

**DESIREE WANDERS**

Department of Nutrition  
Georgia State University  
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Atlanta, GA 30303  
Urban Life Room 876  
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**ACADEMIC TRAINING**

Ph.D., Biomedical Sciences, Auburn University, 2012

M.S., Nutrition, Auburn University, 2008

B.S., Nutrition and Food Science, Auburn University, 2007

- Concentration: Dietetics

**ACADEMIC APPOINTMENTS**

**Associate Professor with Tenure, Department of Nutrition,** Georgia State University, Atlanta, GA  
April 2021-Present

Assistant Professor, Department of Nutrition, Georgia State University, Atlanta, GA  
Aug 2015-Present

Associate Faculty, Neuroscience Institute, Georgia State University, Atlanta, GA  
Apr 2020-Present

Joint Appointment, Department of Biology, Georgia State University, Atlanta, GA  
November 2015-Present

Joint Appointment, Department of Chemistry, Georgia State University, Atlanta, GA  
October 2015-Present

Assistant Professor-Research, Laboratory of Nutritional Physiology, Pennington Biomedical Research Center, Baton Rouge, LA  
Mar 2015-Jul 2015

**ADMINISTRATIVE APPOINTMENTS**

Director, Undergraduate Program  
Department of Nutrition  
Fall 2016-Present

**POST-DOCTORAL TRAINING**

Postdoctoral Fellow, Laboratory of Nutrient Sensing and Adipocyte Signaling, Pennington Biomedical Research Center, Dr. Thomas Gettys

Aug 2012-Feb 2015

Effects of dietary methionine restriction on inter-organ lipid metabolism, insulin sensitivity, and inflammation

## TEACHING EXPERIENCE

Grant Writing (CNHP 8100)  
Georgia State University, Atlanta, GA  
Summer 2019, Summer 2020  
Instructor Evaluation: 4.7; N/A out of 5.0

Senior Seminar (NUTR 4950)  
Georgia State University, Atlanta, GA  
Spring 2016, Spring 2017, Spring 2018, Spring 2020  
Instructor Evaluation: 5.0; 4.7; 5.0; N/A out of 5.0

Energy Metabolism & Obesity (NUTR 4100)  
Georgia State University, Atlanta, GA  
Fall 2017; Fall 2018; Fall 2019; Fall 2020  
Instructor Evaluation: 4.9; 4.8; 5.0; 5.0 out of 5.0

Principles of Nutrition (NUTR 2100)  
Georgia State University, Atlanta, GA  
Spring 2016; Fall 2016 (online); Summer 2017 (online);  
Summer 2018 (online)  
Instructor Evaluation: 4.0; 4.1; 4.5; 4.6 out of 5.0

Micronutrients (NUTR 6700)  
Georgia State University, Atlanta, GA  
Spring 2017, Spring 2018  
Instructor Evaluation: 5.0; 4.9 out of 5.0

Advanced Normal Nutrition (NUTR 6104)  
Georgia State University, Atlanta, GA  
Fall 2016 (flipped classroom); Fall 2017; Fall 2018; Fall 2019; Fall 2020  
Instructor Evaluation: 4.2; 4.8; 4.8; 5.0; 4.95 out of 5.0

Micronutrient Nutrition (NUTR 3700)  
Georgia State University, Atlanta, GA  
Spring 2017, Spring 2018  
Instructor Evaluation: 4.9; 4.6 out of 5.0

Advanced Normal Nutrition: Macronutrients (NUTR 6104)  
Georgia State University, Atlanta, GA  
Fall 2015  
Instructor Evaluation: 4.6 out of 5.0

## ACADEMIC SERVICE

### University-level Service

Senator, Georgia State University

- Member, Senate Research Committee
- Member, Senate Student Discipline Committee

Spring 2019-Present

Member, General Education Task Force  
April 2021-Present

Member, Faculty Board for the Georgia State Undergraduate Research Conference (GSURC)  
Georgia State University  
Fall 2018-Present

### College-level Service

Member, Research Council

July 2020-Present

Member, Search Committee for the Dean of the Lewis College of Nursing and Health Professions  
September 2019-May 2020

Member, Student Services Committee  
Lewis College of Nursing and Health Professions  
Fall 2017-Present

Chair, Research Committee  
Lewis College of Nursing and Health Professions  
Fall 2016-Spring 2020 (Member); Spring 2020-Present (Chair)

Judge, Lewis College Graduate Research Conference  
April 13<sup>th</sup>, 2020

Chair, Lewis College Seminar Series Committee  
Spring 2016

Department-level Service

Member, Curriculum Committee  
Fall 2016-Present

Faculty Advisor to the Nutrition Student Network  
Fall 2017-Present

Liaison to the Honors College  
Spring 2019-Present

Chair, Scholarship Committee  
Spring 2020-Present

Faculty Ambassador to the Neuroscience Institute Brains & Behavior Program  
Spring 2020-Present

Member, Committee for the Doctoral Program in Chemistry with concentration in Nutritional Sciences  
Fall 2015- 2018

