# ANGELA M. SHAW PhD

5411 Tennessee Street

2577 Food Science Building

added/manufacturing industries.

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EDUCATION	
2006-2010	Ph.D. in Animal Science, emphasis in Food Microbiology
	Department of Animal and Food Science, Texas Tech University
	Dissertation: Establishment of a pre-harvest spinach intervention against
	Escherichia coli O157:H7 using lactic acid bacteria.
2004-2006	M.S. in Animal Science, emphasis in Meat Safety
	Department of Animal Science (Meat Science), Iowa State University
	Thesis: Use of carbon monoxide combined with carbon dioxide for
	modified atmosphere packaging of pre- and post-rigor fresh pork sausage
	to improve shelf life.
1999-2003	B.S. in Animal Science, emphasis in Product Development
	Department of Animal Science, Iowa State University
CERTIFICATIONS	T 17 1 0 D 1 0 0 1111 0 7 7 11
2016-Present	Lead Trainer for Produce Safety Alliance Grower Training
2016-Present	Trainer Food Safety Preventive Control Alliance Animal Food
2015-Present	Lead Trainer for Food Safety Preventive Control Alliance Human Food
2009-Present	Trainer Good Agricultural Practices/ Good Manufacturing Practices
2006-Present	Instructor Hazard Analysis Critical Control Point (HACCP)
2006-Present	ServSafe® through National Restaurant Association
PROFESSIONAL E	XPERIENCE
2017-present	Associate Professor, Department of Food Science and Human Nutrition,
· · 1	Iowa State University, Ames, IA
	Appointment: 55% Research; 40% Extension; 5% Service
2011-2017	Assistant Professor, Department of Food Science and Human Nutrition,
	Iowa State University, Ames, IA
	Appointment: 60% Research; 40% Extension
2006-2011	BSL2 Food Safety Pathogen Laboratory Manager, Department of
	Animal and Food Science, Texas Tech University, Lubbock, TX
2010-2011	Post-Doctoral Scholar, Department of Animal and Food Science, Texas
	Tech University, Lubbock, TX
2006-2010	Graduate Research/Teaching Assistant, Department of Animal and
	Food Science, Texas Tech University, Lubbock, TX
2004-2006	Graduate Research Assistant, Department of Animal Science, Iowa
	State University, Ames, IA
Food Safety Expert	ise: Fruit, vegetable, meat, raw agricultural communities, and value

Countries Serviced Through Research and Extension: United States of America (including U.S. Virgin Islands and Puerto Rico), China, France, Mexico, Slovenia, Romania, Bhutan, Ethiopia, Uganda, and Burundi

PROFESSIONAL H	IONORS, AWARDS, RECOGNITIONS
2020	College of Agriculture and Life Sciences Dean Lee R. Kolmer Award for
	Excellence in Applied Research
2020	Iowa State University Extension and Outreach Excellence in Research-
	Based Programming Award (On Farm Produce Safety Team Award)
2020	College of Agriculture and Natural Resources Extension and Outreach
	Team Award (On Farm Produce Safety Team Award)
2020	2020 Women Impacting Iowa State University Calendar
2020	YWCA Women of Achievement Award
2019	Iowa State University Award for Inclusive Excellence
2018	College of Agriculture and Life Sciences Faculty Award for Diversity
	Enhancement
2017	Texas Tech University Advanced Degree Graduate of Distinction-Hall of
	Fame Award by Department of Animal and Food Sciences
2017	Women of Innovation Awards-Technology Association of Iowa Award
	Finalist
2016	Iowa State University Recognized as a "Change Agent"
2016	Iowa State University Extension and Outreach Creativity in Service to All
	Iowans Award
2015	Iowa Section Institute of Food Technologists Outstanding Volunteer
2013	Iowa Section Institute of Food Technologists Outstanding Volunteer
2011	Iowa STATEment Maker provided by Iowa State University Alumni
	Association

# LEADERSHIP

Myers Briggs Type Indicator: ENFJ (Extraversion, Intuition, Feeling, Judging)

