

CURRICULUM VITAE

Name: Lauren Adele Fowler

Address: Department of Biology
1300 Campbell Hall
University of Alabama at Birmingham
Birmingham, AL 35294-1170

Phone: (205) 903-9696

Email: fowlela@uab.edu

Education and Certifications:

UNIVERSITY OF ALABAMA BIRMINGHAM, Birmingham, AL (2012-currently enrolled)
Doctorate of Philosophy in Biology

AUBURN UNIVERSITY, Auburn, AL, December 2005
Bachelor of Science in Marine Biology

UAB, Spring 2013
***Center for the Integration of Research, Teaching, and Learning (CIRTL) Fellow
Program Certification***

Employment

- ***Senior Aquarist*** – McWane Science Center (October 2008-May 2012) Birmingham, AL
 - Coordinated daily care of all aquatic animals
 - Testing of water parameters to maintain water quality at acceptable levels
 - Assisted in maintaining current aquarium systems, plumbing, and filtration equipment, as well as construction of new exhibits
 - Supervised junior aquarists, interns, and volunteers
 - Interaction with public
 - Responsible for ordering, acquisition, and quarantine of new animals
- ***Aquarist*** – The Estuarium at the Dauphin Island Sea Lab (July 2007- October 2008)
 - Responsible for daily care of marine vertebrates and invertebrates
 - Weekly testing of water quality parameters
 - Maintenance of aquarium systems
 - Supervision and training of docents and assistant aquarists
 - Educated public in marine science

Research Interests:

Nutritional requirements for growth and reproduction of aquatic organisms; use of the zebrafish *Danio rerio* as a model for human nutrition and diet-induced obesity; obesity and metabolic syndrome; use of botanicals for alleviation of inflammatory response in the zebrafish; ethnic disparities associated with the development of Type 2 Diabetes; statistical applications in nutrition and obesity studies.

Research Experience

- Graduate Research Student.
 - Dr. Stephen Watts. Department of Biology, UAB. (2012-present) Aquaculture nutrition and utilization of the zebrafish as a biomedical model in human nutrition and obesity studies.
 - Dr. Barbara Gower. (2015-present) Department of Nutrition Sciences, UAB. Ethnic disparities in the development and detection of Type II Diabetes in human participants.
- Undergraduate Research Assistant (2005). Dr. Nanette Chadwick, Department of Biology, Auburn University. Physiological ecology of anemones and clownfish.
- Undergraduate Research Assistant (2004). Dr. Jack Feminella, Department of Biology, Auburn University. Aquatic stream ecology and invertebrate community diversity studies.

Published Manuscripts

- **L. Adele Fowler**, Lacey N. Dennis, R. Jeff Barry, Mickie L. Powell, Stephen A. Watts, and Daniel L. Smith Jr. (2016). “*In Vivo* Determination of Body Composition in Zebrafish (*Danio rerio*) by Quantitative Magnetic Resonance. Zebrafish **13**(3): 170-176. [PMID 26974510]
- Latoya T. Paul, **Lauren A. Fowler**, Robert J. Barry, and Stephen A. Watts. (2013). “Evaluation of the *Moringa oleifera* leaf as a dietary micronutrient replacement.” Journal of Nutritional Ecology and Food Research **1**: 322-328. [PMID 4998195]

