

Ketrell L. McWhorter, Ph.D., M.B.A.

111 TW Alexander Drive, Building 101, Room A353
Research Triangle Park, North Carolina 27709
Ketrell.McWhorter@nih.gov
(984) 287-3721

Education

2017	Ph.D.	Epidemiology (Molecular)	University of Cincinnati
2007	M.B.A.	Business Administration	Xavier University
2003	B.B.A.	Finance	University of Cincinnati
1999	B.A.	Sociology	University of Cincinnati

Postdoctoral Training

2017-Present	Intramural Research Training Award Fellow	Epidemiology	National Institute of Environmental Health Sciences (NIEHS)
--------------	--	--------------	--

- Investigating stress, diet and sleep as key modifiable contributors to racial/ethnic disparities in perinatal outcomes (e.g. birthweight, infant mortality and preterm birth) and adult chronic diseases (e.g. obesity and diabetes) using a life-course perspective
- Interested in examining the biological underpinnings of health disparities using ‘-omics’ approaches

Principal Investigator: Dr. Chandra L. Jackson, Ph.D., M.S. – Earl Stadtman Investigator

Other Professional Positions

1/2016-1/2017	Graduate Research Assistant, University of Cincinnati, Department of Environmental Health & Cincinnati Children’s Hospital and Medical Center, Division of Biostatistics and Epidemiology, Diabetes in Pregnancy Program Project
	<ul style="list-style-type: none">- Investigated the relationship between intrauterine exposure to gestational weight gain among mothers with Type I Insulin-Dependent diabetes and adverse birth outcomes in the neonatal period and metabolic outcomes in adolescence and later life
8/2013-12/2015	Graduate Research Assistant, University of Cincinnati, Department of Environmental Health
	<ul style="list-style-type: none">- Cancer Epidemiology – Conducted statistical analysis of pre- and post-hormonal patterns for a cohort of girls with intrauterine and childhood exposure to perfluorooctanoic acid (PFOA) in the Growing Up Female Study; mentored summer intern performing a methodological study on the relationship between fiber intake and pubertal onset- Molecular Epidemiology – Performed data collection, including assay preparation, plating and Digital Droplet PCR for statistical analysis of Head and Neck Squamous Cell Carcinoma prediction in patients

- **Community-based Epidemiology** – Conducted a literature review for a funding request to examine the relationship between psychosocial stress and risk perception of injection wells in a southeastern Ohio area

7/2012-8/2013

Graduate Research Assistant, University of Cincinnati, Department of Research and Graduate Education, Biomedical Sciences Flex Option

- **Neuroscience** - Observed the effect of high-fat diet (HFD) and low-fat diet (LFD) on circadian rhythms of wild type and clock mutant mice; weighed, fed and bled mice; participated in sacrificing and organ retrieval; prepared glucose and assisted a GTT; performed mice checks in free running diet; completed genotyping rPCR plate and routinely ran rPCR
- **Biostatistics** - Contributed to biostatistical consultations with medical students, physicians and researchers; analyzed data from various clinical physicians conducting research
- **Toxicology** - Examined role of long-term exposure to lead (Pb²⁺) on differentiation of embryonic stem (ES) cells into neuronal and glial cells; routinely ran qPCR and developed western blots; cell plating; split ES cells from one plate to 3 plates; mRNA extraction, Reverse Transcription and qPCR

7/2010-5/2012

Microbiology Lab Student Assistant, University of Cincinnati, Department of Biological Sciences

- Assisted in preparing labs for Microbiology, Cellular Structure, and Plant Physiology lab sections, including preparing solutions, pouring agar plates, test tubes and work stations; cleaning and organizing glassware

9/2011-5/2012

Early Intervention Program (EIP) Counselor, University of Cincinnati Hospital, Department of Emergency Medicine

- Screened and tested individuals at risk for HIV infection; provided linkage to care services and informational materials for HIV Risk Reduction

Academic Merit-Based Awards

2017 **Marco Cabrera Poster Award**

National Institute of Diabetes and Digestive and Kidney Disease – Network of Minority Research Investigators

