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	Post-doctoral 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-date	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 Gillings School of Public Health, Chapel Hill, NC
2018-date	Adjunct appointment, Curriculum in Toxicology, University of North Carolina, Chapel Hill, 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 Extramural Paper of the Month (N=3, Meeker and Ferguson 2011, Ferguson et al. 2014, Ferguson et al. 2019)
NIEHS Extramural Paper of the Year (N=1, Ferguson et al. 2014*)*
NIEHS Intramural Paper of the Month (N=7, Ferguson et al. 2017, Muñoz et al. 2018, Kim et al. 2018, van 't Erve et al. 2019, Ferguson et al. 2019, Ferguson et al. 2019, Welch et al. 2020)
NIEHS Cross-divisional funding award, *Characterizing preeclampsia by race/ethnicity: Urinary biomarker and emerging/legacy phthalate exposure relationship*. (120k)

Memberships

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

Research Interests

Environmental chemical exposure assessment; fetal growth; preterm birth; chemical exposures mixtures; phenotyping adverse pregnancy outcomes; biomarkers of inflammation and oxidative stress; developmental origins of disease; placental development; 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. This is a case-cohort study 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. Role: PI. ZIA-ES103321.

The Generation R birth cohort as an NIEHS resource. 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. Role: PI. ZIA-ES101575.

Environmental phthalate exposures in pregnancy in relation to fetal and placental development. This study is a collaboration with an NICHD-funded Human Placenta Project cohort (PI: Alfred Abuhamad) in which we are collecting urine specimens at 8 visits during pregnancy that coincide with ultrasound measurements that capture novel information on development of the fetus and placenta. Role: PI.

Previous Studies with NIEHS Intramural Funding

Phthalate and stressful life event exposures and pregnancy outcomes: the role of oxidative stress. 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. Role: PI. ZIA-ES103313.

Oxidative stress as a mediator of environmental exposure impacts on fertility endpoints. 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. Role: PI. ZIA-ES103314.

Current Trainees

Barrett Welch, PhD (NIEHS IRTA postdoctoral fellow 2019-present)
Mentoring role: Primary mentor

Paige Bommarito, PhD (NIEHS IRTA postdoctoral fellow 2020-present)
Mentoring role: Primary mentor

Danielle Stevens, PhD (NIEHS IRTA postdoctoral fellow 2021-present)
Mentoring role: Primary mentor

Emma Rosen, MPH (NIEHS Research assistant 2017-2019, pre-doctoral fellow 2021-)
Mentoring role: Co-mentor for dissertation research
Current position: PhD student in Epidemiology, University of North Carolina Gillings School of Public Health

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, University of North Carolina Gillings School of Public Health
Mentoring role: Primary mentor for summer research project

Ellie Lan, MS (MS student 2016-2018, no NIEHS affiliation)
Statistics, University of North Carolina
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

Antti Impinen, PhD (NIEHS Postdoctoral fellow 2016-2017)
Mentoring role: Co-mentor for post-doctoral fellowship

Maria Isabel Guadalupe Muñoz, MPH (NIEHS summer fellow 2017)
Mentoring role: Primary mentor for summer research project and Master's thesis

Stephanie Eick, MPH, PhD (NIEHS summer fellow 2017)
Mentoring role: Primary mentor for summer research project

Paige Bommarito, PhD (NIEHS summer fellow 2018)
Environmental Sciences and Engineeering, University of North Carolina Gillings School of Public Health
Mentoring role: Primary mentor for summer research project and dissertation committee member

Erin Sley, MPH (NIEHS summer fellow 2018)
Maternal and Child Health, University of North Carolina Gillings School of 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

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: Epidemiologist, Nationwide Children's Hospital

Olufunmilayo Arogbokun, MPH (NIEHS summer fellow and special volunteer 2019)
Epidemiology, University of North Carolina Gillings School of Public Health
Mentoring role: Primary mentor for summer internship and independent study

Angel Davalos, PhD (NIEHS IRTA postdoctoral fellow 2019-present)
Mentoring role: Co-mentor with Dr. Shanshan Zhao (Biostatistics and Computational Biology Branch)
Current position: NIEHS post-doctoral fellow (Zhao)

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 Public Health
EPID/MCH 851: Introduction to Reproductive, Perinatal, and Pediatric Epidemiology. Guest lectures 2016-2020
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
EPID 785: Environmental Epidemiology. Guest lecture 2020, 2021

Nicholas School of the Environment, Duke University
ENV 357: Environmental Health, Guest lectures 2018-2021

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 lecture 2021

Other
ISEE Student and New Researcher Network webinar (2016)
Agency for Toxic Substances and Disease Registry webinar (2018)

Dissertation or Thesis Committees: Former

Dongyu Zhang, University of North Carolina Gillings School of 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, University of North Carolina Gillings School of 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, University of North Carolina Gillings School of 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, University of North Carolina Gillings School of 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)

Professional Activities

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

PROTECT Training Core External Advisory Board, 2018-present
Current Epidemiology Reports, Reproductive Epidemiology section editor 2019-present
International Journal of Environmental Research and Public Health section editor 2020-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)
Environmental Research (Editorial Board Member)
Environment International
Epidemiology
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

Search committee – Biostatistics and Computational Biology Branch, 2017
Organizer, Epidemiology Branch External Seminar Series, 2016-2018
Organizer, Tenure Track Retreat, 2019
Assembly of Scientists Council, 2018-2019
Search committee – Metabolomics Staff Scientist, 2018-2020
Search committee – Director, Division of Population Health Research, NICHD, 2020

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 Jainero, 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. May 2021.

