

Aeriel Belk

232 Upchurch, Auburn AL, 36849

aeriel.belk@auburn.edu

(970) 232-5409

Educational Details

Colorado State University

Aug 2021

Doctor of Philosophy: Animal Science

Certificate: Data Analysis

Dissertation: The microbiome surrounding death and decay: microbial ecology of food processing, meat spoilage, and human decomposition environments

Texas A&M University

May 2017

Master of Science: Animal Science

Certificates: Food Safety, Meat Science

Thesis: Comparison of *Salmonella* presence in bovine lymph nodes across feeding stages

Colorado State University

May 2015

Bachelor of Science: Animal Science

Professional Experience

Assistant Professor

August 2022 – Present

Department of Animal Science, Auburn University

Mentored students:

- Current:
 - Committee Chair: 3 (M.S.), 1 (Ph.D.)
 - Committee Member: 5 (M.S.)
- Graduated:
 - Committee Chair: 1 (M.S.)
 - Committee Member: 8 (M.S.)
- Undergraduate research: 2

Postdoctoral Researcher

August 2021 – July 2022

Joint Institute for Food Safety and Applied Nutrition

Supervisor: Dr. Jianghong Meng; jmeng@umd.edu

Graduate Research Assistant

July 2017 – July 2021

Metcalf Lab, Animal Sciences, Colorado State University, Fort Collins, CO

Supervisor: Dr. Jessica Metcalf; jessica.metcalf@colostate.edu

Graduate Research/Teaching Assistant

August 2015-June 2017

Food Microbiology Laboratory, Texas A&M University, College Station, TX

Meat Science Quality Laboratory, Texas A&M University, College Station, TX

Supervisor: Dr. Jeff Savell; j-savell@tamu.edu

Quality Assurance Intern

Summer, 2015

Breeders and Packers Uruguay, Durazno, Uruguay

Quality Assurance Intern

Summer, 2014

Colorado Premium Beef, Greeley, CO

Undergraduate Research Assistant

January 2013-August 2015

CSU Center for Meat Safety and Quality, Fort Collins, CO

Undergraduate Research Assistant

June 2011-May 2015

CSU Animal Reproduction and Biotechnology Laboratory, Fort Collins, CO

Publications

Undergraduate and Graduate School

Belk, A.D., T. Duarte, C. Quinn, D.A. Coil, K.E. Belk, J.A. Eisen, J.C. Quinn, J.N. Martin, X. Yang, J.L. Metcalf. 2021. Air versus water chilling of chicken: a pilot study of quality, shelf-life, microbial ecology, and economics. *mSystems*. 6(2) e00912-20. DOI: 10.1128/mSystems.00912-20.

Dillon MR, Bolyen E, Adamov A, **A.D. Belk**, Borsom E, Burcham Z, Debelius JW, Deel H, Emmons A, Estaki M, Herman C, Keefe CR, Morton JT, Oliveira RM, Sanchez A, Simard A, Vázquez-Baeza Y, Ziemski M, Miwa, HE, Kerere TA, Coote C, Bonneau R, Knight R, Oliveira G, Gopalasingam P, Kaehler PD, Cope EK, Metcalf JL, Robeson MS, Bokulich NA, Caporaso JG. 2021. Experience and lessons learned from two virtual, hands-on microbiome bioinformatics workshops. *PLOS Comp Bio*.

Belk, A.D., H.L. Deel, Z.M. Burcham, R. Knight, D.O. Carter, J.L. Metcalf. 2019. Animal models for understanding microbial decomposition of human remains. *Drug Discover Today: Disease Models* 28. DOI: doi.org/10.1016/j.ddmod.2019.08.013.

Belk, A.D., Xu, Z.Z., Carter, D.O., Lynne, A., Bucheli, S., Knight, R., Metcalf, J.L. 2018. Microbiome data accurately predicts the postmortem interval using Random Forest regression models. *Genes* 9 (104). DOI: 10.3390/genes9020104.

Arnold, A. N., **A. D. Belk**, K. J. Nickelson, J. E. Sawyer, D. B. Griffin, T. M. Taylor, J. W. Savell, and K. B. Gehring. 2018. Impact of feeding stage, cattle source, and season on *Salmonella* prevalence in bovine lymph nodes. *Proc 64th International Congress of Meat Science and Technology*, Melbourne, Australia.