Korn Ferry 360 Feedback Report (Highest Skills): Managing diversity, Fairness to direct reports, Action Oriented, Perserverance, Time Management, Customer Focused, Integrity and trust, Ethics and values, Timely decision making, Organization, Intelletual horsepower, Process

management, Drive	for results, Priority setting, Planning, and Building an effective teams.
2015-Present	Lead of Strategic Area of Excellence Group "Community Health and Food
	Safety Education" in Department of Food Science and Human Nutrition at
	Iowa State University
2016-Present	Project Director of North Central Regional Food Safety Modernization
	Act Center ( <u>www.ncrfsma.org</u> ) -FDA/USDA Funded Center (\$2.6 Mil)
2016-Present	Project Director of Iowa On-Farm Produce Safety Team
	( <u>https://www.safeproduce.cals.iastate.edu/</u> ) -FDA and Iowa Department of
	Agriculture and Land Stewardship Funded Center (\$1.2 Mil)
2017-Present	Co-Chair of Black Faculty and Staff Association at Iowa State University
2021-Present	Inaugural Chair of the Diversity, Equity, and Inclusion Committee for the
	International Association for Food Protection (IAFP)
2019-2020	Lead 21 Program (Class of 15): provides leadership and professional
	development training for faculty and professionals within the land-grant

development training for faculty and professionals within the land-grant

system (https://lead-21.org/)

See "Service and Outreach Section" for other current and past leadership and member position

# SCHOLARLY PUBLICATIONS AND PRESENTATIONS

# Refereed Journal Articles (46)

- 1. Nabwiire, L.\*, Shaw, A., Nonnecke, G., Minner, D., Johnsen, E., and L. Peterson. 2022. Cultural Sensitivity: A Requirement when Developing Food Safety Interventions. Journal of Extension: 60 (1). https://tigerprints.clemson.edu/joe/vol60/iss1/4/
- 2. Bhullar, M\*, Perry, B\*, Monge, A.\*, Nabwiire, L.\*, and **A. Shaw, A**. 2021. *Escherichia coli s*urvival on strawberries and unpacked romaine lettuce washed in contaminated water. Foods. <a href="https://www.mdpi.com/2304-8158/10/6/1390/htm">https://www.mdpi.com/2304-8158/10/6/1390/htm</a>
- 3. Nabwiire, L.\*, Shaw, A., Nonnecke, G., Minner, D., Johnsen, E., and L. Peterson. 2021. Addressing food safety educational needs of food handlers in the U.S. Virgin Islands. Food Protection Trends: 41 (4): 400-408
- 4. Perry, B.\*, Shaw, A., Enderton, A.E., Coleman, S.S., and E.E. Johnsen. 2021. North Central Region Produce Grower Training: Pre-Test and Post-Test Knowledge Change and Produce Safety Behavior Assessment. Food Protection Trends: 41 (3):266-273
- Chen, H. \*\*, Kinchla, A.J., Richards, N., Shaw, A., and Y. Feng. 2021. Produce Growers' On-Farm Food Safety Education: A Review. Journal of Food Protection: 84(4):704-716 DOI: 10.4315/JFP-20-320
- 6. Bhullar, M\*, Shaw, A, Mendonca, A., Monge, A.\*, Nabwiire, L.\*, and E. Thomas-Popo. 2021. Shiga toxin producing *Escherichia coli* in the long-term survival phase exhibit higher chlorine tolerance and less sub-lethal injury following chlorine treatment of romaine lettuce. Foodborne Pathogens: 18(4):276-282
- 7. Eylands, N.J.\*\*, Evans, M.R., and A. Shaw. 2021. Antimicrobial mitigation via saponin intervention on *Escherichia coli* and growth and development of hydroponic lettuce. Hort Tech: 31(2):174-180
- 8. Nazareth, J.\*, **Shaw**, **A.**, Delate, K., and R. Turnbull. 2021. Food safety considerations in integrated organic crop-livestock systems: Prevalence of *Salmonella* spp., and *E.coli* O157:H7 in organically raised cattle and organic feed. *Renewable Agriculture and Food Systems*: 36(1): 8-16
- 9. Kiprotich, S.\*\*, Mendonca, A.F., Dickson, J., **Shaw, A.,** Thomas-Popo, E., White, S., Moutiq, R., and S.A. Ibrahim. 2020. Thyme oil enhances the inactivation of Salmonella enterica on raw chicken breast meat during marination in lemon juice with added yucca schidigera extract. Frontiers in Nutrition, section Nutrition and Food Science Technology: 7: 619023
- 10. Bhullar, M.\*, Monge-Brenes, A.\*, Perry, B.\*, Nabwiire, L.\*, and A. Shaw. 2020. Determining the potential food safety risk associated with dropped produce on floor surfaces in the grocery store. Journal of Food Protection: 84 (2): 315-320.
- 11. Lorena Monge, A.\*, Brown, W., Brecht, J.K., Xie, Y., Bornhorst, E.R., Luo, Y., Zhou, B., Shaw, A. and K. Vorst. 2020. Temperature profiling of open and closed produce display cases in retail grocery stores. Food Control: 113: 107158; <a href="https://www.sciencedirect.com/science/article/abs/pii/S0956713520300748">https://www.sciencedirect.com/science/article/abs/pii/S0956713520300748</a>
- 12. Bhullar, M.\*, **Shaw, A.,** Hannan, J., and S. Andrews. 2020. Extending the holding time for agricultural water testing method EPA 1603 for produce growers. *Water*: 11 (10): 2020; <a href="https://doi.org/10.3390/w11102020">https://doi.org/10.3390/w11102020</a>