Chair, Innovation Fund Committee  
Spring 2016

**STUDENT MENTORING**

Ph.D. Dissertations

Major Professor  
Hannah Land Lail  
June 2020-Present

Qualifying Exam Committee Member  
Maureen Beebe  
October 2019-Present

Dissertation Committee Member  
Siobhan Eze  
May 2017-Present

Dissertation Committee Member  
Rami Najjar  
September 2019-Present

Qualifying Exam Committee Member  
Siobhan Eze  
May 2017-August 2018

M.S. Theses

Thesis Committee Chair  
Marissa Maule  
October 2020-Present

Thesis Committee Chair  
Shaligram Sharma  
December 2015-August 2017

Thesis Committee Chair  
Alyssa Strom  
July 2016-July 2017

Thesis Committee Chair  
Meriah Schoen  
July 2016-June 2017

Thesis Committee Chair  
Taylor Dixon  
January 2016-December 2016

Thesis Committee Member  
Jasmynne Blacks  
January 2021-Present

Thesis Committee Member  
Lena Lear  
January 2021-Present

Thesis Committee Member  
Will Conrad  
November 2019-Present

Thesis Committee Member  
Katherine Hobson  
December 2017-November 2018

Thesis Committee Member  
Chappell (Rebecca) Madhani  
August 2016-December 2017

Thesis Committee Member  
Sarah Cork  
February 2017-June 2017

Thesis Committee Member  
Letal Garber  
August 2015-June 2016

Thesis Committee Member  
Niamh Kearney  
August 2015-June 2016

Thesis Committee Member  
Emily Goodman  
August 2015-June 2016

M.S. Projects

Masters Project Committee Member  
Ansley Fowler  
January 2020-Present

Masters Project Committee Chair  
Kaila Pearson  
April 2018-May 2019

Post-Bac Research

Post-bac Research Chair  
Dominique Hicks  
May 2020-Present

Undergraduate Research

Blakely Stone  
January 2020-January 2021

Kathryn Chiang  
January 2019-May 2020

Emily Price  
November 2019-Present

Anna Atma  
April 2018-March 2019

Hannah Land Lail  
March 2019-May 2020

Sean Jung  
January 2017-December 2018

Patricia Perez  
March 2019-May 2020

## PUBLICATIONS

### Doctoral Dissertation

**Wanders D.** Novel pleiotropic effects of niacin.  
Auburn University Dissertation, Auburn, AL 2012

### Master's Thesis

**Saunders D.** Weight and body composition changes in first semester college freshmen. Auburn University Thesis, Auburn, AL 2008.

### Peer Reviewed Publications

1. Eze SM, Mowa CN, **Wanders D**, Doyle JA, Wong B, Otis JS (2021). Moringa oleifera improves skeletal muscle metabolism and running performance in mice. *BMC Nutrition*. Under Review.
2. Stone KP, Ghosh S, Kovalik JP, Orgeron M, **Wanders D**, Sims L, Gettys TW (2021). The acute transcriptional responses to dietary methionine restriction are triggered by inhibition of ternary complex formation linked to Erk1/2, mTOR, and ATF4. *Scientific Reports*.11(1):3765.
3. Lail HL, Feresin RG, Hicks D, Stone B, Price E, **Wanders D** (2021). Berries as a treatment for obesity-induced inflammation: evidence from preclinical models. *Nutrients*. 13(2):334.
4. Graff EC, Fang H, **Wanders D**, Judd RL (2020). The absence of adiponectin alters niacin's effects on adipose tissue inflammation in mice. *Nutrients*. 12(8):2427.
5. Chan D, Meister M, Madhani C, Elfakhani M, Yount S, Ji X, Feresin R, **Wanders D**, Mo, H (2020). Synergistic Impact of xanthorrhizol and d- $\delta$ -tocotrienol on the proliferation of murine B16 melanoma cells and human DU145 prostate carcinoma cells. *Nutrition and Cancer*. 18:1-12.
6. **Wanders D**, Hobson K, Ji X (2020). Methionine restriction and cancer biology. *Nutrients*. 12:684.
7. Sharma S, Dixon T, Jung S, Graff EC, Forney LA, Gettys TW, **Wanders D** (2019). Dietary methionine restriction reduces inflammation independent of FGF21 action. *Obesity*. 27(8):1305-1313.
8. Hill CM, Laeger T, Dehner M, Albarado DC, Clarke B, **Wanders D**, Burke SJ, Collier J, Qualls-Creekmore E, Solon-Biet S, Simpson SJ, Berthoud H-R, Munzberg H, Morrison CD (2019). FGF21 signals protein status to the brain and adaptively regulates food choice and metabolism. *Cell Reports*. 27(10):2934-2947.
9. Shen C-L, Kaur G, **Wanders D**, Sharma S, Tomison MD, Ramalingam L, Chung E, Moustaid-Moussa N, Mo H, Dufour JM (2018). Annatto-extracted tocotrienols improve glucose homeostasis and bone properties