Weinroth, M. D., **A. D. Belk**, & K. E. Belk. History, Development, and Current Status of Food Safety Systems Worldwide. *Animal Frontiers*. 2018. 8(4) 9-15. DOI: 10.1093/af/vfy016.

Belk, A.D., Arnold, A.N., Sawyer, J.D., Griffin, D.B., Taylor, T.M., Savell, J.W., Gehring, K.B. 2018. Comparison of *Salmonella* prevalence rates in bovine lymph nodes across feeding stages. *J. Food Prot*. 81(4):549-553. DOI: 10.4315/0362-028X.JFP-17-254.

Twenter, H., **A.D. Belk**, K.M. Klohonz, L. Bass, G.J. Bouma, J.E. Bruemmer. 2017. An investigation into miRNAs in the equine epididymis as potential regulators of spermatozoal maturation. *J. Equine Vet Sci*. 48:61-68. DOI: 10.1016/j.jevs.2016.07.023.

Hergenreder, J., A. Cameron, K.M. Klohonz, J. da Silveira, **A.D. Belk**, R. Veeramachaneni, G.J. Bouma, J.E. Bruemmer. 2016. Circulating miRNAs as potential alternative cell signaling associated with maternal recognition of pregnancy in the mare. *Biol. Reprod*. 95(6):124, 1-12. DOI:10.1095/biolreprod.116142935.

Postdoctoral Scholar

Weinroth, M.D., **A. D. Belk**, C. Dean, N. Noyes, D.K. Dittoe, M.J. Rothrock, Jr., S.C. Ricke, P.R. Myer, M.T. Henniger, G.A. Ramirez, B.B. Oakley, K.L. Summers, A.M. Miles, T.B. Ault-Seay, Z. Yu, J.L. Metcalf, J. Wells. 2022. Considerations and best practices in animal science 16S rRNA gene sequencing microbiome studies. *Journal of Animal Sciences*. 100(2). DOI: doi.org/10.1093/jas/skab346.

Belk, A.D., A.N. Frazier, L.K. Fuerniss, R. Delmore, K.E. Belk, B. Borlee, I. Geornaras, J.N. Martin, J.L. Metcalf. 2022. A Pilot Study: The development of a facility-associated microbiome and its association with the presence of *Listeria* spp. in one small meat processing facility. *Microbiology Spectrum*. e02045-22 . DOI: 10.1128/spectrum.02045-22.

Faculty

Belk, A.D. 2025. Microbiome's place in meat: Contributions of the meat processing built environment microbiome to pathogen persistence. *Meat and Muscle Biology* 9 (1). DOI: 10.22175/mmb.18156.

Frazier AN, L. Ferree, **A.D. Belk**, K. Al-Lakhen, M.C. Cramer, J.L. Metcalf. 2025. Stochasticity highlights the development of both the gastrointestinal and upper-respiratory-tract microbiomes of neonatal dairy calves in early life. *Animals* 15(3):361. DOI: 10.3390/ani15030361.