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. NIEHS Extramural Paper of the Month, August 2011. PMID: 21749963. PMCID: 3230451.

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.

13. Meeker JD, Cantonwine DE, Rivera-González LO, **Ferguson KK**, Mukherjee B, Calafat AM, Ye X, Anzalota Del Toro LV, Crespo-Hernández N, Jiménez-Vélez B, Alshawabkeh AN, Cordero JF. Distribution, variability, and predictors of urinary concentrations of phenols and parabens among pregnant women in Puerto Rico. Environ Sci Technol 2013; 47(7):3439-47. PMID: 23469879. PMCID: 3638245.

14. **Ferguson KK**, O'Neill MS, Meeker JD. Environmental contaminant exposures and preterm birth: a comprehensive review. J Toxicol Environ Health B Crit Rev 2013; 16(2):69-113. PMID: 23682677. PMCID: 3889157.

15. Sun Z, Tao Y, Li S, **Ferguson KK**, Meeker JD, Park SK, Batterman SA, Mukherjee B. Statistical strategies for constructing health risk models with multiple pollutants and their interactions: possible choices and comparisons. Environ Health 2013; 12(1):85. PMID: 24093917. PMCID: 2857674.

16. Cantonwine DE, Cordero JF, Rivera- González LO, Anzalota Del Toro LV, **Ferguson KK**, Mukherjee B, Calafat AM, Crespo N, Jiménez-Vélez B, Padilla IY, Alshawabkeh AN, Meeker JD. Urinary phthalate metabolite concentrations among pregnant women in Northern Puerto Rico: Distribution, temporal variability, and predictors. Environ Int 2013; 62:1-11. PMID: 24161445. PMCID: 3874859.

17. **Ferguson KK**, McElrath TF, Meeker JD. Environmental phthalate exposure and preterm birth. JAMA Pediatrics 2014; 168(1):61-7. PMID: 24247736. PMCID: 4005250. Commentary: Swan SH. Environmental phthalate exposure and the odds of preterm birth: an important contribution to environmental reproductive epidemiology, 14-5. NIEHS Extramural Paper of the Month, January 2014; NIEHS Extramural Paper of the Year, January 2015.

18. Colacino JA, Arthur AE, **Ferguson KK**, Rozek LS. Dietary antioxidant and anti-inflammatory intake modifies the effect of cadmium exposure on markers of systemic inflammation and oxidative stress. Environ Res 2014; 131:6-12. PMID: 24607659. PMCID: 4057047.

19. **Ferguson KK**, Cantonwine DE, Rivera-González LO, Loch-Caruso R, Mukherjee B, Anzalota Del Toro L, Jimenez-Velez B, Calafat A, Ye X, Alshawabkeh A, Cordero J, Meeker JD. Urinary phthalate metabolite associations with biomarkers of inflammation and oxidative stress across pregnancy in Puerto Rico. Environ Sci Technol 2014; 48(12):7018-25. PMID: 24845688. PMCID: 4066910.

20. **Ferguson KK**, McElrath TF, Ko Y, Mukherjee B, Meeker JD. Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth. Environ Int 2014; 70:118-24. PMID: 24934852. PMCID: 4104181.

21. **Ferguson KK**, Peterson KE, Lee JM, Mercado-García, Goldenberg CB, Téllez-Rojo MM, Meeker JD. Prenatal and peripubertal phthalates and BPA in relation to sex hormones and puberty in boys. Reprod Toxicol 2014; 47:70-6. PMID: 24945889. PMCID: 4117729.

22. **Ferguson KK**, McElrath TF, Chen YH, Mukherjee B, Meeker JD. Longitudinal profiling of inflammatory cytokines and C-reactive protein during uncomplicated and preterm pregnancy. Am J Reprod Immunol 2014; 72(3):326-36. PMID: 24807462. PMCID: 4573571.

23. Meeker JD, **Ferguson KK**. Urinary phthalate metabolites are associated with decreased serum testosterone in men, women and children from NHANES 2011-2012. J Clin Endocrinol Metab 2014; 99(11):4346-52. PMID: 25121464. PMCID: 4223430.

24. Watkins DJ, Téllez-Rojo MM, **Ferguson KK,** Lee JM, Solano-Gonzalez M, Blank-Goldenberg C, Peterson KE, Meeker JD. In utero and peripubertal exposure to phthalates and BPA in relation to female sexual maturation. Environ Res 2014; 134:233-41. PMID:

25173057. PMCID: 4262586.

25. **Ferguson KK**, McElrath TF, Chen YH, Mukherjee B, Meeker JD. Urinary phthalate metabolites and biomarkers of oxidative stress in pregnant women: a repeated measures analysis. Environ Health Perspect 2015; 123(3):210-6. PMID: 25402001. PMCID: 4348741.