- 13. Thomas-Popo, E.\*\*, Mendonca, A.F., Dickson, J., **Shaw, A.**, Coleman, S., Daraba, A.\*, Jackson-Davis, A., and Woods, Floyd. 2019. Isoeugenol significantly inactivates *Escherichia coli* O157:H7, *Salmonella enterica*, and *Listeria monocytogenes* in refrigerated tyndallized pineapple juice with added Yucca schidigera extract. *Food Control*: 106 (December 2019, 106727)
- 14. Overdiep, J.\*, and A. Shaw. 2019. Assisting Food Processors with Food Safety Modernization Act Compliance. *Journal of Extension*: 57 (3): 3TOT4
- 15. Gomez, C., Currey, C., Dickson, R., Kim, H., Hernández, R., Sabeh, N., Raudales, R., Brumfield, R., Laury-Shaw, A., Wilke, A., and S. Burnett. 2019. Controlled Environment Food Production for Urban Agriculture. *HortScience*: 54 (9):1448-1458
- 16. Perry, B.\*, Shaw, A., Johnsen, E., Enderton, A., Strohbehn, C., and L. Naeve. 2019. Assessment of Midwest Growers' Needs for Compliance with The Food Safety Modernization Act Produce Safety Rule. Food Protection Trends: 39 (3):212-217
- 17. Strohbehn, C., Enderton, A., **Shaw, A.,** B. Perry\*, Overdiep, J.\* and L. Naeve. 2019. Determining what do Growers' Need to Comply with the FSMA Produce Safety Rule?. *Journal of Extension*: 56 (7):7RIB1
- 18. **Shaw, A.,** and K. Helterbran\*. 2018. Development of a food safety training for prison farm: Challenges and opportunity. *Journal of Extension*: 56 (7):7IAW8
- 19. Vorst, K, Shivalingaiah, N.\*, Monges Brenes, A.\*, Coleman, S., Mendonca, A., Brown, J., and **A. Shaw**. 2018. Effect of Display Case Cooling Technologies on Shelf-Life of Beef and Chicken. Food Control 94: 56-64
- 20. **Shaw, A.,** Gragg, S.E., Echeverry, A., and M.M. Brashears. 2018. Survival of *Escherichia coli* O157:H7 after application of lactic acid bacteria. Journal of the Science of Food and Agriculture: doi: 10.1002/jsfa.9332
- 21. Wang, F.\*\*, Mendonca, A., Brehm-Stecher, B., Dickson, J., Dispirito, A., and A. Shaw. 2018. Long-term-survival phase cells of Salmonella Typhimurium ATCC 14028 have significantly greater resistance to ultraviolet radiation in 0.85% saline and apple juice. *Foodborne Pathogens and Disease*: 15 (9):538-543
- 22. Eylands, N.J.\*\*, Evans, M.R., and **A. Shaw**. 2018. Efficacy of Saponin Mitigation of *E.coli* under nonsterile and sterile conditions. HortScience 53 (9): S498-S498
- 23. Manu, D.\*\*, A. Mendonca, A. Daraba\*, J. Dickson, J. Sebranek, **A. Shaw**, and S. White. 2017. Antimicrobial efficacy of cinnamaldehyde against *Escherichia coli* O157:H7 and *Salmonella* enterica in carrot juice and mixed berry juices at 4C and 12C. Foodborne Pathogens and Disease 14(5):302-307. doi: 10.1089/fpd.2016.2214
- 24. Daraba, A.\*, Mendonca, A., Manu, D., Dickson, J., Sebranek, J., **Shaw, A.**, and A. Dispirito. 2016. Enhanced destruction of *Salmonella enterica* in carrot and berry juices by a combination of cinnamaldehyde and high-pressure processing. *Journal of Experimental Food Chemistry*: 2:4 (supplement). <a href="http://dx.doi.org/10.4172/2472-0542.C1.006">http://dx.doi.org/10.4172/2472-0542.C1.006</a>
- 25. Elumalai, E.D.\*, **A. Shaw**, D.A. Pattillo, C. Currey, K.A. Rosentrater, and K. Xie. 2016. Use of ultraviolet treatment as a food safety intervention in a model aquaponics system. *Water* <a href="http://www.mdpi.com/2073-4441/9/1/27/pdf">http://www.mdpi.com/2073-4441/9/1/27/pdf</a>
- 26. Svoboda, A.\*, **A. Shaw**, L. Wilson, A. Mendonca, A. Nair and A. Daraba\*. 2016. The effects of produce washes on the quality and shelf life of "cantaloupe" (Cucumis melo var. cantupensis) and "watermelon" (Citrullus lantus var. lanatus). *Journal of Food Quality* DOI:10.1111/jfq.12229