- Burcham, Z.M., **A.D. Belk**, B.B. McGivern, A. Bouslimani, P. Ghadermazi, C. Martino, L. Shenhav, A.R. Zhang, P. Shi, A. Emmons, H.L. Deel, Z.Z. Xu, V. Nieciecki, Q. Zhu, M. Shaffer, M. Panitchpakdi, K.C. Weldon, K. Cantrell, A. Ben-Hur, S.C. Reed, G.C. Humphry, G. Ackermann, D. McDonald, S. Hung, J. Chan, M. Connor, D. Boyd, J. Smith, J.M.S. Watson, G. Vidoli, D. Steadman, A.M. Lynne, S. Bucheli, P.C. Dorrestein, K.C. Wrighton, D.O. Carter, R. Knight, J.L. Metcalf. 2024. A conserved interdomain microbial network underpins cadaver decomposition despite environmental variables. **Nature Microbiology** 9, 595–613. 10.1038/s41564-023-01580-y.
- Frazier, A.N., A.D. Belk, M.R. Beck, J.A. Koziel JA. 2024. Impact of methane mitigation strategies on the native ruminant microbiome: A protocol for a systematic review and meta-analysis. *PLOS ONE* 19(8): e0308914. DOI: 10.1371/journal.pone.0308914.
- Douglas, S.L., G.M. Bernardez-Morales, B.W. Nichols, G.F. Johnson, L.S. Barahona-Dominguez, A.P. Jessup, **A.D. Belk**, J.J. Ball, S. Cho, J.T. Sawyer. 2024. Inclusion of beef heart in ground beef patties alters quality characteristics and consumer acceptability as assessed by the application of electronic nose and tongue technology. *Foods* 13(811). DOI: 10.3390/foods13050811.
- Bernardez-Morales, G.M., B.W. Nichols, S.L. Douglas, **A.D. Belk**, T.D. Brandebourg, T.M. Reyes, J.T. Sawyer. 2024. Bloom development from frozen to fresh of vacuum packaged steaks. *Journal of Food Science and Nutrition Research* 7.
- Bernardez-Morales, G.M., S.L. Douglas, B.W. Nichols, R.J., Barrazueta-Cordero, **A.D. Belk**, T.D. Brandebourg, T.M. Reyes, J.T. Sawyer. 2024. Vacuum packaging can protect ground beef color and oxidation during cold storage. *Foods* 13(2841). DOI:10.3390/foods13172841.
- Nichols, B.W., G.M. Bernardez-Morales, S.L. Douglas, G.F. Johnson, R.J. Barrazueta-Cordero, **A.D. Belk**, J.J. Ball, J.T. Sawyer. Thermoforming vacuum packaging influences fresh pork loin chop characteristics. *Foods* **2024**, 13, 2701. <https://doi.org/10.3390/foods13172701>.
- Nichols, B.W., S.L. Douglas, G.M. Bernardez-Morales, G.F. Johnson, L.S. Barahona-Dominguez, M.D. Hayden, **A.D. Belk**, J.J. Ball, S. Cho, J.T. Sawyer. 2024. Assessing Pork Quality during Retail Storage using objective measurements. *Journal of Food Science and Nutrition Research* 7: 157-169.
- Bernardez-Morales, G.M., B.W. Nichols, S.L. Douglas, **A.D. Belk**, T.D. Brandebourg, T.M. Reyes, J.T. Sawyer, J.T. 2024. Bloom development from frozen to fresh of vacuum packaged steaks. *Journal of Food Science and Nutrition Research*. 7: 13-18.
- Bernardez-Morales, G.M., B.W. Nichols, S.L. Douglas, **A.D. Belk**, T.D. Brandebourg, T.M. Reyes, J.T. Sawyer, J.T. 2023. Extended Storage of Beef Steaks Using Thermoforming Vacuum Packaging. *Foods* 12, 2922. 10.3390/foods12152922.
- Douglas, S.L., G.M. Bernardez-Morales, B.W. Nichols, **A.D. Belk**, J.J. Ball, and J.T. Sawyer. 2023. Influence of Cookery Method on Frozen Ground Beef Patties. *Journal of Food Science and Nutrition Research* 6:165-170.
- Douglas, S.L., G.M. Bernardez-Morales, B.W. Nichols, **A.D. Belk**, T.M. Reyes, J.J. Ball, J.T. Sawyer. 2023. Influence of Sous Vide Cooking on Ground Beef Patties. *Foods*, 12, 3664.
- Wagoner M.P., T.M. Reyes, V.E. Zorn, M.M. Coursen, K.E. Corbitt, B.S. Wilborn, C.W. Starkey, T.D. Brandebourg, **A.D. Belk**, T. Bonner, J.T. Sawyer. 2022. Vacuum packaging maintains fresh characteristics of previously frozen beef steaks during simulated retail display. *Foods* 11(19):3012. DOI: 10.3390/foods11193012
- Wagoner M.P., T.M. Reyes, V.E. Zorn, M.M. Coursen, K.E. Corbitt, B.S. Wilborn, T.D. Brandebourg, **A.D. Belk**, T. Bonner, J.T. Sawyer. 2022. Influence of vacuum packaging on instrumental surface color characteristics of frozen beef steaks. *Journal of Food Science and Nutrition Research* 5:658-663.