26. **Ferguson KK**, McElrath TF, Chen YH, Mukherjee B, Loch-Caruso R, Meeker JD. Repeated measures of urinary oxidative stress biomarkers during pregnancy and preterm birth. Am J Obstet Gynecol 2015; 212(2):208.e1-8. PMID: 25111586. PMCID: 4312513.

27. Watkins DJ, **Ferguson KK**, Anzalota Del Toro LV, Alshawabkey AN, Cordero JF, Meeker JD. Associations between urinary phenol and paraben concentrations and markers of oxidative stress and inflammation among pregnant women in Puerto Rico. Int J Hyg Environ Health 2015; 218(2):212-9. PMID: 25435060. PMCID: 4323928.

28. Johns LE, **Ferguson KK**, Soldin OP, Cantonwine DE, Rivera-Gonzalez LO, Anzalota Del Toro LV, Calafat AM, Ye X, Alshawabkeh AN, Cordero JF, Meeker JD. Urinary phthalate metabolites in relation to maternal thyroid and sex hormone levels during pregnancy. Reprod Biol Endocrinol 2015; 13(1):4. PMID: 25596636. PMCID: 4326411.

29. Chen YH*, **Ferguson KK***, Meeker JD, McElrath TF, Mukherjee B. Statistical methods for modeling repeated measures of maternal environmental exposure biomarkers during pregnancy in association with preterm birth. Environ Health 2015; 14(1):9. PMID: 25619201. PMCID: 4417225. *Note: These authors contributed equally to this manuscript.

30. **Ferguson KK**, McElrath TF, Mukherjee B, Meeker JD. Phthalate metabolites and bisphenol-A in association with circulating biomarkers of placental function across pregnancy. Placenta 2015; 36(6):699-703. PMID: 25913709. PMCID: 4441857.

31. Cantonwine DE, **Ferguson KK**, McElrath TF, Mukherjee B, Meeker JD. Urinary bisphenol A levels during pregnancy and the risk of preterm birth. Environ Health Perspect 2015; 123(9):895-901. PMID: 25815860. PMCID: 4559950.

32. **Ferguson KK**, McElrath TF, Mukherjee B, Loch-Caruso R, Meeker JD. Associations between maternal biomarkers of phthalate exposure and inflammation using repeated measurements across pregnancy. PLoS One 2015; 10(8):e0135601. PMID: 26317519. PMCID: 4552851.

33. Cantonwine DE, Meeker JD, **Ferguson KK**, Mukherjee B, Hauser R, McElrath TM. Urinary concentrations of bisphenol A and phthalate metabolites measured during pregnancy and risk of preeclampsia. Environ Health Perspect 2015; 123(9):895-901. PMID: 27177253. PMCID: 5047771.

34. Watkins D, Peterson KE, **Ferguson KK**, Mercado-Garcia A, Cantoral A, Meeker JD, Tellez-Rojo MM. Relating phthalate and BPA exposure to metabolism in peripubescence: the role of exposure timing, sex, and puberty. J Clin Endocrinol Metab 2016; 101(1):79-88. PMID: 26529628. PMCID: 4701847.

35. Cantonwine DE, **Ferguson KK**, Mukherjee B, Chen YH, Smith NA, Robinson JN, Doubilet PM, Meeker JD, McElrath TF. Utilizing longitudinal measures of fetal growth to create a standard method to assess the impacts of maternal disease and environmental exposure. PLoS One 2016; 11(1):e0146532. PMID: 26731406. PMCID: 4701464.

36. James-Todd TM, Meeker JD, Huang T, Hauser R, Seely EW, **Ferguson KK**, Rich-Edwards JW, McElrath TF. Racial and ethnic changes in phthalate metabolite concentration changes across full-term pregnancies. J Expo Sci Environ Epidemiol 2017; 27(2):160-6. PMID: 26860587. PMCID: 4980273.

37. **Ferguson KK**, Colacino JA, Lewis RC, Meeker JD. Personal care product use among

adults in NHANES: associations between urinary phthalate metabolites and phenols and use of mouthwash and sunscreen. J Expo Sci Environ Epidemiol 2017 27(3):326-332. PMID: 27168391.

38. Chen YH, Mukherjee B, **Ferguson KK**, Meeker JD, VanderWeele TJ. Mediation formula for binary outcome and time-varying exposure and mediator accounting for possible exposure-mediator interaction. Am J Epidemiol 2016; 184(2):157-9. PMID: 27325886. PMCID: 4945703.

39. Johns LE, **Ferguson KK**, McElrath TF, Mukherjee B, Meeker JD. Associations between repeated measures of maternal urinary phthalate metabolites and thyroid hormone parameters during pregnancy. Environ Health Perspect 2016; 124(11):1808-15. PMID: 27152641. PMCID: 5089879.

40. Kasper-Cusick N, Peterson KE, Zhang Z, **Ferguson KK**, Sanchez BN, Cantoral A, Meeker JD, Tellez-Rojo MM, Pawlowski CM, Ettinger AS. Association of bisphenol A exposure with breastfeeding and perceived insufficient milk supply in Mexican women. Matern Child Health J 2016; 20(8):1713-9. PMID: 27150949. PMCID: 5241867.

41. **Ferguson KK**, Meeker JD, Cantonwine DE, Chen YH, Mukherjee B, McElrath TF. Urinary phthalate metabolite and bisphenol A associations with ultrasound and delivery indices of fetal growth. Environ Int 2016; 94:531-7. PMID: 27320326. PMCID: 4980186.

