
EXPERIENCE

National Institute of Environmental Health Sciences, Research Triangle Park, NC
Epidemiology Branch
Tenure Track Investigator
January 2016 – present

University of Michigan School of Public Health, Ann Arbor, MI
Department of Environmental Health Sciences
Research Assistant Professor
May 2015 – December 2015

EDUCATION AND TRAINING

University of Michigan School of Public Health, Ann Arbor MI
Post-doctoral Research Fellow and NIEHS P30 Center Scientist, April 2014 – May 2015

University of California Program for Reproductive Health and the Environment
Reach the Decision Makers Fellow, June 2015 – May 2015

University of Michigan School of Public Health, Ann Arbor MI
PhD, Environmental Health Sciences, May 2014

University of Michigan School of Public Health, Ann Arbor MI
MPH, Occupational and Environmental Epidemiology, May 2011

University of Michigan, Ann Arbor MI
BS, Biopsychology and Cognitive Science, May 2006

RESEARCH EXPERIENCE

University of Michigan School of Public Health, Ann Arbor MI
Research Assistant, Environmental Health Sciences, September 2009 – August 2011

University of Chicago Hospital, Chicago, IL
Research Assistant, Endocrinology Department, August 2008 – August 2009

Massachusetts General Hospital, Boston, MA
Research Assistant, Transplantation Biology Research Center, July 2006 – June 2008

HONORS AND AWARDS

NIEHS Extramural Paper of the Year
Ferguson et al. 2014, *JAMA Pediatrics*, January 2015

NIH Pediatric Loan Repayment Program
September 2014 – September 2016

University of Michigan Rackham Regents' Fellowship
September 2011 – April 2014

Blue Cross Blue Shield of Michigan Foundation Excellence in Student Research Award
Ferguson et al. 2014, *JAMA Pediatrics*, March 2014

NIEHS Extramural Paper of the Month
Ferguson et al. 2014, *JAMA Pediatrics*, January 2014

University of Michigan Risk Science Center Summer Fellowship

May – August 2013

NIOSH Education Research Center Pre-Doctoral Fellowship

September 2011 – August 2012

NIOSH Education Research Center Training Grant

January – April 2011

RESEARCH PROJECT INVOLVEMENT

University of Michigan Environmental Health Sciences Core Center

NIEHS, NIH P30 ES017885. Director: Rita Loch-Caruso

Role: Collaborator, April 2014 – present

Bisphenol A and Phthalate Exposure in Relation to Fetal Growth and Preterm Birth

NIEHS, NIH R01 ES018872, PI: John Meeker

Role: Collaborator, September 2011 – present

Puerto Rico Testsite for Exploring Contamination Threats (PROTECT)

NIEHS, NIH P42 ES017198. PI: Akram Alshwabkeh.

Role: Collaborator, September 2011 – present

Lifecourse Exposures & Diet: Epigenetics, Maturation & Metabolic Syndrome

NIEHS, NIH; US EPA P01 ES022844, PI: Karen Peterson

Role: Collaborator, September 2011 – present

TEACHING ACTIVITIES

University of Michigan School of Public Health

EHS 608: Environmental epidemiology

Guest lecture, Winter 2014, 2015

EHS 675: Advanced exposure assessment

Guest lectures, Winter 2012, 2013, 2014

EHS 504: Genes and the environment

Guest lecture, Winter 2015

University of Michigan

Public Health 305: The Environment and Human Health

Guest lecture, Winter 2014

Environment 310: Environmental chemicals and disease

Guest lectures, Winter 2013, 2014, 2015

Undergraduate Research Opportunity Program (UROP)

Guest lecture, Winter 2013

Mentoring

Lauren Johns, Environmental Health Sciences PhD (expected May 2017)

Thesis: Phthalate exposure during pregnancy in association with maternal thyroid hormone

Ye Yuan, Epidemiology MPH (May 2015)

Thesis: PBDE exposure in association with biomarkers of inflammation and oxidative stress

Erika Koeppe, Environmental Health Sciences MPH (May 2012)

Thesis: Relationship between urinary triclosan and paraben concentrations and serum thyroid measures in NHANES 2007-2008

PEER-REVIEWED PUBLICATIONS

2016

1. 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* [in press].
2. 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.
3. 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.

2015

4. **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.
5. Cantonwine DE, **Ferguson KK**, McElrath TF, Mukherjee B, Meeker JD. Variability of urinary bisphenol-A levels during pregnancy and risk of preterm birth. *Environ Health Perspect* 2015;123(9):895-901.
6. **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.
7. Chen YH*, **Ferguson KK***, Meeker JD, McElrath TF, Mukherjee B. Repeated measures of environmental biomarkers during pregnancy in association with preterm birth: a case-study illustrating statistical methods for examining longitudinal predictors with a binary, non-time varying outcome. *Environ Health* 2015;14(1):9. *Note: These authors contributed equally to this manuscript.
8. 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.
9. 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.
10. **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.
11. **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.

2014

12. 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.
13. 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.
14. **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.
15. **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.
16. **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.
17. **Ferguson KK**, Cantonwine DE, Rivera-González LO, Loch-Carusio 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.
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.
19. **Ferguson KK**, McElrath TF, Meeker JD. Environmental phthalate exposure and preterm birth. *JAMA Pediatrics* 2014;168(1):61-7. 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.*

2013

20. 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.
21. 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.
22. **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.
23. 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.
24. 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.

2012

25. 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.

26. **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.

2011

27. **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.

28. 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.

29. **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.

2010

30. 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.

31. 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.

32. Duran-Struuk 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, McMorroo 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.

33. 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.