Poster presentation winner for translational research

Journal Reviewer

Journal of General Internal Medicine
Sleep Health
PLOS ONE
BMC Public Health
International Journal of Obesity

Professional Societies

2017-date

Genomics & Health Disparities Interest Group, NIH

Member

Fellowship Awards

Funding period	1/2014 – 1/2017
Project title	The Association Between Gestational Weight Gain and Weight Gain Patterns with Large-for-Gestational Age Outcomes Among Women with Type I Insulin-Dependent Diabetes
Funding source	Molecular Epidemiology in Children's Environmental Health Fellowship (MECEH) University of Cincinnati, PhD Program
Funding level	\$23,000/year
Principal Investigator	Jane C. Khoury, PhD
Program Director	Ranjan Deka, PhD
Research Objectives	1) Examine changing trends in LGA prevalence over 30 years; 2) Examine the relationship between gestational weight gain (GWG) and risk of LGA at birth and determine if patterns of weight gain in early pregnancy more sensitively predict LGA compared to total GWG; and 3) to examine overweight/obesity outcomes among adolescent/adult offspring exposed to hyperglycemic intrauterine environments
Funding period	7/2012 – 8/2013
Funding source	Biomedical Flex Options Rotational Fellowship University of Cincinnati, PhD Program
Funding level	\$22,000/year
Principal Investigator	1) Randy Seeley, PhD, 2) Kim Dietrich, PhD, 3) Alvaro Puga, PhD
Program Director	Robert Highsmith, PhD
Research Objectives	1) Observe the effect of high-fat diet (HFD) and low-fat diet (LFD) on circadian rhythms of wild type and clock mutant mice.; 2) Observe and contribute to biostatistical consultations with medical students, physicians and researchers.; and 3) Determine whether long-term exposure of lead (Pb ²⁺) disrupts the differentiation of embryonic stem (ES) cells into neuronal and glial cells
Funding period	Summer 2011
Project title	Role of Insulin in Hepatic Lipid Disorders
Funding source	Physician Scientist Training Program Fellowship University of Cincinnati, Department of Pathology and Laboratory Medicine
Funding level	\$10,000
Principal Investigator	Anja Jaeschke, PhD
Program Director	Lauran Mayleben
Research Objective	Determined the relationship between insulin modulations and triglyceride accumulation (leading to Non-Alcoholic Fatty Liver Disease) in liver cells
Funding period	Summer 2010
Project title	Role Synthesis of the Photoremovable Protecting Group:(E)-methyl 4-hydroxy-4-(4-methoxy-2,5-dimethylphenyl) but-2-enoate
Funding source	Women In Science & Engineering Program Fellowship University of Cincinnati Department of Chemistry

Funding level \$10,000
Principal Investigator Anna Gudmundsdottir, PhD
Program Director Urmila Ghia, PhD
Research Objective Synthesized a new Photoremovable Protecting Group (PRPG) as well as studied the mechanism for release using laser flash photolysis

Conference Trainings

2016 **Emory Exposome Summer Course, Hercules Center at Emory University, Atlanta, GA, USA**
Comprehensive, interactive and intensive week-long course designed to explore cumulative measures of environmental influences and their relation to disease in later life.

Invited Oral Presentations

2018 **McWhorter K.** Association between gestational weight patterns in early pregnancy and large-for-gestational age infants among women with T1DM. Reproductive and Perinatal Epidemiology seminar. Raleigh, NC. April 20, 2018.

2014 Alexander ES, **McWhorter K.** Public Health in 2014: Outbreak Investigation Simulation. Xavier University, Department of Health Services Administration, Cincinnati, OH. September 24, 2014.

Scientific Oral Presentations

2018 **McWhorter K.** Racial Differences in Traumatic Childhood Experiences and Suboptimal Sleep among Adult Women. 32nd Annual Meeting of the Associated Professional Sleep Societies, LLC. Baltimore, MD. Scheduled for June 4, 2018.

2017 **McWhorter K.** Traumatic Childhood Experiences and Suboptimal Sleep in Adult Women. National Institute of Environmental Health Sciences 15th Annual Science Days. Research Triangle Park, NC. November 2, 2017.

