PhD (NIEHS summer fellow 2018, NIEHS IRTA postdoctoral fellow 2020-2023, NIEHS Staff Scientist 2023-2024)

Mentoring role: Primary mentor

Current position: Epidemiologist, Science Assessment Methods Branch, EPA

Awards: President's Award for Research Competition, NC SOT; NIEHS "Big Picture, Small Talk" communication challenge; NIEHS Intramural Papers of the Month (2022, 2022, 2023, 2023, 2024, 2024); NIEHS Intramural Paper of the Year (2023).

Alexa Friedman, PhD (NIEHS IRTA postdoctoral fellow 2022-2023)

Mentoring role: Primary mentor

Current position: Senior Scientist, Environmental Working Group

Awards: ISEE North America Chapter Travel Award (2023)

Emma Rosen, MPH (Research assistant 2017-2019; Predoctoral fellow 2021-2023)

Mentoring role: Primary mentor for research assistantship and dissertation research, Epidemiology, UNC Gillings School of Global Public Health

Current position: Senior Lead Consultant, Ramboll

Teaching activities

University of Michigan School of Public Health

EHS 675: Advanced exposure assessment, Guest lectures 2012-2014

EHS 608: Environmental epidemiology, Guest lectures 2014-2015

EHS 504: Genes and the environment, Guest lecture 2015

University of Michigan

Undergraduate Research Opportunity Program, Guest lecture 2013

Environment 310: Environmental chemicals and disease, Guest lectures 2013-2015

Public Health 305: The Environment and Human Health, Guest lecture winter 2014

University of North Carolina Gillings School of Global Public Health

EPID/MCH 851: Introduction to Reproductive, Perinatal, and Pediatric Epidemiology. Guest lectures 2016-2023

ENVR 601: Epidemiology for Environmental Sciences and Engineering Students.

Guest lectures 2017, 2018, 2020, 2021

EPID 853: Advanced Perinatal and Pediatric Epidemiology. Guest lectures 2018, 2020, 2022

EPID 785: Environmental Epidemiology. Guest lectures 2020-2022

Nicholas School of the Environment, Duke University

ENV 357: Environmental Health, Guest lectures 2018-2022

Duke University

BIO702/UPGEN712: Succeeding Beyond Graduate School, Guest lecture 2018, 2021

Johns Hopkins Bloomberg School of Public Health

180.640: Molecular epidemiology and biomarkers in public health, Guest lectures 2021-2022

Other

ISEE Student and New Researcher Network webinar (2016)

Agency for Toxic Substances and Disease Registry webinar (2018)

Dissertation or Thesis Committees

Dongyu Zhang, UNC Gillings School of Global Public Health

Department of Epidemiology, Primary mentor: Hazel Nichols

Dissertation: Tea consumption, oxidative stress, and breast cancer risk

(PhD granted 2018)

Rachel Shaffer, University Washington, Seattle School of Public Health

Department of Environmental and Occupational Health Sciences, Primary mentor:

Sheela Sathyanarayana

Dissertation: Maternal urinary phthalates in relation to gestational diabetes and glucose intolerance during pregnancy

(MPH granted 2018)

Stephanie Eick, University of Georgia College of Public Health

Department of Epidemiology and Biostatistics, Primary mentor: Jose Cordero

Dissertation: Psychosocial stress among pregnant women in Puerto Rico

(PhD granted 2019)

Paige Bommarito, UNC Gillings School of Global Public Health

Department of Environmental Sciences and Engineering, Primary mentor: Rebecca Fry

Dissertation: Associations between toxic metals and preeclampsia: an interdisciplinary approach

(PhD granted 2020)

Bevin Blake, UNC Gillings School of Global Public Health

Department of Environmental Sciences and Engineering, Primary mentor: Rebecca Fry

Dissertation: Assessing the effects of perfluoroalkyl substance exposure using transdisciplinary science

(PhD granted 2020)

