

# Daleniece Higgins Jones

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## EDUCATION

Ph.D. 2019 Epidemiology, School of Public Health, University of Memphis, Memphis, TN  
MPH 2016 Environmental Health, School of Public Health, University of Memphis, Memphis, TN  
BS 2013 Biology, University of Memphis, Memphis, TN

## SKILLS

Data Analytics SAS; R  
Molecular Diagnostics DNA extraction; QPCR; NextGen Sequencing; Metagenomics  
Culturing Methodology Plating; streaking; serial dilutions

## TEACHING EXPERIENCE

### University of Memphis School of Public Health

Spring 2021 Undergraduate Environmental Health II – online; Co-instructor  
Spring 2021 Graduate Environmental Health I – online; Teaching Assistant  
Fall 2020 Undergraduate Environmental Health I – online; Co-instructor

### Additional Teaching Experience

2020 Guest Lecture: “Food Desserts” in the course titled “Structural and Environmental Issues in Urban Communities” for graduate students  
2014 – 2019 Supervise undergraduate and graduate students in research methods and lab protocols as lab manager in a School of Public Health Laboratory

## PROFESSIONAL EXPERIENCE

### University of Memphis School of Public Health, Environmental Health, Memphis, TN

2019 – present **Post-doctoral Fellow**

- Community Outreach:  
Urban Child Institute Debra Bartelli (PI) 07/01/19-06/30/21  
*Promoting Safe and Healthy Environments in Early Childhood Learning Center*  
Purpose: to evaluate early childhood exposure to environmental toxins in ECLCs, identify the key hazards, and implement source remediation and removal strategies to promote healthy indoor environments.
- Write, submit, and perform revisions of manuscripts and abstracts.
- Review journal articles.

## RELEVANT EXPERIENCE

### University of Memphis School of Public Health Laboratory, Memphis, TN

2014 – 2019 **Graduate Assistant**

- Community Outreach:
  - Work with Shelby County Health Department to evaluate the microbial quality and diversity of food items found from impoverished and higher socioeconomic areas.
  - Work with WREG News Channel 3 to analyze samples taken from multiple surfaces to evaluate the amount of harmful bacteria that most individuals come in contact with on a daily basis.

- Collaborate with rehabilitation facilities to explore the gut microbiome in alcohol dependent dually diagnosed (alcohol dependence and mental health disorders) African American males in the Mid-South.
- Collaborate with doctors at University of Tennessee Health Science Center to evaluate autism in alcohol treated mice by extracting DNA from colon samples and analyzing the bacterial genera found in each sample.
- Work with doctors at Methodist University Hospital in Memphis, TN to analyze the microbiome of individuals diagnosed with nonalcoholic fatty liver disease (NASH).
- International Outreach:
  - Drinking Water Safety in Haiti: Analyzing the antibiotic resistant genes of bacteria found in their drinking water supply.
- Manage by teaching students laboratory protocols, guiding/advise students in research projects, and completing inventory.
- Partner with U.S. Food and Drug Administration and Tennessee Department of Health to research virulence of pathogenic bacteria and identify different antibiotic phenotypes to determine exposure to antibiotic resistance in individuals diagnosed with salmonellosis across Tennessee.

U.S. Food and Drug Administration, Atlanta, GA

2017, 2019                      **Intern**

- Analyze molecular diagnostics and genetics of foodborne pathogens.
- Explore bacterial genomics.
- Evaluate virulence of pathogenic bacteria and identify different antibiotic phenotypes to determine exposure to antibiotic resistance in individuals diagnosed with salmonellosis across Tennessee.

Shelby County Health Department, Memphis, TN

2015 – 2016                      **Intern**

- Review and categorize all food clients in Shelby County.
- Analyze food items to determine if inner city Memphis population is exposed to high bacterial loads or pathogens.