42. Venkatesh KK, Cantonwine DE, **Ferguson KK**, Arjona M, Meeker JD, McElrath TF. Inflammatory and oxidative stress markers associated with decreased cervical length in pregnancy. Am J Reprod Immunol 2016; 76(5):376-82. PMID: 27476489.

43. Aker AM, Watkins DJ, Johns LE, **Ferguson KK**, Soldin OP, Anzalota Del Toro LV, Alshawabkeh AN, Cordero JF, Meeker JD. Phenols and parabens in relation to reproductive and thyroid hormones in pregnant women. Environ Res 2016; 151:30-37. PMID: 27448730. PMCID: 5071140.

44. **Ferguson KK**, Chen YH, VanderWeele TJ, McElrath TF, Meeker JD, Mukherjee B. Mediation of the relationship between maternal phthalate exposure and preterm birth by oxidative stress with repeated measurements across pregnancy. Environ Health Perspect 2017 125(3):488-94. PMID: 27352406.

45. James-Todd TM, Meeker JD, Huang T, Hauser R, **Ferguson KK**, Rich-Edwards JW, McElrath TF, Seely EW. Pregnancy urinary phthalate metabolite concentrations and gestational diabetes risk factors. Environ Int 2016; 96:118-26. PMID: 27649471.

46. Johns LE, **Ferguson KK**, Meeker JD. Relationships between Phthalate and Bisphenol A Concentrations and Vitamin D Levels in U.S. Adults. J Clin Endocrinol Metab 2016; 101(11):4062-9. PMID: 27648964.

47. Yuan Y, Meeker JD, **Ferguson KK**. Serum polybrominated diphenyl ether (PBDE) concentrations in relation to biomarkers of oxidative stress and inflammation: The National Health and Nutrition Examination Survey 2003-2004. Sci Tot Environ 2017; 575:400-5. PMID: 27750136.

48. **Ferguson KK**, Cantonwine DE, McElrath TF, Mukherjee B, Meeker JD. Repeated measures analysis of associations between urinary bisphenol-A concentrations and biomarkers of inflammation and oxidative stress in pregnancy. Reprod Toxicol 2016; 66:93-8. PMID: 27751756.

49. **Ferguson KK**, Meeker JD, McElrath TF, Mukherjee B, Cantonwine DE. Repeated measures of inflammation and oxidative stress biomarkers in preeclamptic and normotensive pregnancies. *Am J Obstet Gynecol* 2017; 216(5): 527.e1-527.e9. PMID: 28043842.

50. Johns LE, **Ferguson KK**, McElrath TF, Mukherjee B, Seely EW, Meeker JD. Longitudinal profiles of thyroid hormone parameters in pregnancy and associations with preterm birth. PLoS One 2017; 12(1):e0169542. PMID: 28060899.

51. **Ferguson KK**, McElrath TF, Pace G, Weller D, Zeng L, Pennathur S, Cantonwine DE, Meeker JD. Urinary polycyclic aromatic hydrocarbon metabolite associations with biomarkers of inflammation, angiogenesis, and oxidative stress in pregnant women. Env Sci Technol 2017; 51(8):4652-60. PMID: 28306249. *NIEHS Intramural Paper of the Month.*

52. Aung MT, Johns LE, **Ferguson KK**, Mukherjee B, McElrath TF, Meeker JD. Thyroid hormone parameters during pregnancy in relation to urinary bisphenol A concentrations: A repeated measures study. Environ Int 2017; 104:33-40. PMID: 28410473.

53. Johns LE, **Ferguson KK**, Cantonwine DE, McElrath TF, Mukherjee B, Meeker JD. Urinary BPA and phthalate metabolite concentrations and plasma vitamin D levels in pregnant women: A repeated measures analysis. Environ Health Perspect 2017; 125(8):087026. PMID: 28934718.

54. Bellavia A, Hauser R, Seely EW, Meeker JD, **Ferguson KK**, McElrath TF, James-Todd T. Urinary phthalate metabolite concentrations and maternal weight during early pregnancy. Int J Hyg Environ Health 2017; 220(8):1347-1355. PMID: 28939183.

55. Bedrosian LD, **Ferguson KK**, Cantonwine DE, McElrath TF, Meeker JD. Urinary phthalate metabolite concentrations in relation to levels of circulating matrix metalloproteinases in pregnant women. Sci Total Environ 2018; 613-614:1349-1352. PMID: 28968947.

56. Cathey A, **Ferguson KK**, McElrath TF, Cantonwine DE, Pace G, Alshawabkeh A, Cordero JF, Meeker JD. Distribution and predictors of urinary polycyclic aromatic hydrocarbon metabolites in two pregnancy cohort studies. Environ Pollut 2018; 232:556-62. PMID: 28993025.

57. Johns LA, **Ferguson KK**, Meeker JD, Cantonwine DE, Mukherjee B, McElrath TF. Subclinical changes in maternal thyroid function parameters in pregnancy and fetal growth. J Clin Endocrinol Metab 2018; 103(4):1349-1358. PMID: 29293986.