- 27. **Shaw, A.**, K. Helterbran\*, M.M. Evans and C. Currey. 2016. Growth of Escherichia coli O157:H7, Non-O157 Shiga Toxin–Producing Escherichia coli, and Salmonella in Water and Hydroponic Fertilizer Solutions. Journal of Food Protection 79 (12):2179-2183.
- 28. Abdelmassih, K.N., S. Arendt, C.H. Strohbehn, L. Rajagopal, K. Sauer, and **A. Shaw.** 2016. Evaluating impact of food safety messaging posters on observed employees' food safety behavior: A mixed methods approach. *Journal of Foodservice Management and Education* 10 (2): 19-25
- 29. Rajagopal, L., S.W. Arendt, **A. Shaw**, C.H. Strohbehn, and K. Sauer. 2016. Food safety posters for safe handling of leafy greens. *Journal of Extension* 54 (2): 2TOT5.
- 30. Svoboda A.\*, **A. Shaw,** J. Dzubak\*, A. Mendonca, L. Wilson, and A. Nair. 2016. Effectiveness of broad-spectrum chemical produce sanitizers against foodborne pathogens on cantaloupe and watermelon surfaces. *Journal of Food Protection* 79 (4): 524-530.
- 31. Dzubak, J.\*, **A. Shaw**, C. Strohbehn, L. Naeve, and J. Johnson\*\*\*. 2016. Food safety education for students and workers in school gardens and university farms. *Journal of Extension* 54 (1): 1TOT7.
- 32. Roy, A.\*, S. Francis, **A. Shaw**, and L. Rajagopal. 2016. Promoting Food Safety Awareness for Older Adults by Using Online Education Modules. *Journal of Extension* 54 (1): 1TOT8.
- 33. Roy, A.\*, **A. Shaw**, L. Rajagopal, C. Strohbehn, S. Arendt, and K. Sauer. 2016. Use of minimal text posters to improve the microbial status of leafy greens and food contact surfaces in foodservice sites serving older adults. *Food Protection Trends* 36 (2): 123-130.
- 34. **Shaw, A.**, J. Dzubak\*, C. Strohbehn, and L. Naeve. 2016. Improving agricultural workers food safety knowledge through an online curriculum. *Professional Agricultural Workers Journal* 3 (2).
- 35. Myers, M.\*\*, Sebranek, J., Dickson, J., **Shaw, A.**, Tarte, R., Adams, K, and S. Niebuhr. 2016. Implications of decreased nitrite concentrations on *Clostridium perfringens* outgrowth during an Appendix B cooling cycle for ready-to-eat-meats. *Journal of Food Protection* 79 (1): 153-156.
- 36. **Shaw-Laury, A.,** A. Svoboda \*, B. Jie\*, G. Nonnecke, and A. Mendonca. 2015. Survival of *Escherichia coli* on strawberries grown under greenhouse conditions. *Food Microbiology* 46: 200-203.
- 37. **Shaw A.**, A. Svoboda\*, B. Jie\*, A. Daraba\* and G. Nonnecke. 2015. Importance of hand hygiene during the harvesting of strawberries. *HortTechnology* 25 (3):380-384.
- 38. **Shaw**, A., C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Current trends in food safety practices for small growers in the Midwest. *Food Protection Trends* 35 (6):461-469.
- 39. **Shaw, A.,** A. Mendonca, A., and A. Daraba\*. 2015. "Clickers" and HACCP: Educating a diverse food industry audience with technology. *Journal of Extension* 53 (6): 6TOT6.
- 40. **Shaw, A.**, C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Systematic approach to food safety education on the farm. *Journal of Extension* 53 (6): 6IAW4.
- 41. **Shaw, A.**, C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Knowledge gained from good agricultural practices courses for Iowa growers. *Journal of Extension* 53 (5): 5RIB3.
- 42. Hong, S., A. Mendonca, A. Daraba\*, and **A. Shaw**. 2014. Radiation resistance and injury in starved *Escherichia coli* O157:H7 treated with electron-beam irradiation in 0.85% saline and in apple juice. *Foodborne Pathogens and Disease* 11(11): 900-906.