2009

34. Horner BM, Randolph MA, Duran-Struuk 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.

2008

35. Horner BM, Eberlin KR, **Ferguson KK**, Hirsh EL, Randolph MA, Butler PE. Recipient damage after musculocutaneous transplant rejection. *Transplantation* 2008;86(8):1104-10.

PEER-REVIEWED BOOK CHAPTERS

36. **Ferguson KK**, Meeker JD. The role of environmental exposures in preterm birth. In:

Translational Toxicology: Defining a New Therapeutic Discipline; Hughes C, ed. [in press].

37. 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.
38. 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.

SUBMITTED MANUSCRIPTS

39. **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.
40. 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 concentrations across the full course of pregnancy.
41. 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.
42. **Ferguson KK**, Cantonwine DE, Mukherjee B, McElrath TF, Meeker JD. Repeated measures analysis of associations between urinary bisphenol-A concentrations and biomarkers of inflammation and oxidative stress in pregnancy.
43. **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.
44. **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.

INVITED TALKS AND OTHER PRESENTATIONS

1. **Ferguson KK**, Meeker JD, Cantonwine DE, Mukherjee B, McElrath TF. Associations between phthalate exposure during pregnancy and fetal growth. Invited talk; International Society for Environmental Epidemiology Conference, Sao Paulo, Brazil. August 2015.
2. **Ferguson KK**, Cantonwine DE, Mukherjee B, McElrath TF, Meeker JD. Associations between urinary bisphenol-A and inflammation and oxidative stress biomarkers in pregnancy. Invited talk; International Society for Environmental Epidemiology Conference, Sao Paulo, Brazil. August 2015.
3. **Ferguson KK**. Environmental phthalate exposure, pregnancy outcomes, and underlying biological pathways. Special seminar; National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina. June 2015.
4. **Ferguson KK**, Johns LE, Cantonwine DE, Mukherjee B, Anzalota Del Toro LV, Alshwabkeh AN, Cordero JF, Meeker JD. Developmental effects of phthalates: what are the mechanisms? Invited talk; Copenhagen Endocrine Disrupters Workshop, Copenhagen, Denmark. April 2015.
5. **Ferguson KK**, Chen Y, McElrath TF, Mukherjee B, Loch-Caruso R, Omenn GS, Rozek LS, Meeker JD. Mediation of the relationship between phthalate exposure and preterm birth by

- oxidative stress. Invited talk; NIEHS Center and Training Directors Meeting, Tucson, AZ, April 2015.
6. **Ferguson KK**, Meeker JD. Phthalate exposure, preterm birth, and potential mechanisms. Invited talk; Phthalate Symposium at Brigham and Women's Hospital, Boston, MA. September 2014.
 7. **Ferguson KK**, McElrath TF, Chen Y, Mukherjee B, Meeker JD. Mediation of the relationship between phthalate exposure and preterm birth by oxidative stress. Invited talk; International Society for Environmental Epidemiology Conference, Seattle, WA. August 2014.
 8. **Ferguson KK**, McElrath TF, Ko Y, Chen Y, Mukherjee B, Meeker JD. Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth. Invited talk; International Society for Environmental Epidemiology Conference, Seattle, WA. August 2014.
 9. **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. Invited talk; Society for Gynecologic Investigation Annual Meeting, Florence, Italy. March 2014.
 10. **Ferguson KK**, Cantonwine DE, Chen Y, Mukherjee B, Doubilet PM, Meeker JD, McElrath TF. A method for examining the longitudinal trends in fetal growth using clinically available data. Poster; Society for Gynecologic Investigation Annual Meeting, Florence, Italy, March 2014.
 11. **Ferguson KK**, McElrath TF, Meeker JD. Environmental phthalate exposure is associated with increased odds of preterm birth. Invited talk; International Society for Environmental Epidemiology Conference, Basel, Switzerland. August 2013.
 12. **Ferguson KK**, McElrath TF, Ko Y, Mukherjee B, Meeker JD. Associations between urinary phthalate metabolites and biomarkers of inflammation and oxidative stress in pregnant women. Invited talk; International Society for Environmental Epidemiology Conference, Basel, Switzerland. August 2013.
 13. **Ferguson KK**, McElrath TF, Meeker JD. Gestational urinary phthalate metabolites in relation to preterm delivery: preliminary findings from a case-control analysis. Poster; Superfund Research Program Annual Meeting, Raleigh, NC. October 2012.
 14. **Ferguson KK** and Meeker JD. Relationships between urinary paraben and triclosan levels and markers of oxidative stress and inflammation. Poster; International Society for Environmental Epidemiology Conference, Columbia, SC. August 2012.
 15. **Ferguson KK**, Loch-Caruso R, Meeker JD. Exploration of oxidative stress and inflammatory markers in relation to urinary phthalate metabolites: NHANES 1999-2006. Invited talk; Superfund Research Program Annual Meeting, Lexington, KY. October 2011.
 16. **Ferguson KK**, Loch-Caruso R, Meeker JD. Exploration of oxidative stress and inflammatory markers in relation to urinary phthalate metabolites: NHANES 1999-2006. Poster; International Society for Environmental Epidemiology Conference, Barcelona, Spain. September 2011.

SERVICE

Professional affiliations

International Society for Environmental Epidemiology, Member 2011-Present.

Journal reviews

Environmental Health Perspectives, Journal of the American Medical Association,

Reproductive Toxicology, Environment International, Environmental Research, Journal of Exposure Science and Environmental Epidemiology, Science of the Total Environment, American Journal of Epidemiology, PLoS One, Environmental Health, Pediatrics, Chemosphere.