- in high-fat diet-induced type 2 diabetic mice by decreasing the inflammatory response. *Scientific Reports*. 8(1):11377
10. **Wanders D**, Forney LA, Stone KP, Hasek BE, Johnson WD, Gettys TW (2018). The components of age-dependent effects of dietary methionine restriction on energy balance in rats. *Obesity*. 26(4):740-746.
  11. Forney LA, Stone KP, **Wanders D**, Gettys TW (2017). Sensing and signaling mechanisms linking dietary methionine restriction to the behavioral and physiological components of the response. *Frontiers in Neuroendocrinology*. 3022(17):30094-30098.
  12. Forney LA, Stone KP, **Wanders D**, Ntambi JM, Gettys TW (2017). The role of suppression of hepatic SCD1 expression in the metabolic effects of dietary methionine restriction. *Applied Physiology, Nutrition, and Metabolism*. 43(2):123-130.
  13. Zimmerman AD, Breckenridge CB, Yi KD, Coder PS, **Wanders D**, Judd RL, Foradori CD (2017). Changes in hepatic phase I and phase II biotransformation enzyme expression and substrate availability following atrazine exposure in female rats. *Xenobiotica*. 48(9):867-881.
  14. Ghosh S, Forney LA, **Wanders D**, Stone KP, Gettys TW (2017). An integrative analysis of tissue-specific transcriptomic and metabolomic responses to short-term dietary methionine restriction in mice. *PLOS One*. 12(5):e0177513.
  15. Forney LA, **Wanders D**, Stone KP, Pierse A, Gettys TW (2017). Concentration-dependent linkage of dietary methionine restriction to the components of its metabolic phenotype. *Obesity*. 25(4):730-738.
  16. **Wanders D**, Forney LA, Stone KP, Burk DH, Pierse A, Gettys TW (2017). FGF21 mediates the thermogenic and insulin-sensitizing effects of dietary methionine restriction but not its effects on hepatic lipid metabolism. *Diabetes*. 66(4):858-867.
  17. **Wanders D**, Stone KP, Forney LA, Cortez CC, Dille KN, Simon J, Xu M, Hotard EC, Nikonorova IA, Petit AP, Anthony TG, Gettys TW (2016). Role of GCN2-independent signaling through a non-canonical PERK/NRF2 pathway in the physiological responses to dietary methionine restriction. *Diabetes*. 65(6):1499-1510.
  18. Graff EC, Fang H, **Wanders D**, Judd RL (2016). Anti-inflammatory effects of the hydroxycarboxylic acid receptor 2. *Metabolism*. 65(2):102-113.
  19. Wang L, Miller D, **Wanders D**, Nanayakkara G, Amin R, Judd RL, Morrison E, Zhong J (2016). Adiponectin downregulation is associated with myocyte dysfunction in volume overload-induced heart failure. *Acta Pharmacologica Sinica*. 37(2):187-195.
  20. **Wanders D**, Stone KP, Dille K, Simon J, Pierse A, Gettys TW (2015). Metabolic responses to dietary leucine restriction involve remodeling of adipose tissue and enhanced hepatic insulin signaling. *Biofactors*. 41(6):391-402.
  21. Stone KP, **Wanders D**, Calderon LF, Spurgin SB, Scherer PE, Gettys TW (2015). Compromised responses to dietary methionine restriction in adipose tissue but not liver of *ob/ob* mice. *Obesity*. 23(9):1836-1844.
  22. **Wanders D**, Burk DH, Cortez CC, Van NT, Stone KP, Baker M, Mendoza T, Mynatt RL, Gettys TW (2015). UCP1 is an essential mediator of the effects of methionine restriction on energy balance but not insulin sensitivity. *The FASEB Journal*. 29(6):2603-2615.
  23. Godwin LA, Brooks JC, Hoepfner LD, **Wanders D**, Judd RL, Easley CJ (2015). A microfluidic interface design for the culture and sampling of adiponectin from primary adipocytes. *Analyst*. 140(4):1019-1025.

24. Stone KP, **Wanders D**, Orgeron M, Cortez CC, Gettys TW (2014). Mechanisms of increased in vivo insulin sensitivity by dietary methionine restriction in mice. *Diabetes*. 63(11):3721-3733.
25. **Wanders D**, Ghosh S, Stone KP, Van NT, Gettys TW (2014). Transcriptional impact of dietary methionine restriction on systemic inflammation: relevance to biomarkers of metabolic disease during aging. *BioFactors*.40(1):13-26.
26. Ghosh S, **Wanders D**, Stone KP, Van NT, Cortez CC, Gettys TW (2014). A systems biology analysis of the unique and overlapping transcriptional responses to caloric restriction and dietary methionine restriction in rats. *FASEB Journal*. 28(6):2577:2590.
27. Nanjappa MK, Ahuja M, Dhanasekaran M, Coleman ES, Braden TD, Bartol FF, Bird RC, Wanders D, Judd RL, Akingbemi BT (2013). Bisphenol A regulation of testicular endocrine function in male rats is affected by diet. *Toxicology Letters*. 225(3):479-487.
28. **Wanders D**, Graff EC, White, BD, Judd RL (2013). Niacin increases adiponectin and decreases adipose tissue inflammation in high fat diet-fed mice. *PLOS ONE*. 8(8):e71285.
29. Hasek B, Boudreau A, Shin J, Feng D, Hulver M, Van NT, Laque A, Stewart L, Stone KP, **Wanders D**, Ghosh S, Pessin J, Gettys TW (2013). Remodeling the integration of lipid metabolism between liver and adipose tissue by dietary methionine restriction in rats. *Diabetes*. 62(10):3362-3372.
30. **Wanders D**, Graff EC, Judd RL (2012). Effects of high fat diet on GPR109A and GPR81 expression in the adipose tissue. *Biochemical and Biophysical Research Communications*. 425(2):278-283.
31. Pfhaeler A, Nanjappa MK, Coleman ES, Mansour M, **Wanders D**, Plaisance EP, Judd RL, Akingbemi BT (2012). Regulation of adiponectin secretion by soy isoflavones has implication for endocrine function of the testis. *Toxicology Letters*. 209(1):78-85.
32. **Wanders D**, Judd RL (2011). Future of GPR109A agonists in the treatment of dyslipidaemia. *Diabetes, Obesity and Metabolism*. 13(8):685-691.
33. Godwin LA, Pilkerton ME, Deal KS, **Wanders D**, Judd RL, Easley CJ (2011). A passively operated microfluidic device for stimulation and secretion sampling of single pancreatic islets. *Analytical Chemistry*. 83(18):7166-72.
34. Gropper SS, Clary K, Gaines A, **Wanders D**, Simmons K (2011). Summer doesn't reverse freshman year body weight and fat gains in female college students. *The Open Nutrition Journal*. 5:24-31.
35. **Wanders D**, Plaisance EP, Judd RL (2010). Pharmacological effects of lipid-lowering drugs on circulating adipokines. *World Journal of Diabetes*. 1(4):116-28.
36. Gropper SS, Simmons KP, Gaines A, Drawdy K, **Saunders D**, Ulrich P, Connell LJ (2009). The freshman 15 - a closer look. *Journal of American College Health*. 58(3):223-31.