- 43. Brown, AL., JC. Brooks, E. Karunasena, A. Echeverry, **A. Laury**, and MM Brashears. 2011. Inhibition of *Escherichia coli* O157:H7 and *Clostridium sporogenes* in spinach packaged in modified atmospheres after treatment combined with chlorine and lactic acid bacteria. Journal of Food Science Jul 5 doi: 10.1111/j.1750-3841.2011.02260.x.
- 44. **Laury**, **A.**, MV. Alvarado, G. Nace, CZ. Alvarado, JC. Brooks, A. Echeverry and MM. Brashears. 2009. Validation of a lactic acid-based antimicrobial product for the reduction of E. coli O157:H7 and Salmonella on beef tips and whole chicken carcasses. Journal of Food Protection 72 (10): 2208-2211.
- 45. **Laury**, **A.** and J. Sebranek. 2007. Use of carbon monoxide combined with carbon dioxide for modified atmosphere packaging of pre- and post-rigor fresh pork sausage to improve shelf life. J. Food Protection 70 (6): 937-942.
- 46. Niebuhr S., **A. Laury**, G. Acuff, and JS. Dickson. 2007. Evaluation of nonpathogenic surrogate bacteria as process validation indicators for *Salmonella enterica* for selected antimicrobial treatments, cold storage, and fermentation in meat. Journal of Food Protection 71 (4): 714-718.
- \*Shaw Post-Doc, Graduate, or Undergraduate Student | \*\* Shaw on Graduate Student Committee

# Refereed Extension Publications (47)

- 1. Bilenky, M.\*\*, Nair, A., Shaw, A., and E. Bobeck. 2020. Integrating poultry into an organic vegetable cropping system: benefits, challenges, and considerations. HORT 3103. <a href="https://store.extension.iastate.edu/product/16041">https://store.extension.iastate.edu/product/16041</a>
- 2. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm. FS 34. https://store.extension.iastate.edu/product/15826
- 3. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Agricultural Water. FS 35A. https://store.extension.iastate.edu/product/15829
- 4. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Cleaning and Sanitizing. FS 35 B. https://store.extension.iastate.edu/product/15830
- 5. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm- Handwashing. FS 35 C. <a href="https://store.extension.iastate.edu/product/15831">https://store.extension.iastate.edu/product/15831</a>
- 6. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Worker Hygiene and Health. FS 35 D. https://store.extension.iastate.edu/product/15832
- 7. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm- Harvest and Post Harvesting Handling. FS 35 E. <a href="https://store.extension.iastate.edu/product/15833">https://store.extension.iastate.edu/product/15833</a>
- 8. Nabwiire, L.\*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Biological Soil Amendments of Animal Origin. FS 35 F. https://store.extension.iastate.edu/product/15834
- 9. Monge-Brenes, A.L.\*, Velez, J.\*, **Shaw, A.**, and K. Vorst. 2020. Stocking and rotation of produce: Best practices for retail employees. FS 37. <a href="https://store.extension.iastate.edu/product/16022">https://store.extension.iastate.edu/product/16022</a>
- 10. Monge-Brenes, A.L.\*, Velez, J.\*, **Shaw, A.,** and K. Vorst. 2020. Manager's responsibility: Employees reporting foodborne illness. FS 36A. <a href="https://store.extension.iastate.edu/product/16042">https://store.extension.iastate.edu/product/16042</a>