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Fuerniss, L.K., H.E. Davis, **A. D. Belk**, J.L. Metcalf, T.E. Engle, J.A. Scanga, F.B. Garry, T.C. Bryant, J.N. Martin. 2022. Liver abscess microbiota of feedlot steers finished in natural and traditional management programs. *Journal of Animal Sciences* skac252. DOI: 10.1093/jas/skac252.

Book Chapters

Deel, H., Bucheli, S., **Belk, A.**, Ogden, S., Lynne, A., Carter, D. O., Knight, R., Metcalf, J. L. Using microbiome tools for estimating the postmortem interval. In B. Budowle (Eds.) *Microbial Forensics*.

Funding

Active Funding

The Meat Institute

Targeting Foodborne Pathogens In The Beef Industry Through An Integrated Analysis Of The Beef Processing System

Collaborators: Texas Tech University, International Center for Food Industry Excellence, University of Nebraska – Lincoln, Auburn University, ARS - Meat Animal Research Center

- \$482,000 total/\$66,400 Auburn subcontract
- Jan. 2025 – Jan. 2026
- Expected outputs: 2-3 publications, multiple conference presentations, ongoing collaborations, 1 graduate student thesis project

Alabama Cattlemen's Association

Strengthening Alabama cattlemen through enabling better fly control: Determining the gut microbiota in the horn fly as the first step to impairing it and preventing flies from thriving

Collaborators: Terry Brandebourg (PI), John Beckmann

- \$10,000
- Oct. 2024 – Sept. 2025
- Expected outputs: 1 publication,
- 1 graduate student thesis project (Bronwyn Stearns)

USDA-ARS Non-Assistance Cooperative Agreement

Strategies to Control Poultry Associated Foodborne Pathogens at the Retail Level

- \$429,812
- Oct. 2024 – Oct. 2025
- Expected outputs: 5-6 publications, conference presentations
- 2-3 graduate student thesis projects, support for postdoctoral scholar

USDA-NIFA AFRI Foundational and Applied Science Program

The wisdom of the quorum: How biofilm microbiomes can support or inhibit *Listeria monocytogenes* growth in small meat processing facilities

- \$648,627
- June 2023 – May 2027
- Expected outputs: 2 publications, conference presentations
- 1 graduate student dissertation project (Noel Claudio-Soto)

Alabama Agricultural Experiment Station AgRSEED Program

The influence of pathogen presence on the meat spoilage microbiome and quality deterioration

- \$49,836
- Sept. 2023 – Sept. 2025
- Expected outputs: 1 publication, 2 conference presentations
- 1 graduate student thesis project (Barrett Maloney)

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Completed

Beef Cattle Production Research Program

Predicting the ground beef shelf life from the initial microbial community profile

- \$10,000
- Sept. 2023 – Sept. 2024
- Outputs: 1 publication, 2 conference presentations, 1 graduate student thesis project (Isabella Gafanha)

Beef Cattle Production Research Program

An investigation of the impact of transportation stress on beef microbiomes and pathogen shedding

Alabama Beef Checkoff Council

- \$10,000
- Sept. 2022 – Sept. 2023
- Outputs: 1 publication, 1 conference presentation, 1 graduate student thesis project (Abigail Krikorian)

Graduate Research Fellowship Program in Science, Technology, Engineering and Mathematics

Improving Machine Learning Methods for Predicting the Postmortem Interval Using Microbiome Data

National Institutes of Justice

Award number: 2018-R2-CX-0017

\$150,000

Jan. 2019 – Dec. 2021

Generating, Analyzing, and Using Sensory and Sequencing Information Fellowship

National Science Foundation and CSU Office of the Vice President of Research

Award number: DGE-1450032

\$32,000

July 2018 – June 2019

Seminars and Presentations

Academic

Reciprocal Meat Conference, June 23, 2025. “Biofilms: An Introduction That Will Stick With You.” *Invited Talk*.

Pennsylvania State University One Health Microbiome Center Seminar Series. Dec 13, 2024. “How The Microbiome Of Animal Systems Supports (Or Hinders) Pathogen Persistence.” *Invited Talk*.