#### Book Chapters

1. Orgeron ML, Stone KP, **Wanders D**, Cortez CC, Van NT, Gettys TW (2014). The impact of dietary methionine restriction on biomarkers of metabolic health. Progress in Molecular Biology and Translational Science. 121:351-376.
2. **Wanders D**, Plaisance EP, Judd RL (2012). Lipid-lowering drugs and circulating adiponectin. Adiponectin. Vitamins and Hormones, Volume 90: Toluca Lake, CA.

Abstracts

1. Najjar RS, Meister ML, Danh JP, Lear LMT, Kim S, **Wanders D**, Feresin RG. Raspberry consumption increases cardiac NRF2 transcriptional products in angiotensin II-infused rats. American Society for Nutrition Annual Meeting. June 2021.
2. Kim JS, Meister ML, Najjar RS, Danh JP, Lear LMT, **Wanders D**, Feresin RG. Raspberry consumption decreases the expression of interleukin-6 in the liver of angiotensin II-infused rats. American Society for Nutrition Annual Meeting. June 2021.
3. Lear LMT, Najjar R, Meister ML, Lail HL, **Wanders D**, Feresin RG. Raspberry supplementation attenuates angiotensin II-induced oxidative stress in the kidneys of rats. American Society for Nutrition Annual Meeting. June 2021.
4. Meister ML, Najjar RS, Danh JP, Lear LMT, Kim J, **Wanders D**, Feresin RG. Raspberry consumption mitigates expression of Nox4 and increases antioxidant enzymes in lungs of angiotensin II-infused rats. American Society for Nutrition Annual Meeting. June 2021.
5. Blacks J, Althammer F, Najjar RS, Meister ML, Danh JP, **Wanders D**, Stern JE, Feresin RG. Raspberry Consumption Attenuates Angiotensin II-Induced Oxidative Stress in the Subfornical Organ in Male Sprague-Dawley Rats. American Society for Nutrition Annual Meeting. June 2021.
6. **Wanders D**, Perez P, Land H, Chiang K, Najjar RS, Patel R, Knapp D, Pearson K, Chassaing B, Feresin G. Effects of berries on high-fat diet-induced inflammation. American Society for Nutrition Annual Meeting. Seattle, WA, May 2020. Meeting cancelled due to COVID-19.
7. Land H, West C, Stern JE, Gettys TW, Perez P, Chiang K, **Wanders D**. Mechanisms of action of methionine restriction and FGF21. American Society for Nutrition Annual Meeting. Seattle, WA, May 2020. Meeting cancelled due to COVID-19.
8. Feresin RG, **Wanders D**, Najjar RS, Patel R, Knapp D, Chassaing B. Effects of blackberry and raspberry consumption on insulin resistance in mice fed a high-fat, high-sucrose diet. American Society for Nutrition Annual Meeting. Seattle, WA, May 2020. Meeting cancelled due to COVID-19.
9. West C, **Wanders D**, Gettys TW, Land H, Stern JE. Understanding the Mechanism of Fibroblast Growth Factor 21 Action in the Paraventricular Nucleus of the Hypothalamus: A Promising Candidate in Treatment of Obesity and Metabolic Diseases. Experimental Biology. San Diego, CA, April 2020. Meeting cancelled due to COVID-19.
10. **Wanders D**, Perez P, Land H, Chiang K, Najjar RS, Patel R, Knapp D, Pearson K, Chassaing B, Feresin G. Effects of berries on high-fat diet-induced inflammation. Georgia State University Undergraduate Research Conference (GSURC). Atlanta, GA. April 2020.
11. Land H, West C, Stern JE, Gettys TW, Perez P, Chiang K, **Wanders D**. Mechanisms of action of methionine restriction and FGF21. Georgia State University Undergraduate Research Conference (GSURC). Atlanta, GA. April 2020.
12. Chiang K, Perez P, Land H, Najjar RS, Patel R, Knapp D, Pearson K, Chassaing B, Feresin G, **Wanders D**. Effects of berries on glucose and lipid metabolism in a mouse model of obesity. Georgia State University Undergraduate Research Conference (GSURC). Atlanta, GA. April 2020.