- 11. Monge-Brenes, A.L.\*, Velez, J.\*, **Shaw, A.**, and K. Vorst. 2020. Employee health and personal hygiene- Training for employees. FS 36B. https://store.extension.iastate.edu/product/16043
- 12. Monge-Brenes, A.L.\*, Velez, J.\*, **Shaw, A.,** and K. Vorst. 2020. Display case cleaning. FS 37B. <a href="https://store.extension.iastate.edu/product/16044">https://store.extension.iastate.edu/product/16044</a>
- 13. Monge-Brenes, A.L.\*, Velez, J.\*, **Shaw, A.**, and K. Vorst. Handwashing. 2020. FS 38. https://store.extension.iastate.edu/product/16045
- 14. **Shaw, A.,** Fillius, D., and E. Johnsen. 2020. On-Farm Training Guide for Employees and Volunteers. https://www.ncrfsma.org/training-guides
- 15. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Fermented Foods. FS 45. <a href="https://store.extension.iastate.edu/product/15964">https://store.extension.iastate.edu/product/15964</a>
- 16. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Jams and Jellies. FS 47. https://store.extension.iastate.edu/product/15966
- 17. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Frozen and Dehydrated Foods. FS 46. <a href="https://store.extension.iastate.edu/product/15965">https://store.extension.iastate.edu/product/15965</a>
- 18. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Pickled Vegetables. FS 48. <a href="https://store.extension.iastate.edu/product/15967">https://store.extension.iastate.edu/product/15967</a>
- 19. **Shaw, A.**, Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. FSMA Summary for Hops Growers. FS 44. <a href="https://store.extension.iastate.edu/product/15926">https://store.extension.iastate.edu/product/15926</a>
- 20. **Shaw, A.,** Andrews, A., Coleman, S., Savits, J., Lewis Ivey, M., and Overdiep, J. 2018. Ensuring Food Safety: Wineries. FS 31. <a href="https://store.extension.iastate.edu/product/15671">https://store.extension.iastate.edu/product/15671</a>
- 21. **Shaw, A.,** Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. Ensuring Food Safety in the Vineyard: Table Grapes. FS 32. <a href="https://store.extension.iastate.edu/product/15676">https://store.extension.iastate.edu/product/15676</a>
- 22. **Shaw, A.,** Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. Ensuring Food Safety in the Vineyard: Wine Grapes. FS 33. https://store.extension.iastate.edu/product/15677
- 23. Strohbehn, C., Hannan, J., **Shaw, A.,** Naeve, L, and M. Bhullar. 2018. FS 30 Checklist for Retail Purchasing for Local Fresh Produce.

  <a href="https://store.extension.iastate.edu/product/Checklist-for-Retail-Purchasing-of-Local-Produce">https://store.extension.iastate.edu/product/Checklist-for-Retail-Purchasing-of-Local-Produce</a>
- 24. Coleman, S., Andrews, S., Rajagopal, L, and **A. Shaw**. 2018. Cleaning a Walk-in Cooler. https://vimeo.com/user20353817/review/261890330/0e82d166e0
- 25. Coleman, S., Andrews, S., Rajagopal, L, and **A. Shaw**. 2018. Cleaning and Sanitizing Crates. https://vimeo.com/user20353817/review/261887089/4f9eb34403
- 26. Tocco, P., Strohbehn, C., and **A. Shaw**. 2018. Practical Record Keeping: A tool to aid growers in determination of qualified exemption and documentation.

  <a href="https://www.ncrfsma.org/files/page/files/ncr\_exemption\_worksheet\_9x12\_updated\_2018\_sales\_numbers\_front\_page.pdf">https://www.ncrfsma.org/files/page/files/ncr\_exemption\_worksheet\_9x12\_updated\_2018\_sales\_numbers\_front\_page.pdf</a>
- 27. Overdiep, J., Johnsen, E., Nwadike, L., Burrows, R., Garden-Robinson, J., and **A. Shaw**. 2018. Interactive quizzes are on the NCR website for those who make Value Added Products and wish to test their knowledge about FSMA requirements. <a href="https://iastate.qualtrics.com/jfe/form/SV\_3DDy7C8ZVqgcj0V">https://iastate.qualtrics.com/jfe/form/SV\_3DDy7C8ZVqgcj0V</a>
- 28. Hultberg, A., Hedeen, L., Strohbehn, C., and **A. Shaw**. 2018. GAP training videos in Hmong (with English subtitles). https://www.youtube.com/channel/UCAkZq Q zWKpaa-ib04akFQ?view as=subscriber