Pennsylvania State University Department of Animal Science Seminar. Dec 12, 2024. “The Microbial Ecology of Meat Science: Do Microbiomes Hold the Key to Meat Safety?” *Invited Talk*.

Pennsylvania State University Department of Food Science Seminar (Virtual), Nov 14, 2024. “Microbiome Impacts on Pathogen Persistence in Food Safety Systems.” *Invited Talk*.

University of Arizona Food Safety Conference (virtual). Oct. 29, 2024. “Microbiome Impacts on Pathogen Persistence in Food Safety Systems.” *Invited Talk*.

Summer Science Program International, Genomics Session. July 11, 2024. “Explorations Through Food Microbiology.” Georgetown, DC. 30 Students. *Invited Talk*.

Reciprocal Meat Conference, June 18, 2024. “Contributions of the Meat Processing Built Environment Microbiome to Pathogen Persistence”. Attendance ~100. *Invited Talk*.

Educational Program for A.C. Legg. May 7, 2024. “A Primer on Meat Microbiology.” Auburn, AL. ~40 participants. *Invited Talk*.

Auburn University Entomology and Plant Pathology Departmental Seminar. Oct 30, 2023. “A Primer on Food Safety and the Meat Microbiome”. Auburn, AL. *Invited Talk*.

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- Auburn University European Union Delegation. Oct 21, 2022. “Meat and Meat Product Safety for a Global Consumer”. Auburn, AL. *Invited Talk*.
- American Society of Microbiology: Microbe Conference. June 9, 2022. “The Spatial Development of a Core Meat Processing Facility Microbiome”. *Oral Presentation*.
- Colorado State University Graduate Student Showcase. Nov. 16, 2020. “The Microbiome of a Newly Constructed Meat Processing Facility”. Fort Collins, CO. *Poster Presentation*.
- International Congress of Meat Science and Technology PhD Research Competition. Aug 3, 2020. “The microbiome of a newly constructed meat processing facility differs based on room function and time”. Virtual. *Poster Presentation*.
- Colorado State University Three-Minute Thesis Competition. Feb. 8, 2020. “The impact of chilling method on the chicken microbiome”. Fort Collins, CO. *Lightning Talk*.
- Colorado State University Graduate Student Showcase. Nov. 12, 2019. “The impact of chilling method on chicken microbiome and quality”. Fort Collins, CO. *Poster Presentation*.
- International Symposium on Human Identification. Sept. 2019. “Using Microbiome Tools to Estimate the Postmortem Interval of Human Remains”. Palm Springs, CA. *Panelist*.
- 2019 Reciprocal Meat Conference. June 25, 2019. “How Computer Science Can Be Used in Combination with Meat Science”. Fort Collins, CO. *Invited Talk*.
- 2019 Reciprocal Meat Conference. June 23, 2019. “Utilizing Microbiome and Bioinformatic Tools to Reduce Food Waste in Poultry”. Fort Collins, CO. *Poster Presentation*.
- JBS-CSU Graduate Research Symposium. May 23, 2019. “Using Microbiome and Bioinformatic Tools to Reduce Food Waste in Poultry”. Fort Collins, CO. *Oral Presentation*.
- 1st Annual Front Range Microbiome Symposium. April 24, 2019. “Building a microbial model to estimate the postmortem interval using data collected during the spring season at three anthropological facilities”. Fort Collins, CO. *Poster Presentation*.
- 71st Annual Meeting of the American Academy of Forensic Sciences. February 21, 2019, 4:30pm. “Building a Microbial Model to Estimate the Postmortem Interval Using Data Collected During the Spring Season at Three Anthropological Facilities”. **Aeriel D Belk**, Heather Deel, David O. Carter, Sibyl Bucheli, Aaron Lynne, Melissa Conner, Dawnie Steadman, Giovanna Vidoli, Rob Knight, Jessica L. Metcalf. Baltimore, MD.
- 71st Annual Meeting of the American Academy of Forensic Sciences. February 18, 2019. “Stakeholder Meeting for Estimating the Postmortem Interval Using Microbes: Active to Advanced Decay”. Baltimore, MD. *Oral Presentation*.
- Colorado State University Graduate Student Showcase, Nov. 13, 2018; “Using the Microbiome to Estimate the Postmortem Interval.” Fort Collins, CO. *Poster Presentation*.
- American Society of Microbiology: Rocky Mountain Branch Meeting, Nov. 10, 2018; “Using the Skin and Gravesoil Microbiome to Estimate the Postmortem Interval of Human Remains”. Fort Collins, CO. *Oral Presentation*.
- Colorado State University GAUSSI Symposium, June 25, 2018; “Investigating the microbial, sensory, and physiochemical differences between air and water chilled chicken carcasses.” *Lightning Talk*.
- Colorado State University Graduate Student Showcase, Nov. 9, 2017; “The development of microbial clocks to estimate the postmortem interval of human remains at three anthropological research facilities.” *Poster Presentation*.
- Beef Industry Food Safety Council Safety Summit, March 1, 2017; “Comparison of *Salmonella* in the bovine lymph node across feeding stages.” San Antonio, TX. *Oral Presentation*.