13. Najjar RS, **Wanders D**, Chassaing B, Feresin RG. Raspberry polyphenols decrease oxidative stress and hypertrophic signaling in human cardiomyocytes and may attenuate angiotensin II-induced cardiac hypertrophy in rats. Lewis College Graduate Research Conference. Atlanta, GA. April 2020.
14. Zalavadia D, Jin H, Meister M, Mabb A, **Wanders D**, Mo H. The potential role of FGF21 in  $\delta$ -tocotrienol-mediated neuroprotection. Georgia State University Undergraduate Research Conference (GSURC). Atlanta, GA. April 2020.
15. **Wanders D**, Perez P, Land H, Chiang K, Najjar RS, Patel R, Knapp D, Pearson K, Chassaing B, Feresin G. Effects of berries on high-fat diet-induced inflammation. 13<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2020. Meeting cancelled due to COVID-19.
16. Land H, West C, Stern JE, Gettys TW, Perez P, Chiang K, **Wanders D**. Mechanisms of action of methionine restriction and FGF21. 13<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2020. Meeting cancelled due to COVID-19.
17. Chiang K, Perez P, Land H, Najjar RS, Patel R, Knapp D, Pearson K, Chassaing B, Feresin G, **Wanders D**. Effects of berries on glucose and lipid metabolism in a mouse model of obesity. 13<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2020. Meeting cancelled due to COVID-19.
18. Beebe M, Najjar RS, Chan D, Madhani CR, Elfakhani M, Yount S, Ji X, Feresin RG, **Wanders D**, Mo H. Synergistic impact of xanthorrhizol and *d*- $\delta$ -tocotrienol on the proliferation of murine B16 melanoma cells and human DU145 prostate carcinoma cells. American Society for Nutrition Annual Meeting. Baltimore, MD, June 2019.
19. **Wanders D**, Knapp D, Najjar R, Jung S, Pearson K, Chassaing B, Feresin RG. Blackberries and raspberries attenuate inflammation. 12<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2019.
20. Sharma S, Jung S, Graff EC, Gettys TW, **Wanders D**. Low-dose FGF21 administration decreases obesity-induced hepatic steatosis but has no effect on inflammation in mice. American Diabetes Association 78<sup>th</sup> Annual Scientific Sessions. Orlando, FL, June 2018.
21. Hobson K, **Wanders D**, Ji X. Methionine restriction inhibits non-small cell lung cancer growth by targeting beta-catenin pathway. American Society for Nutrition Annual Meeting. Boston, MA, June 2018.
22. Sharma S, Jung S, Graff EC, Gettys TW, **Wanders D**. Low-dose FGF21 administration decreases obesity-induced hepatic steatosis but has no effect on inflammation in mice. 11<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2018.
23. Sharma S, Mo H, Shen C-L, **Wanders D**. *d*-delta-Tocotrienol inhibits high-fat diet-induced hepatic inflammation by downregulating STAT3 signaling. American Diabetes Association 77<sup>th</sup> Annual Scientific Sessions. San Diego, CA, June 2017.
24. Dixon TM, Sharma S, Forney LA, Gettys TW, **Wanders D**. Fibroblast Growth Factor-21 (FGF-21): A mediator of inflammatory responses to diets? American Diabetes Association 77<sup>th</sup> Annual Scientific Sessions. San Diego, CA, June 2017.
25. Sharma S, Mo H, Shen C-L, **Wanders D**. *d*-delta-Tocotrienol inhibits high-fat diet-induced hepatic inflammation by downregulating STAT3 signaling. Lewis College Graduate Research Conference. Atlanta, GA, April 2016.

26. Dixon TM, Sharma S, Forney LA, Gettys TW, **Wanders D**. Fibroblast Growth Factor 21 (FGF21) may mediate peripheral inflammatory responses to different diets. 10<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2017.
27. Sharma S, Dixon T, Dille K, Simon J, Bobart L, Gettys TW, **Wanders D**. Dietary methionine restriction inhibits STAT3 signaling and decreases inflammation in liver and adipose tissue of rodents. 9<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2016.
28. **Wanders D**, Burk DH, Gettys TW. Dietary restriction of essential amino acids induces browning of white adipose tissue. Keystone Symposia on Beige and Brown Fat: Basic Biology and Novel Therapeutics. Snowbird, Utah, April 2015.
29. **Wanders D**, Stone KP, Cortez CC, Burk DH, Orgeron M, Dille K, Gettys TW. Effects of dietary leucine restriction on energy balance and insulin sensitivity. 8<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2015.
30. Graff EC, Fang H, **Wanders D**, Judd RL. Niacin attenuates high-fat diet-induced adipose tissue inflammation in an adiponectin-independent manner. 8<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2015.
31. Ghosh S, **Wanders D**, Stone KP, Van N, Cortez C, Gettys TW. Unique and overlapping transcriptomic landscapes define tissue-specific responses to long-term dietary calorie and methionine restriction in rats. American Diabetes Association 74<sup>th</sup> Scientific Sessions. San Francisco, CA, June 2014.
32. Worsham EA, Wicks SE, Vandanmagsar B, Drewes DM, Woodlief TL, Cortright RN, Koves TR, Thyfault JP, **Wanders D**, Gettys TW, Mynatt RL, Noland RC. Defining the role of skeletal muscle peroxisomes in glucose homeostasis. Metabolic Origins of Disease Symposium. Orlando, FL, March 2014.
33. **Wanders D**, Cortez CC, Van NT, Stone KP, Baker M, Burk DH, Mendoza T, Mynatt RL, Gettys TW. Effects of dietary methionine restriction on energy balance: Roles of UCP1 and FGF21. 7<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, February 2014.
34. **Wanders D**, Van NT, Gettys TW. Dietary methionine restriction attenuates the development of age-associated inflammation. 6<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2013.
35. **Wanders D**, Graff EC, White BD, Judd RL. Niacin increases adiponectin and decreases markers of adipose tissue inflammation in obese mice. 6<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2013.
36. Gorman T, Schwartz D, Judd RL, **Wanders D**. Oxidative stress in hearts of mice fed a high fat diet. 6<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2013.
37. **Wanders D**, Graff EC, Plaisance EP, Judd RL. Niacin increases adiponectin in obese mice in a receptor-dependent manner. American Diabetes Association 72<sup>nd</sup> Scientific Sessions. Philadelphia, PA, June 2012.
38. **Wanders D**, Graff EC, Plaisance EP, Judd RL. Niacin Decreases Retinol-Binding Protein 4 in Mice in a Receptor-Independent Manner. American Diabetes Association 72<sup>nd</sup> Scientific Sessions. Philadelphia, PA, June 2012.