- 29. Andrews, S., Janke, A., Naeve, L., Burrows, R., Bhullar, M., and A. Shaw. 2018. FSMA Produce Safety Rule: Dealing with Wildlife. https://www.ncrfsma.org/files/page/files/ncr\_wildlife\_guidance\_0.pdf
- 30. Bhullar, M., Naeve, L., Nwadike, L., and **A. Shaw**. 2018. FSMA Produce Safety Rule: Dealing with Domestic Animals. <a href="https://www.ncrfsma.org/files/page/files/ncr\_domesticated\_animals\_factsheet.pdf">https://www.ncrfsma.org/files/page/files/ncr\_domesticated\_animals\_factsheet.pdf</a>
- 31. Bhullar, M., Andrews, A., and A. Shaw. 2018. FSMA Compliant On-Farm Thermophilic composting. https://www.ncrfsma.org/files/page/files/ncr bsaao final 0.pdf
- 32. Stull, K., Nwadike, L., Strohbehn, C., Lewis Ivey, M., Burrows, R., Garden-Robinson, J., Ilic, S., and **A. Shaw**. 2018. Farm Stand and U-Pick Produce Operations Safety Best Practices.
- https://www.ncrfsma.org/files/page/files/ncr\_farm\_stands\_and\_u\_pick\_guidance\_0.pdf 33. Tocco, P., Strohbehn, C., and A. Shaw. 2018. Practical Record Keeping: Pre-Harvest
- 33. Tocco, P., Strohbehn, C., and A. Shaw. 2018. Practical Record Keeping: Pre-Harvest Checklist. <a href="https://www.ncrfsma.org/resources-topic">https://www.ncrfsma.org/resources-topic</a>
- 34. Andrews, S., and A. Shaw. 2018. FSMA Produce Safety Rule Summary for Midwest Orchards. <a href="https://www.ncrfsma.org/files/page/files/ncr\_orchard\_guidance.pdf">https://www.ncrfsma.org/files/page/files/ncr\_orchard\_guidance.pdf</a>
- 35. **Shaw, A.**, and E. Johnsen. 2018. Bodily Fluid Clean Up on the Farm. <a href="https://www.ncrfsma.org/files/page/files/ncr">https://www.ncrfsma.org/files/page/files/ncr</a> bodily fluid clean up on the farm.pdf
- 36. Overdiep, J., and A. Shaw. 2017. FSMA Human Food Audit Checklist for Food Processors.
  <a href="https://ncrfsma.org/files/page/files/HumanFoodSafety%20for%20Processors\_update\_12\_1">https://ncrfsma.org/files/page/files/HumanFoodSafety%20for%20Processors\_update\_12\_1</a>
  9 17.pdf
- 37. Strohbehn, C., Naeve, L., and **A. Shaw**. 2016. FS11 "Make Food Safety a Priority at Your CSA". <a href="https://store.extension.iastate.edu/product/Make-Food-Safety-a-Priority-for-Your-CSA">https://store.extension.iastate.edu/product/Make-Food-Safety-a-Priority-for-Your-CSA</a>
- 38. Strohbehn, C., Naeve, L., and **A. Shaw**. 2016. FS10 "Make Food Safety a Priority at Your Farmers Market Booth". <a href="https://store.extension.iastate.edu/Topic/Food-Nutrition-and-Health/Food-Safety">https://store.extension.iastate.edu/Topic/Food-Nutrition-and-Health/Food-Safety</a>.
- 39. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 1: Overview of practical best food safety practices. Greenhouse Grower.
- 40. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 2: Food safety in soilless and hydroponics systems. Greenhouse Grower.
- 41. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 3: Workers and biosecurity. Greenhouse Grower.
- 42. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 4: Sanitation. Greenhouse Grower.
- 43. Strohbehn, C., L. Rajagopal, S. Arendt, A. Shaw, K. Sauer. 2014. HS 007 "Leafy green safety handling posters".
- 44. **Shaw, A.,** C. Strohbehn, and S. Beattie. Revised 2014. SP0328. "Garden produce in floods". Iowa State University Extension Publication.
- 45. **Shaw A.,** C. Strohbehn, J. Meyer, H. Snyder\*, L. Wilson, B. Brehm-Stecher, and A. Mendonca. 2013. PM 1974d. "Guide to using liquid sanitizer washes with fruits and vegetables". Iowa State University Extension Publication.
- 46. **Shaw A.**, C. Strohbehn, and J. Meyer.2013. PM1974e. "Food pantry produce donations". Iowa State University Extension Publication.

47. Strohbehn C, A. Mendonca, L. Wilson, P. Domoto, M. Smith, B. Brehm-Stecher, and A. Shaw. 2013. PM 1974c. "On-Farm food safety: cleaning and sanitizing guide". Iowa State University Extension Publication.