Presentations and Published Abstracts

- **Lauren A. Fowler**, Jeannie Tay, Laura L.T. Goree, Amy M. Goss, Nikki C. Bush, W. Timothy Garvey, and Barbara A. Gower. The Influence of Visceral Adipose Tissue Accumulation on the Accuracy of Surrogate Indices for Insulin Sensitivity. Oral Presentation. American Diabetes Association 2017 Annual Meeting, San Diego, CA.
- **Lauren A. Fowler**, Jeannie Tay, Laura L.T. Goree, Amy M. Goss, Nikki C. Bush, W. Timothy Garvey, and Barbara A. Gower. The Influence of Visceral Adipose Tissue Accumulation on the Accuracy of Surrogate Indices for Insulin Sensitivity. Oral and Poster Presentations. UAB Diabetes Research Day 2017, Birmingham, AL.
- **Fowler, L. Adele**; Dennis, Lacey N.; Dawson, John A.; Barry, R. Jeff; Davis, James L.; Powell, Mickie L.; Yuan Yuan; Williams, Michael B; Makowsky, Robert; and S. A Watts. Sex-Specific Differences in the Development of Diet-Induced Obesity in a Zebrafish Model. Poster Presentation. Experimental Biology/American Society of Nutrition 2017 Annual Meeting, Chicago, IL.
- **Fowler, L. Adele**; Dennis, Lacey N.; Davis, James L.; Powell, Mickie L.; Barry, Robert J.; Dawson, John A.; Yuan Yuan; Williams, Michael B.; Watts, Stephen A. The Influence of Sex on Fat Mass Accumulation in a Zebrafish Model. Poster Presentation. Aquatic Animal Models of Human Disease 2017 Meeting, University of Alabama at Birmingham, Birmingham, AL.

- **Fowler, Lauren A;** Robert Makowsky; James L. Davis, and Stephen A. Watts. Visualization of Dietary Lipid Effects on Adiposity in Zebrafish with Linear Modeling and Contour Plots. Poster Presentation. Alabama Academy of Science 2016 Annual Meeting, University of North Alabama, Florence, AL.
- **Fowler, L.A.;** Dennis, L.N.; Barry, R.J.; Powell, M.L.; Watts, S.A.; and Smith, D.L. *In vivo* Determination of Body Composition in the Zebrafish *Danio rerio* by Quantitative Magnetic Resonance. Poster Presentation. Obesity Week 2015 Annual Meeting, Los Angeles, CA.
- **Watts, S.A.;** Dennis, L.N.; Fowler, L.A.; Yuan, Y.; Barry, R.J.; and Powell, M.L. Evaluation of Commercial Diets in the Zebrafish *Danio rerio*. Aquaculture America 2015, New Orleans, LA.
- **Fowler, L.A.;** Dennis, L.N.; Powell, M.L.; Dawson, J.A.; Barry, R.J.; Davis, J.L.; Gower, B.A.; and Watts, S.A. Effects of Varying Levels and Ratios of Dietary Lipids on Growth, Body Composition, and Reproductive Success in the Zebrafish *Danio rerio*. Oral Presentation. Society for Integrative and Comparative Biology 2015 Annual Meeting, West Palm Beach, FL.
- **Fowler, L.A.;** Dennis, L.N.; Powell, M.L.; Dawson, J.A.; Barry, R.J.; Davis, J.L.; Gower, B.A.; and Watts, S.A. Effects of Dietary Lipid Composition on Weight Gain and Body Composition in a Zebrafish Model. Poster Presentation. Obesity Week 2014 Annual Meeting, Boston, MA.
- **L. A Fowler,** L.T Paul, and S.A. Watts. Evaluation of *Moringa oleifera* as a short-term nutrient source for animal health. Poster Presentation. Society for Integrative and Comparative Biology 2014 Annual Meeting, Austin, TX.
- **L. A. Fowler.** Evaluation of *Moringa oleifera* as a short-term nutrient source for animal health. Oral Presentation. Graduate Student Research Days 2014, UAB.
- **L. Adele Fowler,** Latoya Paul, and Steve Watts. 2013. Evaluation of *the Moringa oleifera* leaf as a dietary micronutrient replacement in the zebrafish *Danio rerio*. Oral Presentation. Alabama Academy of Sciences, Samford University, AL.

Fellowships

- **NIH T32 Fellowship** (UAB NORC 5T32HL105349). Competitive award that provides research training opportunities in the fields of nutrition and obesity.