58. **Ferguson KK**, Meeker JD, Cantonwine DE, Mukherjee B, Pace GG, Weller D, McElrath TF. Environmental phenol associations with ultrasound and delivery measures of fetal growth. Environ Int 2018; 112:243-50. PMID: 29294443.

59. Eick SM, Barrett ES, van 't Erve TJ, Nguyen RHN, Bush NR, Milne G, Swan SH, **Ferguson KK**. Association between prenatal psychological stress and oxidative stress during pregnancy. Paediatr Perinat Epidemiol 2018; 32(4):318-326. PMID: 29603338.

60. Boss J, Zhai J, Aung MT, **Ferguson KK**, Johns LE, McElrath TF, Meeker JD, Mukherjee B. Associations between mixtures of urinary phthalate metabolites with gestational age at delivery: a time to event analysis using summative phthalate risk scores. Environ Health 2018; 17(1):56. PMID: 29925380.

61. **Ferguson KK**, Kamai EM, Cantonwine DE, Mukherjee B, Meeker JD, McElrath TF. Associations between repeated ultrasound measures of fetal growth and biomarkers of maternal oxidative stress and inflammation in pregnancy. Am J Reprod Immunol 2018; 80(4):e13017. PMID: 29984454.

62. **Ferguson KK**, Yu Y, Cantonwine DE, McElrath TF, Meeker JD, Mukherjee B. Foetal ultrasound measurement imputations based on growth curves versus multiple imputation chained equation (MICE). Paediatr Perinat Epidemiol 2018; 32(5):469-473. PMID: 30016545.

63. Rosen EM, Brantsæter AL, Carroll R, Haug LS, Singer AB, Zhao S, **Ferguson KK.** Maternal plasma concentrations of per- and polyfluoroalkyl substances and breastfeeding

duration in the Norwegian Mother and Child Cohort. Environ Epidemiol 2018; 2(3): pii:e027. PMID: 30298140.

64. Muñoz IMG, Colacino JA, Lewis RC, Arthur AE, Meeker JD, **Ferguson KK**. Associations between school lunch consumption and urinary phthalate metabolite concentrations in US children and adolescents: Results from NHANES 2003-2014. Environ Int 2018; 121 (Pt 1):287-95. PMID: 30223205. *NIEHS Intramural Paper of the Month.*

65. Aung MT, **Ferguson KK**, Cantonwine DE, Bakulski KM, Mukherjee B, Loch-Caruso R, McElrath TF, Meeker JD. Longitudinal associations between maternal plasma measurements of inflammatory markers and urinary levels of phenols and parabens during pregnancy. Sci Tot Environ 2019; 10(650 Pt 1):1131-40. PMID: 30308801.

66. Chin HB, Jukic AM, Wilcox AJ, Weinberg CR, **Ferguson KK**, Calafat AM, McConnaughey DR, Baird DD. Association of urinary concentrations of phthalate metabolites and bisphenol A with early pregnancy endpoints. Environ Res 2018; 168:254-60. PMID: 30321738.

67. Kim SS, Meeker JD, Carroll R, Zhao S, Mourgas MJ, Richards MJ, Aung M, Cantonwine DE, McElrath TF, **Ferguson KK**. Urinary trace metals individually and in mixtures in association with preterm birth. Environ Int 2018; 121 (Pt 1):582-90. PMID: 30300816. *NIEHS Intramural Paper of the Month.*

68. Aker AM, **Ferguson KK**, Rosario ZY, Mukherjee B, Alshawabkeh AN, Cordero JF, Meeker JD. The associations between prenatal exposure to triclocarban, phenols and parabens with gestational age and birth weight in northern Puerto Rico. Environ Res 2018; 169:41-51. PMID: 30412856.

69. Rosen EM, van 't Erve TJ, Boss J, Sathyanarayana S, Barrett ES, Nguyen RHN, Bush NR, Milne GL, McElrath TF, Swan SH, **Ferguson KK**. Urinary oxidative stress biomarkers and accelerated time to spontaneous delivery. Free Radic Biol Med 2018; 130:419-25. PMID: 30445128.

70. Aung MT, **Ferguson KK**, Cantonwine DE, McElrath TF, Meeker JD. Preterm birth in relation to the bisphenol replacement, bisphenol S, and other phenols and parabens. Environ Res 2018; 169:131-8. PMID: 30448626.

71. Zhang D, **Ferguson K**, Troester M, Bensen JT, Cai J, Milne GL, Sandler DP, Nichols HB. Tea consumption and oxidative stress: a cross-sectional analysis of 889 premenopausal women from the Sister Study. Br J Nutr 2018; 20:1-23. PMID: 30567620.

72. Venkatesh KK, **Ferguson KK**, Smith NA, Cantonwine DE, McElrath TF. Association of antenatal depression with clinical subtypes of preterm birth. Am J Perinatol 2019 36(6):567-73. PMID: 30551235.

73. Rosen EM, Muñoz MI, McElrath TF, Cantonwine DE, **Ferguson KK**. Environmental contaminants and preeclampsia: a systematic literature review. J Toxicol Environ Health B Crit Rev 2018 21(5):291-319. PMID: 30582407.