Cao Feng, UNC Gillings School of Global Public Health

Department of Environmental Sciences and Engineering, Primary mentor: Kun Lu

Undergraduate thesis: Lipidomic markers of preterm birth: a pilot case-control study (passed thesis defense with high honors 2020)

Katelyn Huff, UNC Gillings School of Global Public Health

Curriculum in Toxicology & Environmental Medicine, Primary mentor: Rebecca Fry

Dissertation: Placental epigenetic aging in the relationship between prenatal metals exposure and childhood health outcomes

(PhD expected 2024)

Professional Activities

Reviewer, University of North Carolina Center for Environmental Health and Susceptibility Pilot Projects, 2017, 2019, 2021

Reviewer, Columbia University Center for Environmental Health Pilot Projects, 2022
PROTECT Training Core External Advisory Board, 2018-present
Current Epidemiology Reports, Reproductive Epidemiology section editor 2019-2020
International Journal of Environmental Research and Public Health section editor 2020-2021 (recipient of Outstanding Special Issue Award)
Member, Capacity Building and Education Committee (CAPE), International Society for Environmental Epidemiology, 2022-present

Reviewer for Journals (selected)

American Journal of Epidemiology
American Journal of Obstetrics and Gynecology
British Journal of Obstetrics and Gynecology
Environmental Health
Environmental Health Perspectives (Editorial Review Board, Top Peer Reviewer 2021)
Environmental Research (Editorial Board Member 2020-2023, Associate editor 2023-)
Environment International
Epidemiology (Editorial Board Member)
Journal of Exposure Science and Environmental Epidemiology
JAMA and JAMA Pediatrics
Lancet Public Health
Paediatric and Perinatal Epidemiology
Pediatrics
Reproductive Toxicology
Science of the Total Environment

NIEHS and NIH Committees

Committee member
Assembly of Scientists, 2018-2019
Spirit Lecture, 2019-2021
Biostatistics and Computational Biology Branch Staff Scientist search, 2017
Metabolomics Staff Scientist search, 2018-2020
NICHD Division of Population Health Research Director search, 2020
NIH Stadtman Epidemiology and Population Sciences Committee, 2022
NIEHS COP IV Committee, 2022-
NIEHS COP I Committee, 2023-
PRIDE@NIEHS, 2022-

Leadership

Organizer for Epidemiology Branch Seminar Series, 2016-2018
Organizer for Epidemiology Branch Reproductive Journal Club, 2017-present
Co-organizer for Epidemiology Branch Mixtures Working Group, 2017-present
Co-organizer for NIEHS Tenure Track Retreat, 2019
Co-organizer for NIEHS Epidemiology Branch Retreat, 2023
NIH Senior Leadership Training Program, 2023

Invited Presentations

2011

Exploration of oxidative stress and inflammatory markers in relation to urinary phthalate metabolites: NHANES 1999-2006. Selected talk; Superfund Research Program Annual Meeting, Lexington, KY. October 2011.

2013

Associations between urinary phthalate metabolites and biomarkers of inflammation and oxidative stress in pregnant women. Selected talk; International Society for Environmental Epidemiology Conference, Basel, Switzerland. August 2013.

Environmental phthalate exposure is associated with increased odds of preterm birth. Selected talk; International Society for Environmental Epidemiology Conference, Basel, Switzerland. August 2013.

2014

Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth. Selected talk; Society for Gynecologic Investigation Annual Meeting, Florence, Italy. March 2014.

Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth. Selected talk; International Society for Environmental Epidemiology Conference, Seattle, WA. August 2014.

Mediation of the relationship between phthalate exposure and preterm birth by oxidative stress. Selected talk; International Society for Environmental Epidemiology Conference, Seattle, WA. August 2014.

Phthalate exposure, preterm birth, and potential mechanisms. Invited talk; Phthalate Symposium at Brigham and Women's Hospital, Boston, MA. September 2014.

2015

Mediation of the relationship between phthalate exposure and preterm birth by oxidative stress. Selected talk; NIEHS Center and Training Directors Meeting, Tucson, AZ, April 2015.