Peer-Reviewed Publications

Original Reports

1. Kawakita T, Bowers K, **McWhorter KL**, Rosen B, Adams M, et al. Characterizing Gestational Weight Gain According to Institute of Medicine Guidelines in Women with Type I Diabetes Mellitus: Association with Maternal and Perinatal Outcome. *American Journal of Perinatology*. 2016; 33(13):1266-1272. [PMID 27398703]
2. **McWhorter KL**, Bowers K, Dolan L, Deka R, Jackson CL, Khoury J. The Impact of Excessive Gestational Weight Gain and Pre-pregnancy Body Mass Index on the Prevalence of Large-for-Gestational Age Infants Among Women with Type I Insulin-Dependent Diabetes: A Cross-Sectional Population Study. *BMJ Open* (in press)

Non-Peer-Reviewed publication

3. Schmidlin K, **McWhorter KL.**, Kelley AL., Levin L, Smith AM. Redefining Total and Peak Ragweed Pollen Season for the Practicing Allergist. *Supplement to Annals of Allergy, Asthma, and Immunology*. 2013;111:A17

Poster Presentations

NATIONAL

1. **McWhorter K**, Parks CL, D'Aloisio AA, Rojo-Wissar DM, Sandler DP, Jackson CL. (2018, June) Traumatic Childhood Experiences, Poor Sleep and Chronic Fatigue Syndrome among Adult Women. 32nd Annual Meeting of the Associated Professional Sleep Societies, LLC. Baltimore, MD.
2. **McWhorter K**, Parks CL, D'Aloisio AA, Rojo-Wissar DM, Sandler DP, Jackson CL. (2018, June) Racial Differences in Traumatic Childhood Experiences and Suboptimal Sleep among Adult Women. 32nd Annual Meeting of the Associated Professional Sleep Societies, LLC. Baltimore, MD.
3. **McWhorter K**, Bowers K, Dolan LM, Jackson CL, Dekka R, Khoury JC. (2017, October) The Impact of Gestational Weight Gain on Overweight and Obesity among Adolescent and Young Adult Offspring of Women with Type I Insulin-Dependent Diabetes: A Pilot Study. The 15th Biennial Meeting of the Diabetes in Pregnancy Study Group of North America. Washington, DC.
4. **McWhorter K**, Bowers K, Dolan LM, Jackson CL, Dekka R, Khoury JC. (2017, June) Impact of Excessive Gestational Weight Gain and Prepregnancy BMI on the Prevalence of Large-for-Gestational-Age Infants in Two Cohorts of Women With Type I Insulin-Dependent Diabetes. American Diabetes Association 77th Scientific Sessions. San Diego, CA.

LOCAL

1. Gaston AS, **McWhorter KL**, Jackson CL. (2018, February) Mono-isobutyl Phthalate Concentrations may Moderate Associations between Birth Weight and Overweight as well as Obesity in U.S. Adolescents. EDC Conference. Research Triangle Park, NC.
2. **McWhorter K**, Parks CL, D'Aloisio AA, Rojo-Wissar DM, Sandler DP, Jackson CL. (2018, February) Racial Differences in Traumatic Childhood Experiences and Suboptimal Sleep among Adult Women. Do early life stressors contribute to epigenetic changes? Center for Human Health and the Environment 2nd Annual Symposium: Epigenetics, Environment, and Human Health. Raleigh, NC.
3. YM Park, Jackson CL, White AJ, **McWhorter KL**, Weinberg CR, DP Sandler. (2017, November) Sleep characteristics and risk of incident metabolic abnormalities in women: findings from the Sister Study. NIEHS 15th Annual Science Days. Research Triangle Park, NC.
4. **McWhorter K**, Bowers K, Dolan LM, Jackson CL, Dekka R, Khoury JC. (2017, April) Impact of Excessive Gestational Weight Gain and Prepregnancy BMI on the Prevalence of Large-for-Gestational-Age Infants in Two Cohorts of Women With Type I Insulin-Dependent Diabetes. National Institute of Diabetes and Digestive and Kidney Disease—Network of Minority Research Investigators. Bethesda, MD.
5. Pinney SM., Windham GC., Herrick R., **McWhorter K**, Xie C, Fassler CS, Hiatt RA, Stewart SL, Kushi LH, Biro FM. (2016, December) Investigating the Relationship between Perfluorooctanoate and Body Mass Index in Young Girls in the Greater Cincinnati and San Francisco Bay Area. NIEHS Environmental Health Science FEST. Durham, NC.