39. **Wanders D**, Graff EC, Plaisance EP, Judd RL. Niacin increases adiponectin in obese mice in a receptor-dependent manner. 5<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2012.
40. Godwin LA, **Wanders D**, Kim J, Judd RL, Easley CJ. Passive microfluidic methods for secretion sampling and quantitation of adiponectin from murine adipocytes. 5<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2012.
41. **Wanders D**, Plaisance, EP, Graff EC, Zhang Y, Cao G, Judd RL. Mechanism of action of niacin on adiponectin production and secretion. 4<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2011.
42. Graff EC, **Wanders D**, Judd RL. Isolation and culture of feline adipocytes. The Annual American College of Veterinary Pathologists 62<sup>nd</sup> Annual Meeting. Nashville, TN, December 2011.
43. Kim J, Godwin L, Deal K, Keenum Z, **Wanders D**, Judd R, Easley C. Combining microfluidic secretion sampling with small-volume proximity immunoassays: Application to murine islets and adipocytes. Microscopy and Microanalysis. Nashville, TN, August 2011.
44. Graff EC, **Wanders D**, Judd RL. Identification of adipose tissue macrophages and crown-like structures in lean and obese cats. 4<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2011.
45. Thomas T, Pfahler A, Nanjappa M, **Wanders D**, Plaisance EP, Judd RL, Akingbemi BT. Exploring the relationships between endocrine disruptors, metabolic syndrome and male reproduction. 4<sup>th</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2011.
46. Thomas T, **Saunders D**, Plaisance EP, Judd RL, Akingbemi BT. Adult male rats exposed to dietary soy isoflavones in the perinatal period exhibit elevated serum adiponectin concentrations with implication for steroid hormone secretion by Leydig cells. 92<sup>nd</sup> Annual Endocrine Society Meeting & Expo. San Diego, CA, June 2010; P2-77.
47. Graff EC, **Saunders D**, Amin RH, Judd RL. Identification of adiponectin multimers in serum of healthy cats. 3<sup>rd</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2010.
48. Nanjappa MK, **Saunders D**, Judd RL, Akingbemi BT. Developmental exposures of male rats to environmentally relevant bisphenol A levels impact serum 17 $\beta$ -estradiol concentrations and affect adiponectin secretion. 3<sup>rd</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2010.
49. Plaisance EP, Hanson LD, **Saunders D**, Graham T, Lukasova M, Offermanns S, Judd RL. Niacin decreases serum retinol binding protein 4 (RBP4) concentrations in humans with metabolic syndrome. American Diabetes Association 69<sup>th</sup> Scientific Sessions. New Orleans, LA. Late Breaking Abstract 70-LB, June 2009.
50. Wang SX, **Saunders D**, Williams JN, Tao YX. Functional characterization of fifteen novel melanocortin-4 receptor mutations identified from obese patients. 91<sup>st</sup> Annual Endocrine Society Meeting. Washington D.C., June 2009.
51. Plaisance EP, **Saunders D**, Judd RL, Akingbemi BT. Soy-based diets mimic the effects of estrogen on adipose tissue estrogen receptor- $\alpha$  density and testicular leydig cell function. 2<sup>nd</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2009.

52. Gropper SS, **Saunders D**, Gaines A, Simmons K, Connell LJ. Weight and body composition changes in first semester college freshmen. 1<sup>st</sup> Annual Boshell Diabetes and Metabolic Diseases Research Day. Auburn, AL, March 2008.

## FUNDING

### Ongoing

USDA-AFRI-Program Area: Function and Efficacy of Nutrients: “*Berries prevent hypertension and cardiac damage by modulating the gut microbiota and attenuating oxidative stress and inflammation*”.

March 2019-February 2022

Role: Co-principal Investigator (Feresin-PI)

\$500,000

Center for Neuroinflammation and Cardiometabolic Diseases: “*Neural Mechanisms of FGF21 on Energy Balance*”.

November 2020-May 2021

Role: Principal Investigator

\$9,550

### Completed

Georgia State University Research Initiation Grant: “*Metabolic Benefits of Dietary Methionine Restriction*”.