Grants and Travel Awards

- UAB Diabetes Research Center Travel Award to the American Diabetes Association 2017 Meeting - \$1,000
- Travel Award to the American Society of Nutrition 2017 Meeting - \$100
- Alabama Academy of Science Research Grant 2015- \$250
- 2014-2015. Charlotte Magnum Award for Student Housing Support, Society for Integrative and Comparative Biology Annual Meeting
- UAB Department of Biology Travel Grant for Spring 2015- \$540

Awards, Honors, and Achievements

- Finalist in the American Society for Nutrition's Emerging Leader Poster Competition at the EB/ASN 2017 Meeting. **Placed 2nd** in the Experimental Animal Models Research Interest Group.
- 2016 "Creativity is a Decision" Award Recipient – Graduate Student Division. Sponsored by UAB NORC and Pfizer
- 2014 "Creativity is a Decision" Award Recipient – Graduate Student Division. Sponsored by UAB NORC and Pfizer
- 1st Place in Session at UAB Graduate Student Research Days 2014
- 2014 Outstanding Master's Student of the Year in the Department of Biology at UAB

Teaching Experience:

- Co-Instructor for Biometry BY 655/755 (Spring 2018). Department of Biology, UAB. Introductory course for graduate students involving the application and implementation of statistical analyses in the biological sciences using R Statistical Software.
- Graduate Teaching Assistant. Department of Biology, UAB. Courses include:
 - **Introduction to Microbiology Lab**, BY 261 (Fall 2012 and Spring 2013). Course work included bacterial culture, staining and inoculation techniques, and identification of unknown cultures using biochemical tests.
 - **Human Physiology Lab**, BY 116 (Fall 2017). Introductory course to discuss and test specific aspects of human physiology, often using themselves as test subjects. Coursework utilizes computer-based experiments using the PhysioEx 7.0 program
- Undergraduate Teaching Assistant for Introductory Biology for non-majors (Spring 2004). Department of Biology, Auburn University.
- Mentor to Undergraduate Interns and Volunteers (2008-2012). World of Water, McWane Science Center

Professional Societies:

- World Aquaculture Society
- Alabama Academy of Sciences
- Society of Integrative and Comparative Biology
- The Obesity Society
- American Association for the Advancement of Science
- Phi Sigma

Workshops and Short Courses

- UAB Microbiome Resource Workshop
University of Alabama at Birmingham, September 14, 2016
- Short Course on Mathematics in Obesity Research
University of Alabama at Birmingham, June 13-17, 2016
- 8th Annual Mouse Metabolic Phenotyping Consortium Course
Isotope Tracers in Metabolic Research
Case Western Reserve University, Cleveland, Ohio, November 16-20, 2015
- Short Course on Strengthening Causal Inference in Behavioral Obesity Research
University of Alabama at Birmingham, July 20-24, 2015

Academic and Professional Service:

- Judge, UAB. Undergraduate Summer Expo 2017. Judged posters for undergraduate summer research projects.
- Volunteer, UAB Science Day 2016.
- Student Volunteer, Obesity Week 2015. Session Room Monitor.
- Host, UAB Department of Biology Seminar Series. Hosted seminar speaker Dr. Nanette Chadwick from Auburn University.
- Volunteer, UAB Darwin Day 2015. Sponsored by the Department of Biology. Presented poster on research project.
- Judge, Gorgas Paper Competition 2015. Judged high school science projects for scholarship program.
- Volunteer, UAB. Assisted with set-up and hosting of biology department picnic, which is held annually for student recruitment (Fall 2012-Fall 2014).
- Volunteer, UAB. Earth Day 2013. Assisted with set-up and representation of department of biology research at UAB.
- Judge, UAB. Undergraduate Summer Expo 2013. Judged posters for undergraduate summer research projects.
- Mentor, UAB. Mentorship of high school student through research work-study program. (2013-2014 Academic Year)
- Mentor to undergraduate researchers in the lab

Community Service:

- Volunteer Teacher, Lovelady Women's Shelter. Fall 2016- Spring 2017. Participated in program that teaches science to children at the Shelter.
- Volunteer Counselor, Birmingham Crisis Center. Telephone counselor for crisis line (2010-2012).
- Mentor, Avondale Elementary. Participated in pilot program that assisted 5th grade students with development of science fair projects (Fall 2013)