6. Pinney S, **McWhorter K.** (2014, November) Changes in estrogen and other hormones around the time of breast development. Biomedical Sciences Research Day and Graduate Fair, Breast Cancer Symposium. Cincinnati, OH.
7. **McWhorter K,** Gadang V, Jaeschke A. Role of Insulin in Hepatic Lipid Disorders. (2011, September) 2011 Physician Scientist Training Program End of Summer Poster Session. Cincinnati, OH.
8. **McWhorter K,** Li Q, Gudmundsdottir A. (2010, October) Role Synthesis of the PhotoRemovable Protecting Group:(E)-methyl 4-hydroxy-4-(4-methoxy-2,5-dimethylphenyl) but-2-enoate. Oesper Poster Session, University of Cincinnati. Cincinnati, OH.

Academic Teaching Experience (guest lecture unless specified)

- | | | |
|------|---|--|
| 2015 | Introduction to Epidemiology (Teaching Assistant)
Aimin Chen, PhD & Katherine Bowers, PhD
80 students | University of Cincinnati, Department of Environmental Health, Epidemiology, Cincinnati, OH |
| 2015 | Research Methods for Human Population Studies
The Importance the Specific Aims Page in Grant Writing
25 students | University of Cincinnati, Cincinnati, OH |

Academic Community Activities

- | | | |
|------|--|---|
| 2017 | Presenter
Molecular Epidemiology in Children’s Environmental Health Biennial External Advisory Board Meeting | University of Cincinnati, Cincinnati, OH |
| 2013 | Biostatistics Journal Club Leader
Initiated, organized and led the first Biostatistics Journal Club in the Division of Biostatistics and Epidemiology
Faculty Leader: Mario Medvedovic, Ph.D. | University of Cincinnati, Department of of Environmental Health, Cincinnati, OH |

Community Activities

- | | | |
|------------|---|---|
| 2017 | Bennett College Speed Mentoring (20 students) | Mentor, NIEHS, RTP, NC |
| 2016/15 | Alpha Kappa Alpha Sorority, Inc. (Phi Psi Omega Chapter), Achievement, Self-Awareness, Communication, Engagement, Networking and Developmental Skills Program | Session speaker, Xavier University, Cincinnati, OH |
| 2016/15/14 | McNair’s Scholars Symposium | Session speaker, University of Cincinnati, Cincinnati, OH |
| 2015 | Black Family Reunion, Alpha Kappa Alpha Sorority, Inc. – <i>Know Your Body!</i> – 2- Day Kids Fitness Presentation | Session Facilitator, Cincinnati, OH |
| 2013 | STARS Scholars Program | Session speaker, University of |

2013	Environmental Protection Agency (EPA) One-Day	Cincinnati, Cincinnati, OH Speaker for Women in Symposium Science and Engineering (WISE), Cincinnati, OH
2013/11	Women in Science and Engineering (WISE) Graduate Panel	Panel member and Facilitator, University of Cincinnati, Cincinnati, OH
2011 2010	Rockdale Academy Elementary School Career Day Bridging The Gap Panel Discussion	Speaker, Cincinnati, OH Panel member, Community Action Agency, Cincinnati, OH
2010	Aiken College and Career Conference	Speaker, Aiken High School, Cincinnati, OH
2010	University of Cincinnati Hospital Emergency Department	Volunteer, University of Cincinnati Hospital, Cincinnati, OH

Social Media

ResearchGate, <https://www.researchgate.net/home.Home.html>

LinkedIn, www.linkedin.com/pub/ketrell-mcwhorter/8/6b9/131/