74. Shaffer RM, **Ferguson KK**, Sheppard L, James-Todd T, Butts S, Chandrasekaran S, Swan SH, Barrett ES, Nguyen R, Bush N, McElrath TF, Sathyanarayana S; TIDES Study team. Maternal urinary phthalate metabolites in relation to gestational diabetes and glucose intolerance during pregnancy. Environ Int 2019 123:588-96. PMID: 30622083.

75. Impinen A, Longnecker MP, Nygaard UC, London SJ, **Ferguson KK**, Haug LS, Granum B. Maternal levels of perfluoroalkyl substances (PFASs) during pregnancy and childhood allergy and asthma related outcomes and infections in the Norwegian Mother and Child (MoBa) cohort. Environ Int 2019 124:462-72. PMID: 30684804.

76. Noor N, **Ferguson KK**, Meeker JD, Seely EW, Hauser R, James-Todd T, McElrath TF.

Pregnancy phthalate metabolite concentrations and infant birth weight by gradations of maternal glucose tolerance. Int J Hyg Environ Health 2019 222(3):395-401. PMID: 30704894.

77. Venkatesh KK, Meeker JD, Cantonwine DE, McElrath TF, **Ferguson KK**. Association of antenatal depression with oxidative stress and impact on spontaneous preterm birth. J Perinatal 2019 39(4):554-62. PMID: 30723278.

78. van 't Erve TJ, Rosen EM, Barrett ES, Nguyen RHN, Sathyanarayana S, Milne GL, Calafat AM, Swan SH, **Ferguson KK**. Phthalates and phthalate alternatives have diverse associations with oxidative stress and inflammation in pregnant women. Environ Sci Technol 2019 53(6):3258-3267. PMID: 30793895. *NIEHS Intramural Paper of the Month.*

79. Aker AM, **Ferguson KK**, Rosario ZY, Mukherjee B, Alshawabkeh AN, Calafat AM, Cordero JF, Meeker JD. A repeated measures study of phenol, paraben, and triclocarban urinary biomarkers and circulating maternal hormones during gestation in the Puerto Rico PROTECT cohort. Environ Health 2019 18(1):28. PMID: 30940137.

80. Kamai EM, McElrath TF, **Ferguson KK**. Fetal growth in environmental epidemiology: mechanisms, limitations, and a review of associations with biomarkers of non-persistent chemical exposures during pregnancy. Environ Health 2019 18(1):43. PMID: 31068204.

81. **Ferguson KK**, Rosario Z, McElrath TF, Vélez Vega C, Cordero JF, Alshawabkeh A, Meeker JD. Demographic risk factors for adverse birth outcomes in Puerto Rico in the PROTECT cohort. PLoS One 2019 14(6):e0217770. PMID: 31194765.

82. **Ferguson KK**, Lan Z, Yu Y, Mukherjee B, McElrath TF, Meeker JD. Urinary concentrations of phenols in association with biomarkers of oxidative stress in pregnancy: Assessment of effects independent of phthalates. Environ Int 2019 131:104903. PMID: 31288179.

83. Boss J, Mukherjee B, **Ferguson KK**, Aker A, Alshawabkeh AN, Cordero JF, Meeker JD, Kim S. Estimating outcome-exposure associations when exposure biomarker detection limits vary across batches. Epidemiology 2019 30(5):746-55. PMID: 31299670.

84. Bommarito PA, Kim SS, Meeker JD, Fry RC, Cantonwine DE, McElrath TF, **Ferguson KK**. Urinary trace metals, maternal circulating angiogenic biomarkers, and preeclampsia: a single-contaminant and mixture-based approach. Environ Health 2019 18(1):63. PMID: 31300062.

85. Eick SM, Meeker JD, Brown P, Swartzendruber A, Rios-McConnell R, Shen Y, Milne GL, Velez-Vega C, Rosario Z, Alshawabkeh A, Cordero JF, **Ferguson KK**. Associations between socioeconomic status, psychosocial stress, and urinary levels of 8-iso-prostaglandin-$F_{2\alpha}$ during pregnancy in Puerto Rico. Free Radic Biol Med 2109 143:95-100. PMID: 31369838.

86. van den Dries MA, Guxens M, Pronk A, Spaan S, El Marroun H, Jusko TA, Longnecker MP, **Ferguson KK**, Tiemeier H. Organophosphate pesticide metabolite concentrations in urine during pregnancy and offspring attention-deficit hyperactivity disorder and autistic traits. Environ Int 2019 131:105002. PMID: 31369979.

87. **Ferguson KK**, van den Dries MA, Gaillard R, Pronk A, Spaan S, Tiemeier H, Jaddoe VWV. Organophosphate pesticide exposure in pregnancy in association with ultrasound and delivery measures of fetal growth. Environ Health Perspect 2019 127(8):87005. PMID: 31419153. *NIEHS Intramural Paper of the Month.*

88. **Ferguson KK**, Rosen EM, Rosario Z, Feric Z, Calafat AM, McElrath TF, Velez Vega C, Cordero JF, Alshawabkeh A, Meeker JD. Environmental phthalate exposure and preterm birth in the PROTECT birth cohort. Environ Int 2019 132:105099. PMID: 31430608. *NIEHS Extramural Paper of the Month.*

89. Chin HB, Jukic AM, Wilcox AJ, Weinberg CR, **Ferguson KK**, Calafat AM, McConnaughey DR, Baird DD. Association of urinary concentrations of early pregnancy phthalate metabolites and bisphenol A with length of gestation. Environ Health 2019 18(1):80. PMID: 31470855.