Developmental effects of phthalates: what are the mechanisms? Invited talk; Copenhagen Endocrine Disrupters Workshop, Copenhagen, Denmark. April 2015.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina. June 2015.

Associations between urinary bisphenol-A and inflammation and oxidative stress biomarkers in pregnancy. Selected talk; International Society for Environmental Epidemiology Conference, Sao Paulo, Brazil. August 2015.

Associations between phthalate exposure during pregnancy and fetal growth. Selected talk; International Society for Environmental Epidemiology Conference, Sao Paulo, Brazil. August 2015.

2016

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; George Washington University Department of Environmental and Occupational Health Seminar Series, Washington DC. February 2016.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; University of North Carolina Gillings School of Global Public Health Reproductive, Perinatal, and Pediatric Epidemiology Seminar Series, Chapel Hill, North Carolina. March 2016.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Epigenetics and Stem Cell Biology Laboratory, NIEHS, Research Triangle Park, NC. March 2016.

Associations between urinary PAH and a panel of inflammation, angiogenesis, and oxidative stress biomarkers. Selected talk; International Society for Environmental Epidemiology Conference, Rome, Italy. August 2016.

Mechanisms of endocrine disruptor action in the etiology of preeclampsia. Invited talk; International Society for Environmental Epidemiology Conference, Rome, Italy. August 2016.

Exposure to plasticizers in pregnancy and fetal growth. Invited talk; Environmental and Occupational Epidemiology Seminar, Chapel Hill, NC. September 2016.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Immunity, Inflammation, and Disease Laboratory, NIEHS, Research Triangle Park, NC. September 2016.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Duke Integrated Toxicology and Environmental Health Program Seminar, Durham, NC. October 2016.

2017

Oxidative stress and inflammation in growth restriction: evidence from epidemiology. Invited talk; Triangle Consortium for Reproductive Biology, Research Triangle Park, NC. February 2017.

Environmental chemical exposures in pregnancy: what is the role of oxidative stress? Invited talk; Department of Maternal-Fetal Medicine, Brigham and Women's Hospital, Boston, MA. May 2017.

Perinatal and Early Life Epidemiology Group. Invited talk; Reproductive Health Data Meeting, Department of Environmental Health, Harvard T.H. Chan School of Public Health, Boston, MA. May 2017.

Environmental chemical exposures and fetal growth. Invited talk; Robinson Research Institute Seminar Series, University of Adelaide, Adelaide, Australia. September 2017.

Environmental phenol exposures and fetal growth. Selected talk; International Society for Environmental Epidemiology Conference, Sydney, Australia. September 2017.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Department of Environmental Health Seminar Series, College of Medicine, University of Cincinnati, Cincinnati, OH. October 2017.

Phthalate exposure through school lunches in US children. Invited talk; International Society for Exposure Science Conference, Research Triangle Park, NC. October 2017.

Environmental chemical exposures and fetal growth: Recent advances and next steps. Invited talk; NIEHS Science Days. Research Triangle Park, NC. October 2017.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Department of Biological Sciences Toxicology Program Seminar, North Carolina State University. Raleigh, NC. November 2017.

2018

Environmental Chemicals and Preterm Birth: Emerging Threats and Priorities for Future Research. Invited webinar; Collaborative on Health and the Environment. March 2018.

Inflammation differentiated from oxidative stress in reproductive epidemiology: Understanding the environmental impact on birth outcomes. Invited talk; Society of Toxicology Annual Meeting. San Antonio, TX. March 2018.

Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Invited talk; Research meeting, Department of Epidemiology, Erasmus Medical Center. Rotterdam, The Netherlands. April 2018.

Biomarkers of environmental chemicals for exposure assessment during pregnancy. Invited webinar; Agency for Toxic Substances and Disease Registry (ATSDR) Environmental Exposure Investigation webinar series. June 2018.

Inflammation vs. oxidative stress in relation to phthalate exposure: Evidence from human and animal studies. Selected talk; International Society for Environmental Epidemiology Conference. Ottawa, Canada. August 2018.