July 2019-June 2020

Role: Principal Investigator

\$19,869

Lewis Foundation Award: “*Impact of berry consumption on gut microbiota, inflammation and insulin resistance*”

March 2018-June 2020

Role: Collaborator (Feresin-PI)

\$10,000

Center for Neuroinflammation and Cardiometabolic Diseases: “*Role of FGF21 Signaling in Cardiometabolic Disorders*”

February 2019-June 2019

Role: Principal Investigator

\$4,500

The Lewis College Intramural Grant Program: “*Novel Anti-inflammatory properties of Fibroblast Growth Factor 21 (FGF21)*”.

October 2017- June 2018

Role: Principal Investigator

\$7,000

The Center for Obesity Reversal Seed Grant: “*Novel Anti-inflammatory actions of Fibroblast Growth Factor 21 (FGF21)*”.

July 2017- June 2018

Role: Principal Investigator

\$18,612

The Lewis Foundation Award: “*Mechanisms Behind Dietary Methionine Restriction-induced Improvements in Obesity-induced Inflammation and Metabolic Dysfunction*”.

April 2016-June 2017

Role: Principal Investigator

\$10,000

The Lewis College Teacher-Scholar Academy Mini-Grant: “*Evaluation of Supermarket Training as a Component of Graduate Nutrition Education*”.

November 2016-June 2017

Role: Co-investigator

\$750

The Lewis College Intramural Grant Program: “*Anti-inflammatory Effects of Dietary Methionine Restriction*”

September 2015-June 2016

Role: Principal Investigator

\$7,000

5P20GM103528-09 NIH/NIGMS Centers of Biomedical Research Excellence. “*Mentoring Obesity and Diabetes Research in Louisiana*”.

March 2015-July 2015

Role: Project Principal Investigator

\$81,625

1 F32 DK098918-01A1 NIH Ruth L. Kirschstein National Research Service Award: F32. “*Role of UCPI in the Inter-organ Lipid Cycle Engaged by Dietary Methionine Restriction*”.

January 2014- February 2015

Role: Principal Investigator

\$57,417

7-13-MI-05 American Diabetes Association Mentor-Based Postdoctoral Minority Fellowship Award. *Role of UCPI in the Inter-organ Lipid Cycle Engaged by Dietary Methionine Restriction*.

October 2013- December 2013

Role: Postdoctoral Fellow

3T32DK064584 NIH Ruth L. Kirschstein National Research Service Award: Institutional Research Training Grant (T32). “*Obesity: From Genes to Man*”, Pennington Biomedical Research Center

October 2012- September 2013

Role: Postdoctoral Fellow

\$11,250

University Peak of Excellence graduate research fellowship in Cellular and Molecular Biosciences, Auburn University, AL.

August 2008-August 2009

Role: Graduate Research Assistant

\$18,500

**Submitted; Not Funded**

1 R01 DK125551-01 NIH Research Project Grant (R01): “*Neural mechanisms of FGF21 on energy balance*”.

Submitted October 2019  
Revising based on Summary Statement received in March 2020  
To be resubmitted July 5<sup>th</sup>, 2020  
Role: Principal Investigator  
\$1,947,986

1-19-JDF-067. American Diabetes Association-Junior Faculty Development Award: “*Anti-inflammatory properties of FGF21 mediate its anti-diabetic effects*”.  
Submitted April 2018  
Role: Principal Investigator

1R21DK113429-01A1. NIH/NIDDK Small Grants for New Investigators to Promote Diversity in Health-Related Research. “*Role of FGF21 in Mediating Metabolic Effects of Dietary Methionine Restriction*”.  
Submitted July 16, 2017 (resubmission)  
Role: Principal Investigator  
Impact Score: 45

1R15DK117408-01. NIH/NIDDK Academic Research Enhancement Award. “*Novel Anti-inflammatory Effects of FGF21*”.  
Submitted June 26, 2017  
Role: Principal Investigator  
Impact Score: 51

1-18-JDF-036. American Diabetes Association-Junior Faculty Development Award: “*Role of FGF21 in Mediating Metabolic Effects of Dietary Methionine Restriction*”.  
Submitted April 2017  
Role: Principal Investigator

1R15DK112183-01A1 NIH/NIDDK. Academic Research Enhancement Award. “*Role of FGF21 in Mediating Metabolic Effects of Dietary Methionine Restriction*”.  
Submitted October 25, 2016 (Resubmission)  
Role: Principal Investigator  
Impact Score: 27

1R21DK- NIH/NIDDK. Small Grants for New Investigators to Promote Diversity in Health-Related Research. “*Roles of FGF21 and the Sympathetic Nervous System in Energy Metabolism*”.  
Submitted June 16, 2016  
Role: Principal Investigator  
Impact Score: 40

1R15DK112183-01 NIH/NIDDK. Academic Research Enhancement Award. “*Role of FGF21 in Mediating Metabolic Effects of Dietary Methionine Restriction*”.  
Submitted February 25, 2016  
Role: Principal Investigator  
Impact Score: 32

## HONORS AND AWARDS

Faculty Fellowship  
College to Career Program  
2018-2019

Keystone Symposia Future of Science Fund Scholarship (Travel Grant)  
Keystone Symposia – Beige and Brown Fat: Basic Biology and Novel Therapeutics  
April 2015

Outstanding Postdoctoral Poster Presentation  
The Boshell Diabetes and Metabolic Diseases 6<sup>th</sup> Annual Research Day  
March 2013