90. Mulder TA, van den Dries MA, Korevaar TIM, **Ferguson KK**, Peeters RP, Tiemeier H. Organophosphate pesticides exposure in pregnant women and maternal and cord blood thyroid hormone concentrations. Environ Int 2019 132:105124. PMID: 31479957.

91. Carroll R, White AJ, Keil AP, Meeker JD, McElrath TF, Zhao S, **Ferguson KK**. Latent classes for chemical mixtures analyses in epidemiology: an example using phthalate and phenol exposure biomarkers in pregnant women. J Expo Sci Environ Epidemiol 2019 30(1):149-59. PMID: 31636370.

92. **Ferguson KK**, Rosen EM, Barrett ES, Nguyen RHN, Bush N, McElrath TF, Swan SH, Sathyanarayana S. Joint impact of phthalate exposure and stressful life events in pregnancy on preterm birth. Environ Int 2019 133(Pt B):105254. PMID: 31675562. *NIEHS Intramural Paper of the Month.*

93. Kim SS, Meeker JD, Keil AP, Aung MT, Bommarito PA, Cantonwine DE, McElrath TF, **Ferguson KK**. Exposure to 17 trace metals in pregnancy and associations with urinary oxidative stress biomarkers. Environ Res 2019 133 (Pt B):108854. PMID: 31678726.

94. Eick SM, **Ferguson KK**, Milne GL, Rios-McConnell R, Velez-Vega C, Rosario Z, Alshawabkeh A, Cordero JF, Meeker JD. Repeated measures of urinary oxidative stress biomarkers and preterm birth in Puerto Rico. Free Radic Biol Med 2020 146:299-305. PMID: 31704372.

95. Ingle ME, Watkins D, Rosario Z, Velez Vega CM, Calafat AM, Ospina M, **Ferguson KK**, Cordero JF, Alshawabkeh A, Meeker JD. An exploratory analysis of urinary organophosphate ester metabolites and oxidative stress among pregnant women in Puerto Rico. Sci Tot Environ 2019 703:134798. PMID: 31726298.

96. Aung MT, **Ferguson KK**, Cantonwine DE, Zeng L, McElrath TF, Pennathur S, Mukherjee B, Meeker JD. Prediction and associations of preterm birth and its subtypes with eicosanoid enzymatic pathways and inflammatory markers. Sci Reports 2019 9(1):17049. PMID: 31745121.

97. Aung MT, Meeker JD, Boss J, Bakulski KM, Mukherjee B, Cantonwine DE, McElrath TF, **Ferguson KK**. Manganese is associated with increased plasma interleukin-1B during pregnancy, within a mixtures analysis framework of urinary trace metals. Reprod Toxicol 2020 93:43-53. PMID: 31881266.

98. Rosen EM, Mínguez-Alarcón L, Meeker JD, Williams PL, Milne GL, Hauser R, **Ferguson KK**; EARTH Study Team. Urinary oxidative stress biomarker levels and reproductive outcomes among couples undergoing fertility treatments. Hum Reprod 2019 34(12):2399-2409. PMID: 31887223.

99. Mendy A, Salo PM, Wilkerson J, Feinstein L, **Ferguson KK**, Fessler MB, Thorne PS, Zeldin DC. Association of urinary levels of bisphenols F and S used as bisphenol A substitutes with asthma and hay fever outcomes. Environ Res 2020 183:108944. PMID: 31911000.

100. Eick SM, Meeker JD, Swartzendruber A, Rios-McConnell R, Brown P, Vélez-Vega C, Shen Y, Alshawabkeh AN, Cordero JF, **Ferguson KK**. Relationships between psychosocial factors during pregnancy and preterm birth in Puerto Rico. PLoS One 2020 15(1):e0227976. PMID: 31995596.

101. Kim SS, Meeker JD, Aung MT, Yu Y, Mukherjee B, Cantonwine DE, McElrath TF, **Ferguson KK**. Urinary trace metals in association with fetal ultrasound measures during

pregnancy. Environ Epidemiol 2020 4(2):pii: e075. PMID: 32201854.

102. Clinton CM, Bain JR, Muehlbauer MJ, Li Y, Li L, O'Neal SK, Hughes BL, Cantonwine DE, McElrath TF, **Ferguson KK**. Non-targeted urinary metabolomics in pregnancy and associations with fetal growth restriction. Sci Rep 2020 10(1):5307. PMID: 32210262.

103. Keil AP, Buckley JP, O'Brien KM, **Ferguson KK**, Zhao S, White AJ. A quantile-based g-computation approach to addressing the effects of exposure mixtures. Environ Health Perspect 2020 128(4):47004. PMID: 32255670.

104. van den Dries MA, Guxens M, Spaan S, **Ferguson KK**, Philips E, Santos S, Jaddoe VWV, Ghassabian A, Trasande L, Tiemeier H, Pronk A. Phthalate and bisphenol exposure during pregnancy and offspring nonverbal IQ. Environ Health Perspect 2020 128 (7):77009. PMID: 32716663.