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Popular Media

MeatsPad Podcast (American Meat Science Association), March 12, 2025; “The Role of Microbiomes in Meat Science and Food Safety with Dr. Aeriel Belk”. Published at www.meatpad.com/episode/0d28662e-7ac8-44ec-866d-4412142d9e1a. *Interview*.

Alabama Cattlemen Magazine, March 2024; “Animal Science News: Aeriel Belk”. Published at www.bamabeef.org/magazine. *Author*.

The Season Magazine, by Taylor Edwards. “Belk Brings Fresh Expertise to the Field of Decay.” The Season 2024 Vol 2. Published at: theseason.agriculture.auburn.edu/issue/2024-volume-1/decompose. *Interview write-up*.

Alabama Public Television: Spotlight on Agriculture, Jan. 31, 2024; “Food Safety”. Published at: aptv.org/watch/spotlight-agriculture/spotlight-on-agriculture-kj3zse/. *Interview*.

Teaching and Instruction

Instructor of Record

ANSC3700: Muscle Foods

2022 - Present

Auburn University, Auburn, AL

- Approx. 35 undergraduate students, fall semesters
- Developed syllabus, lectures, labs
- Innovative teaching methods: Standards-based grading

ANSC7700: Muscle Foods and Applied Muscle Biology

2023 – Present

Auburn University, Auburn, AL

- Approx. 8 graduate students, spring semesters
- Designed and developed entire course

ANSC5700/6700: Microbiology of Meat and Other Foods

Spring 2025

Auburn University, Auburn, AL

- Graduate and Undergraduate level instruction
- Designed and developed entire course

ANSC3310: Introduction to Meat Selection and Grading

2024 – Present

Auburn University, Auburn, AL

- Approx. 15 undergraduate students, fall semesters
- Developing students to participate on the meat judging team
- Mentor graduate teaching assistant coach in leading instruction

ANSC4310: Introduction to Meat Selection and Grading

Spring 2025

Auburn University, Auburn, AL

- Continued instruction of students actively participating in the meat judging competitive program
- Mentor graduate teaching assistant coach in leading instruction

Graduate Teaching Assistant

ANEQ505: Introduction to the Microbiome of Animal Systems

2018 - 2020

Colorado State University, Fort Collins, CO

- Assisted with design of course and syllabus
- Provided lectures on various microbiome topics, tutorial, and lab sections
- Organized data collection and analysis for class research projects

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Short Courses, Extension, and Outreach Programming

Instructor, Beef Tips

2022-2024

Auburn University, Auburn, AL

Programming for Golden State Foods

Aug. 15, 2022, Aug. 14, 2024

Instructor, A.C. Legg Beef Training

2022-2024

Auburn University, Auburn, AL

May 6, 2024

Instructor, QIIME2 Microbiome Analysis Workshop

2018-2020

Colorado State University, Fort Collins, CO

Nov. 19 – 20, 2018

Nov. 18 – 19, 2019

Nov. 23 – 24, 2020

One Health Institute, University of Bern, Bern, Switzerland

Aug. 24, 2019

University of Wyoming, Laramie, WY

Oct. 24-25, 2019

National Institutes of Health, Bethesda, MD

Jan. 8 – 10, 2020

Sam Houston State University, Huntsville, TX

Jan 13, 2020

CZI-CABANA Virtual Workshop

Oct. 5 – 8, 2020

Graduate Assistant, USDA-FSIS Enforcement Investigations and Analysis Officer Training