Outstanding Doctoral Student  
Auburn University  
2011-2012

Outstanding Graduate Student Oral Presentation  
Graduate Symposium: Auburn University Research Week  
April 2012

Outstanding Graduate Student Oral Presentation  
The Boshell Diabetes and Metabolic Diseases 5<sup>th</sup> Annual Research Day  
March 2012

## PROFESSIONAL SERVICE

### Ad-Hoc Manuscript Reviewer

Journal Title (Impact Factor during year of review); \*indicates multiple reviews

1. Aging Cell (IF: 7.346)
2. Molecular Metabolism (IF: 6.181)
3. Molecular Nutrition and Food Research\* (IF: 4.653)
4. International Journal of Obesity\* (IF: 4.514)
5. The Journal of Nutrition (IF: 4.398)
6. Journal of Endocrinology (IF: 4.403)
7. Annals of the New York Academy of Sciences\* (IF: 4.518)
8. International Journal of Molecular Sciences\* (IF: 4.183)
9. Nutrients\* (IF: 4.171)
10. Journal of Translational Medicine\* (IF: 4.098)
11. Obesity\* (IF: 4.042)
12. Nutritional Neuroscience (IF: 3.950)
13. Biochimie (IF: 3.362)
14. Genes (IF: 3.331)
15. Nutrition & Metabolism (IF: 3.211)
16. Inflammation Research (IF: 3.061)
17. Molecules (IF: 3.060)
18. Food & Nutrition Research (IF: 2.553)
19. Comparative Biochemistry and Physiology (IF: 2.142)
20. Canadian Journal of Physiology and Pharmacology (IF: 1.704)

Book Proposal Reviewer

1. The Royal Society of Chemistry; May 2018

Grant Reviewer

1. National Mouse Metabolic Phenotyping Centers (MMPC) MICROMouse Program May 2017; Oct 2017
2. Atlanta VAMC Rehabilitation R&D Center for Visual and Neurocognitive Rehabilitation; Internal Reviewer Jun 2017; Aug 2017.
3. Laura Bush Institute for Women's Health at the Texas Tech University Health Sciences Center; Centralized Seed Grant Program; Dec 2015

Abstract Reviewer

1. The American Society for Nutrition Annual Conference-Cellular and Physiological Nutrition/Metabolism Section Abstract Reviewer; February 2021
2. The American Society for Nutrition Annual Conference-Cellular and Physiological Nutrition/Metabolism Section Abstract Reviewer; February 2020
3. The Obesity Society Annual Meeting (Obesity Week)-Basic Science Section Abstract Reviewer; September 2016

Poster Judge

1. The American Society for Nutrition Annual Conference. Emerging Leaders in Nutrition Science Poster Competition Judge; Dietary Bioactive Components Section. June 2018-Boston, MA.
2. Boshell Diabetes and Metabolic Diseases 11<sup>th</sup> Annual Research Day-Graduate Student Poster Presentations; February 2018-Auburn, AL
3. Boshell Diabetes and Metabolic Diseases 12<sup>th</sup> Annual Research Day-Graduate Student Poster Presentations; February 2019-Auburn, AL

Oral Session Co-chair

1. The American Society for Nutrition Annual Conference. *Anti-inflammation Effect of Dietary Bioactive Components*. June 2018-Boston, MA.

**PROFESSIONAL ORGANIZATION MEMBERSHIPS**

The American Physiological Society  
2020-Present

The American Society for Nutrition  
2018-2020

The Center for Neuroinflammation and Cardiometabolic Diseases  
2018-Present

The American Diabetes Association  
2016-2020

Center for Obesity Reversal, Georgia State University  
2016-2018

The Obesity Society  
2015-2018



## **INVITED PRESENTATIONS**

Auburn University – Department of Anatomy, Physiology, and Pharmacology Seminar Series  
“Methionine restriction and FGF21: Potential tools in the fight against obesity”  
January 29<sup>th</sup>, 2021

Georgia State University Neuroscience Institute Lecture Series  
“Methionine restriction and FGF21: Potential tools in the fight against obesity”  
September 18<sup>th</sup>, 2020

University of Georgia-Department of Nutrition, Athens, GA.  
“Metabolic Benefits of Dietary Methionine Restriction”  
February 21<sup>st</sup>, 2018

13<sup>th</sup> Annual Joint Meeting of the Upstate and Western New York Councils on Renal Nutrition, Batavia, NY.  
“Obesity and the Kidney: A Focus on Lipids”  
October 19<sup>th</sup>, 2017

6<sup>th</sup> Annual Georgia Council on Renal Nutrition Spring Conference, Atlanta, GA.  
“Obesity and the Kidney: A Focus on Lipids”  
May 4<sup>th</sup>, 2017

Third International Conference of Long-Term Care Directors, Atlanta, GA.  
“Nutrition for the Older Population”  
March 2016

## **MEDIA APPEARANCES**

The Conversation  
"Fat-burning fat exists but may not be the key to weight loss."  
December 2015

Atlanta Journal-Constitution  
"Whole milk for a healthy heart? Don't raise that glass just yet."  
Quoted in print article regarding saturated fat intake, dairy, and health.  
October 2015

Baton Rouge Community Radio 96.9 FM WHYR  
Radio interview regarding ways to improve nutrition and dietary choices  
May 2015