Endocrine Disrupting Chemicals and Adverse Pregnancy Outcomes: Investigation of Oxidative Stress as a Mediator. Invited seminar; Curriculum in Toxicology and Environmental Medicine, University of North Carolina Gillings School of Global Public Health. Chapel Hill, NC. October 2018.

2019

Environmental phthalate exposure and preterm birth: A research update. Invited seminar; Epidemiology and Biostatistics Department, University of Georgia College of Public Health, Athens, GA. March 2019.

Environmental phthalate exposure and preterm birth: A research update. Invited seminar; Vanderbilt University Medical Center, Nashville, TN. April 2019.

Environmental phthalate exposure and preterm birth: A research update. Invited seminar; Reproductive and Developmental Biology Laboratory, NIEHS, Durham, NC. May 2019.

Plasticizers in pregnancy: Exposure and birth outcomes. Invited seminar; First Brazilian seminar on maternal child health and environmental pollutants, Rio de Janeiro, Brazil. June 2019.

Organophosphate pesticide exposure in pregnancy and fetal growth. Selected talk; Society for Pediatric and Perinatal Epidemiology Research annual meeting. Minneapolis, MN. June 2019.

Prenatal urinary oxidative stress biomarkers and preterm birth. Selected talk; Society for Epidemiologic Research annual meeting. Minneapolis, MN. June 2019.

Environmental phthalate exposure and preterm birth in the Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) birth cohort. Selected talk; International Society for Environmental Epidemiology Conference. Utrecht, the Netherlands. August 2019.

Looking for meaning in chemical mixtures analyses: Three examples from studies of phthalate exposure in pregnancy. Invited seminar; Environmental and Occupational Epidemiology Seminar, Chapel Hill, NC. November 2019.

Organophosphate pesticide exposure and other chemical mixtures in association with ultrasound and delivery measures of fetal growth. Invited seminar; University of North Carolina Center for Environmental Health and Susceptibility seminar, Chapel Hill, NC. December 2019.

2020

Looking for meaning in chemical mixtures analyses: Three examples from studies of phthalate exposure in pregnancy. Invited seminar; ISGlobal, Barcelona, Spain. *Presented over webinar due to COVID-19.* April 2020.

Virtual Graduation, Department of Environmental Health Sciences, University of Michigan School of Public Health. Keynote address; Ann Arbor, MI. *Presented over webinar due to COVID-19.* May 2020.

Looking for meaning in chemical mixtures analyses: Three examples from studies of phthalate exposure in pregnancy. Invited seminar; RECETOX Seminar Series, Masaryk

University, Brno, Czech Republic. *Presented over webinar due to COVID-19.* November 2020.

Fetal growth trajectories among SGA newborns and child neurodevelopment. Selected talk; Society for Pediatric and Perinatal Research Annual Meeting. *Presented over webinar due to COVID-19.* December 2020.

2021

Phthalate exposure and preterm birth: recent findings and future directions. Invited webinar; Collaborative on Health and the Environment. February 2021.

Looking for meaning in chemical mixtures analyses: Three examples from studies of phthalate exposure in pregnancy. Invited seminar; NIEHS T32 Training Program in Environmental Health Sciences at the University of California, Davis. *Presented over webinar due to COVID-19.* May 2021.

Phthalate exposure and preterm birth: Findings from a pooled study of 16 US cohorts. Invited seminar; Health Canada, Ottawa, ON, Canada. *Presented over webinar due to COVID-19.* October 2021.

Phthalate exposure and preterm birth: Findings from a pooled study of 16 US cohorts. Invited seminar; Duke University Children's Health Discovery Initiative Great Minds Think for Kids seminar series, Durham, NC. *Presented over webinar due to COVID-19.* October 2021.

2022

Phthalate exposure and preterm birth: Findings from a pooled study of 16 US cohorts. Invited seminar; University of Pennsylvania Center of Excellence in Environmental Toxicology seminar series, Philadelphia, PA. *Presented over webinar due to COVID-19.* January 2022.