2015 – 2017

Texas A&M University, College Station, TX

Three Courses

Graduate Assistant, HACCP: Beyond Basics

2015 – 2017

International HACCP Alliance, College Station, TX

Four Courses

Graduate Assistant, Beef 101/706

2015 – 2017

Texas A&M Agrilife Extension, College Station, TX

Aug., Dec. 2015; Jan., June, Aug, Dec. 2016; Jan. 2017

Honors & Awards

Certificate of Appreciation for Direct Support of the Special Forces

2024

CSU Vice President of Research Fellow

2020 – 2021

CSU Graduate Student Showcase – Outstanding Animal Science Presentation

2020

CSU Three-Minute Thesis Competition – Award winner

2020

International Congress of Meat Science and Technology Research Competition – 1st place, PhD Division

2020

Reciprocal Meat Conference Graduate Research Competition – 1st place, PhD Division

2019

JBS-CSU Graduate Research Competition – 1st place, PhD Division

2019

American Society for Microbiology Science Teaching Fellow

2016 – 2017

Texas A&M Zerle Carpenter Outstanding Graduate Student in Meat Science

2016

Texas A&M Excellence Fellow

2015 – 2016

Bob Ondrusek Memorial Scholarship

2015

North American Meat Institute Scholarship Recipient

2014

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CSU Outstanding Animal Science Senior
CSU Outstanding Animal Science Sophomore

2014
2012

Leadership and Service

External

Peer Review	2020 – Present
mSystems	
mSphere	
Frontiers in Microbiology	
Frontiers in Water	
Meat and Muscle Biology	
Translational Animal Science	
American Meat Science Association	
Quiz Bowl Committee	2022 – Present
Student Activities Committee	2015– 2019
Women in the Meat Industry Network:	2023 – Present
Networking Committee	2023-2024
Southeastern Branch of the American Society of Microbiology: Executive Committee	2023 – Present

Academic

Auburn Animal Science Departmental Committees	
Meat Laboratory Users Group	2024 – Present
Graduate Program Committee	2024 – Present
Undergraduate Curriculum Committee	2023 – 2025
Social Committee	2023 – 2025
Equine Science Spring Break Trip Chaperone	March 2024
Auburn Student Organization Advisor	
Auburn Meat Judging Team	2024-Present
Auburn Meat Science Quiz Bowl	2023 – Present
Auburn Block & Bridle	2023 – Present
Auburn Collegiate Horsemen	2022 – Present
CSU Graduate Researchers Across Microbiomes: Co-Founder, Co-Chair	2018 – 2021
CSU Bioinformatics Club	2018 – 2021
CSU Graduate Student Council	2018 – 2021
CSU Microbiome Network	2017 – 2020
CSU Cyberbiosecurity Core	2017 – 2018
CSU Animal Science Graduate Student Association: Vice President, President	2017 – 2021
Texas A&M Meat Science Quiz Bowl Team: Coach	2017
Texas A&M Animal Science Graduate Student Association:	2015 – 2017
Texas A&M Meat Judging Team: Assistant Coach	2015 – 2016
CSU Meat Animal Evaluation Team Member	2015
CSU Meat Judging Team Member	2012 – 2013

Professional Affiliations

American Society of Animal Sciences (Meat Science Programming Committee)	2023 – Present
International Association of Food Protection	2023 – Present
Alabama Cattlemen's Association	2022 – Present
Women in the Meat Industry Network	2021 – Present
Southeastern Branch of ASM (Alabama Policy Member)	2023 – Present
American Society for Microbiology	2016 – Present
American Meat Science Association	2013 – Present

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Special Trainings and Certificates

Auburn University Biggio Center Course (Re)Design Training	2024
British Retail Consortium Certification	2020
Strategies and Techniques for Analyzing Microbial Population Structures (STAMPS) Course	2018
Produce Safety Training	2017
Hazard Analysis of Critical Control Points (HACCP) trained	2016