105. Welch BM, Keil AP, van 't Erve TJ, Deterding LF, Williams JG, Lih FB, Cantonwine DE, McElrath TF, **Ferguson KK**. Longitudinal profiles of plasma eicosanoids during pregnancy and size for gestational age at delivery: A nested case-control study. PLoS Med 2020 17(8):e1003271. PMID: 32797061. *NIEHS Intramural Paper of the Month and Year.*

106. van den Dries MA, Lamballais S, El Marroun H, Pronk A, Spaan S, **Ferguson KK**, Longnecker MP, Tiemeier H, Guxens M. Prenatal exposure to organophosphate pesticides and brain morphology and white matter microstructure in preadolescents. Environ Res 2020 191:110047. PMID: 32805249.

107. Rommel AS, Milne GL, Barrett ES, Bush NR, Nguyen R, Sathyanarayana S, Swan SH, **Ferguson KK**. Associations between urinary biomarkers of oxidative stress in the third trimester of pregnancy and behavioral outcomes in the child at 4 years of age. Brain Behav Immun 2020 90:272-278. PMID: 32905853.

108. Sley EG, Rosen EM, van 't Erve TJ, Sathyanarayana S, Barrett ES, Nguyen RHN, Bush NR, Milne GL, Swan SH, **Ferguson KK**. Omega-3 fatty acid supplement use and oxidative stress levels in pregnancy. PLoS One 2020 15(10):e0240244. PMID: 33095772.

109. Aung MT, Song Y, **Ferguson KK**, Cantonwine DE, Zeng L, McElrath TF, Pennathur S, Meeker JD, Mukherjee B. Application of an analytical framework for multivariate mediation analysis of environmental data. Nat Commun 2020 11(1):5624. PMID: 33159049.

110. Boyles AL, Beverly BE, Fentone SE, Jackson CL, Jukic AMZ, Sutherland VL, Baird DD, Collman GW, Dixon D, **Ferguson KK**, Hall JE, Martin EM, Schug TT, White AJ, Chandler KJ. Environmental factors involved in maternal morbidity and mortality. J Womens Health (Larchmt) 2021 30(2):245-52. PMID: 33211615.

111. Ashrap P, Watkins DJ, Milne GL, **Ferguson KK**, Loch-Caruso R, Fernandez J, Rosario Z, Velez-Vega CM, Alshawabkeh A, Cordero JF, Meeker JD. Maternal urinary metal and metalloid concentrations in association with oxidative stress biomarkers. Antioxidants 2021 10(1):114. PMID: 33467519.

112. Arogbokun O, Rosen E, Keil AP, Milne GL, Barrett E, Nguyen R, Bush NR, Swan SH, Sathyanarayana S, **Ferguson KK**. Maternal oxidative stress biomarkers in pregnancy and growth from birth to age 6. J Clin Endocrinol Metab 2021 (online ahead of print). PMID: 33524128.

113. Aung MT, Yu Y, **Ferguson KK**, Cantonwine DE, Zeng L, McElrath TF, Pennathur S, Mukherjee B, Meeker JD. Cross-sectional estimation of endogenous biomarker associations with prenatal phenols, phthalates, metals, and polycyclic aromatic hydrocarbons in single-pollutant and mixtures analysis approaches. Environ Health Perspect 2021 129(3): 37007. PMID: 33761273.

114. **Ferguson KK**, Sammallahti S, Rosen E, van den Dries M, Pronk A, Spaan S, Guxens M,

Tiemeier H, Gaillard R, Jaddoe VWV. Fetal growth trajectories among small for gestational age babies and child neurodevelopment. Epidemiology 2021 [accepted].

115. Bommarito PA, Welch BM, Keil AP, Baker GP, Cantonwine DE, McElrath TF, **Ferguson KK**. Prenatal exposure to consumer product chemical mixtures and size for gestational age at delivery. Environ Health 2021 [accepted].

116. Jukic AMZ, Kim SS, Meeker JD, Weiss ST, Cantonwine DE, McElrath TF, **Ferguson KK**. A prospective study of maternal 25-hydroxyvitamin D (25OHD) in the first trimester of pregnancy and second trimester heavy metals levels. Environ Res 2021 [online ahead of print]. PMI: 34022229.

Chapters, Proceedings, Invited Reviews, and Commentaries

1. Meeker JD, **Ferguson KK**. Phthalates: Human exposure and related health effects. 2012. In: *Dioxins and Persistent Organic Pollutants: Health and Toxicity, Third Edition.* Schechter A , ed. John Wiley & Sons, Hoboken, NJ, USA. p. 415-443.

2. Meeker JD, **Ferguson KK**. Male reproductive tract disorders. 2013. In: *Aging and Vulnerability to Environmental Chemicals*; Weiss B, ed. Royal Society of Chemistry, Cambridge, UK. p. 267-292.

3. **Ferguson KK**, Meeker JD. The role of environmental exposures in preterm birth. 2016. In: *Translational Toxicology: Defining a New Therapeutic Discipline*; Hughes C, ed. Springer International Publishing, Switzerland. p. 269-93.

4. **Ferguson KK**, Chin HB. Environmental chemicals and preterm birth: biological mechanisms and the state of the science. Curr Epidemiol Rep 2017; 4(1):56-71. PMID: 28944158.