Phthalate exposure and preterm birth: Findings from a pooled study of 16 US cohorts. Invited webinar; International Society for Environmental Epidemiology North America Chapter. February 2022.

Phthalates and preterm birth: A pooled analysis of 16 US cohorts. Invited webinar; TIDES webinar series. June 2022.

Oxidative Stress as a Pathway Linking Diet and Child Neurodevelopment: The Promises and the Problems. Invited webinar; NIEHS Workshop: Can Nutrition Modify the Impact of Environmental Exposures on Autism Spectrum Disorder? June 2022.

Race Differences in Phthalate Exposure and Consequent Risk of Preterm Birth: Findings from Sixteen US Cohorts. Invited talk; Birth Defects Research and Prevention Annual Meeting. Vancouver, British Columbia, Canada. *Presented over webinar due to COVID-19.* June 2022.

Disentangling Heterogeneous Outcomes to Better Understand Environmental Impacts on Pregnancy and Child Health. Invited talk; National Academies of Science, Engineering and Medicine Workshop: Children's Environmental Health: A Workshop on Future Priorities for Environmental Health Sciences. Virtual workshop. August 2022.

Phthalate exposure and preterm birth: Insights from a pooled study of U.S. cohorts. Invited talk; Harvard Newborn Health Services and Epidemiology Seminar Series. Virtual seminar. September 2022.

Developmental exposures to EDCs: recent findings and ongoing challenges. Invited keynote; EDC-North Carolina Working Group Third Annual Scientific Meeting. Raleigh, NC. September 2022.

Phthalate exposure and preterm birth: a pooled analysis of 16 US cohorts. Invited seminar; Uterine Biology Workshop. Virtual seminar. November 2022.

Phthalates and preterm birth: a pooled analysis of 16 US cohorts. Invited seminar; Branch seminar series, Assessment Branch 6, Existing Chemicals Risk Assessment Division, US Environmental Protection Agency. Virtual seminar. November 2022.

Hypothetical interventions to reduce racial and ethnic disparities in phthalate exposure and the impact on preterm birth. Invited webinar; Society for Pediatric and Perinatal Epidemiologic Research webinar series. Virtual seminar. November 2022.

Phthalates and preterm birth: a pooled analysis of 16 US cohorts. Invited seminar; Reproductive and Developmental Biology Laboratory. Durham, NC. November 2022.

Prenatal exposure to phthalates, bisphenol, and organophosphate pesticide mixtures and fetal growth. Invited webinar; ATHLETE-HEAL webinar series. Virtual seminar. December 2022.

2023

Racial and ethnic disparities in phthalate exposure and preterm birth: A pooled study of 16 US cohorts. Invited talk; 169th meeting of the National Advisory Environmental Health Sciences Council. June 2023.

Trajectories of fetal growth: A tool for identifying fetal growth restriction? Selected talk as part of a submitted symposium; Society for Pediatric and Perinatal Epidemiologic Research annual meeting. June 2023.

2024

Phthalates and preterm birth: A pooled analysis of 16 US cohorts. Invited talk; NIH Director's Seminar Series. February 2024.

Answering the questions we care about: application of mixtures methods in the study of chemical exposures and early life growth. Invited talk; University of Copenhagen, Center for Health and Society, Section of Epidemiology. September 2024.

The path to the Generation R Metabolomics study. Invited talk; Erasmus MC, Rotterdam, the Netherlands. October 2024.