**HONORS**

- Tennessee Doctoral Scholars Program (2016)
- Golden Key International Honor Society (2016)
- Public Health Community Scholar (2015)
- 3<sup>Rd</sup> Place at Interdisciplinary Case Competition (2015)
- Dean's List (2013)

**PROFESSIONAL SOCIETY MEMBERSHIPS**

- American College of Epidemiology
- Society of Epidemiologic Research
- International Association of Food Protection (IAFP)
- American Society for Microbiology

## RESEARCH

- Dissertation Use of Antibiotics and its Association with Wheezing, Bacterial Resistance, and Virulence
- Thesis Microbiological Safety of Retail Foods Available in Low and High Socioeconomic Neighborhoods in the Memphis Metropolitan Area
- Interests Molecular Epidemiology, Environmental epidemiology; Health disparities

## PUBLICATIONS

1. Satapathy S, Banerjee P, Pierre J, Higgins D, Dutta S, Heda R, et al. Characterization of Gut Microbiome in Liver Transplant Recipients with Non-Alcoholic Steatohepatitis. *Transplantation Direct*. 2020. DOI: 10.1097/TXD.0000000000001033 (in press).
2. Higgins D, Mukerjee N, Jiang Y, Karmaus W, Sulaiman IM, Pal C, Banerjee P. Association of Virulence and Antibiotic Resistance in Salmonella—Statistical and Computational Insights into a Selected Set of Clinical Isolates. *Microorganisms*. 2020. DOI:10.3390 /microorganisms8101465
3. Higgins D, Karmaus W, Jiang Y, Banerjee B, Sulaiman IM, Arshad SH. Infant Wheezing and Prenatal Antibiotic Exposure and Mode of delivery: A Prospective Birth Cohort Study. *Journal of Asthma*. 2020; 1-12. DOI: 10.1080/02770903.2020.1734023
4. Higgins D, Pal C, Sulaiman IM, Jia C, Zerwekh T, Dowd SE, et al. Application of high-throughput pyrosequencing in the analysis of microbiota of food commodities procured from small and large retail outlets in a U.S. metropolitan area – A pilot study. *Food Research International*. 2017;105:29–40. DOI.org/10.1016/j.foodres.2017.10.057
5. Higgins D, Jiang Y, Karmaus W, Sulaiman IM, Pal C, Banerjee P. Association between Antibiotic Resistance Genes and Retail Food Items from a Point Prevalence Study: Using PCR, MiSeq, and HiSeq. **[In Progress]**

## PROFESSIONAL PRESENTATIONS

1. Jia C, Bartelli D, Fu X, Higgins D, Turchi J, Robinson A, Randall SN, Rudd L, Banerjee P. 2020. Identification and mediation of indoor environmental risks in early childhood learning centers. 2020 APHA Annual Meeting. San Diego, CA. Oct. 24-28, 2020. [Poster presentation]
2. Bartelli D, Jia C, Fu X, Higgins D, Turchi J, Robinson A. 2020. Reducing environmental risks in childcare centers. TPHA 2020 Annual Conference. Virtual. September 11, 2020. [Poster presentation]
3. Higgins D, Y. Jiang, Sulaiman I. M., Hanna S., Dunn J., and Banerjee P. Association between Drug-Resistant Phenotypes and Selected Virulence Genes of Salmonella Clinical Isolates from Tennessee, presented at the American Society of Microbiology annual meeting, June 20-24, 2019. San Francisco, CA [Poster presentation]
4. Higgins D, Sulaiman I. M., Hanna S., Dunn J., and Banerjee P. Status of selected virulence genes in antibiotic-resistant and sensitive Salmonella clinical isolates from Tennessee, presented at the

International Association for Food Protection annual meeting, July 9-12, 2018. Salt Lake City, UT [Poster presentation]

5. Higgins D, Pal C, Sulaiman IM, and Banerjee P. Microbiota of Retail Foods Available to Population of Different Socioeconomic Status - Implication to Food Safety, presented at the International Association for Food Protection annual meeting, July 9-12, 2017. Tampa, FL [Poster presentation]
6. Higgins D and Banerjee P. Microbiological Safety of Retail Foods Available in Low and High Socioeconomic Neighborhoods in Memphis Metropolitan Area, presented at the The University of Memphis Graduate School Research Forum, March 15, 2017. Memphis, TN [Oral presentation].
7. Higgins D and Banerjee P. Comparing Quality and Safety of Foods Sold in Low vs. High Income Neighborhoods, presented at the Nashville Legislative Plaza, February 8, 2017. Nashville, TN [Poster presentation].