Research Papers in Peer-reviewed Journals

1. Horner BM, Eberlin KR, **Ferguson KK**, Hirsh EL, Randolph MA, Butler PE. Recipient damage after musculocutaneous transplant rejection. *Transplantation* 2008; 86(8):1104-10. PMID: 18946349.
2. Horner BM, Randolph MA, Duran-Struuck R, Hirsh EL, **Ferguson KK**, Teague AG, Butler PE, Huang CA. Induction of tolerance to an allogeneic skin flap transplant in a preclinical large animal model. *Transplant Proc* 2009; 41(2):539-41. PMID: 19328921. PMCID: 2796481.
3. Horner BM, **Ferguson KK**, Randolph MA, Spencer JA, Carlson AL, Hirsh EL, Lin CP, Butler PE. In vivo observations of cell trafficking in allotransplanted vascularized skin flaps and conventional skin grafts. *J Plast Reconstr Aesthet Surg* 2010; 63(4):711-9. PMID: 19324598. PMCID: 2796481.
4. Duran-Struuck R, Cho PS, Teague AG, Fishman B, Fishman AS, Hanekamp JS, Moran SG, Wikiel KJ, **Ferguson KK**, Lo DP, Duggan M, Arn JS, Billiter B, Horner B, Houser S, Yeap BY, Westmoreland SV, Spitzer TR, McMorrow IM, Sachs DH, Bronson RT, Huang CA. Myelogenous leukemia in adult inbred MHC-defined miniature swine: a model for human myeloid leukemias. *Vet Immunol Immunopathol* 2010; 135(3-4): 243-56. PMID:

20079939. PMCID: 2879595.
5. Sutanto MM, **Ferguson KK**, Sakuma H, Ye H, Brady MJ, Cohen RN. The silencing mediator of retinoid and thyroid hormone receptors (SMRT) regulates adipose tissue accumulation and adipocyte insulin sensitivity in vivo. *J Biol Chem* 2010; 285(24):18485-95. PMID: 20371609. PMCID: 2881774.
 6. Lutton BV, Cho PS, Hirsh EL, **Ferguson KK**, Teague AG, Hanekamp JS, Chi N, Goldman SN, Messina DJ, Houser S, Yeap BY, Popma SH, Sachs DH, Huang CA. Approaches to avoid immune responses induced by repeated subcutaneous injections of allogeneic umbilical cord tissue-derived cells. *Transplantation* 2010; 90(5):494-501. PMID: 21451445. PMCID: 3740357.
 7. **Ferguson KK**, Loch-Caruso R, Meeker JD. Urinary phthalate metabolites in relation to biomarkers of inflammation and oxidative stress: NHANES 1999-2006. *Environ Res* 2011; 111(5):718-26. PMID: 21349512. PMCID: 3110976.
 8. Meeker JD, **Ferguson KK**. Relationship between urinary phthalate and bisphenol A concentrations and serum thyroid measures in U.S. adults and adolescents from the National Health and Nutrition Examination Survey (NHANES) 2007-2008. *Environ Health Perspect* 2011; 119(10):1396-402. PMID: 21749963. PMCID: 3230451. **NIEHS Extramural Paper of the Month.**
 9. **Ferguson KK**, Loch-Caruso RK, Meeker J. Exploration of oxidative stress and inflammatory markers in relation to urinary phthalate metabolites: NHANES 1999-2006. *Environ Sci Technol* 2011; 46(1):477-85. PMID: 22085025. PMCID: 3230451.
 10. **Ferguson KK**, Hauser R, Altshul L, Meeker JD. Serum concentrations of PCBs and reproductive hormones among men of reproductive age. *Reprod Toxicol* 2012; 34(3):429-35. PMID: 22564984. PMCID: 3419818.
 11. Benedict MD, Missmer SA, **Ferguson KK**, Vitonis AF, Cramer DW, Meeker JD. Secondhand tobacco smoke exposure is associated with prolactin but not thyroid stimulating hormone among nonsmoking women seeking in vitro fertilization. *Environ Toxicol Pharmacol* 2012; 34(3):761-7. PMID: 23046534. PMCID: 3514562.
 12. Koeppe ES, **Ferguson KK**, Colacino JA, Meeker JD. Relationships between urinary triclosan and paraben concentrations and serum thyroid measures in NHANES 2007-2008. *Sci Total Environ* 2013; 34(3):299-305. PMID: 23340023. PMCID: 3572338.
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