\*Shaw Post-Doc, Graduate, or Undergraduate Student

## Refereed Presentations (Presentation, Poster, and Abstracts) at Conferences (48)

- 1. Ozoh, C.\*, and A. Shaw. 2021. Food-handling practices of active food delivery service users. Poster Presentation. International Association for Food Protection Annual Conference. 2021
- 2. Nabwiire, L.\*, **Shaw, A.**, Nonnecke, G., Minner, D., Johnsen, E., and L. Petersen, 2020. Empowering the US. Virgin Islands food industry through food safety education. Poster Presentation. International Association for Food Protection Annual Conference. Virtual Conference. October 26<sup>th</sup>, 2020.
- 3. Ozoh, C.\*, and **A. Shaw**. 2020. Food delivery service users' food handling practices. Oral Presentation. Partnership for Food Safety Education. September 21<sup>st</sup>, 2020. Virtual Conference.
- Monge, A.\*, Vorst, K., and A. Shaw. 2019. Effect of location and design of refrigerated display cases on temperature control of display cases. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 23<sup>rd</sup>, 2019.
- 5. Bhullar, M.\*, Monge, A.\*, Perry, B.\*, Nabwiire, L.\*, and **A. Shaw**. 2019. Determining the potential food safety risks associated with dropped produce on floor surfaces in retail stores. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 23<sup>rd</sup>, 2019.
- 6. Perry, B.\*, Enderton, A., **Shaw, A.**, Hannan, J., Rajagopal, L., Johnsen, E.\*, and S. Coleman. 2019. North Central Region Pre and Post Grower Training Knowledge Assessment. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 22<sup>nd</sup>, 2019.
- 7. Bhullar, M.\* and **A. Shaw**. 2018. Development of user-friendly *E.coli* water testing method for Iowa produce farmers to enhance food safety. Poster Presentation: International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9<sup>th</sup>, 2018.
- 8. Perry, B.\*, A. Enderton, C. Strohbehn, **A. Shaw**, and L. Naeve. 2018. Midwest Region Round Two Needs Assessment of FSMA Produce Safety Rule. Poster Presentation: International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9<sup>th</sup>, 2018.
- 9. **Shaw, A.,** S. Ilic, and M. Ivey. 2018. Food Safety Hydroponic Fruits and Vegetables-What We Do and Don't Know. Symposia. International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9<sup>th</sup>, 2018.
- Strohbehn, C., A. Shaw, and L. Naeve. 2017. The Impact of Online Modules on Farmers Market Vendors' and Managers' Knowledge about Good Agriculture Practices. Poster Presentation: 2017 National Extension Tourism Conference. Galveston, TX. August 9<sup>th</sup>, 2017.

- 11. Overdiep, J.\*, **Shaw, A.,** Strohbehn, C., and L. Naeve. 2017. Development of a FSMA Preventive Controls for Human Food Rule Audit Checklist for Fruit and Vegetable Processors. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10<sup>th</sup>, 2017
- 12. Perry, B.\*, Enderton, A., Strohbehn, C., **Shaw, A.,** and L. Naeve. 2017. North Central Region Produce Needs Assessment of FSMA Produce Safety Rule. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10<sup>th</sup>, 2017
- 13. Manu, D.\*\*, Mendonca, A., Daraba, A.\*, Dickson, J.S, Sebranek, J., **Shaw, A.**, and A DiSpirito. 2017. Cinnamaldehyde Enhances the Killing Effect of High-pressure Processing against *Escherichia coli* O157:H7 and *Salmonella Enterica* in Refrigerated (4°C) Carrot and Berry Juices. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11<sup>th</sup>, 2017
- 14. Mendonca, A., Manu, D.\*\*, Wang, F. \*\*, Daraba, A.\* and **A. Shaw**. 2017. Antibacterial Efficacy of Geraniol against *Escherichia coli* O157:H7 and *Salmonella enterica* in Carrot Juice and a Mixed Berry Juice Held at 4°C. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11<sup>th</sup>, 2017
- 15. Wang, F.\*\*, Mendonca, A., Daraba, A.\*, Zhang, Y., Manu, D.\*, Shaw, A., and B. Brehm-Stecher. 2017. Influence of Desiccation on Survival and Dry-heat Resistance of Long-term-survival Phase Salmonella Typhimurium and Salmonella PT 30 on Paper Discs and Raw Almonds. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11<sup>th</sup>, 2017
- 16. **Shaw, A,** R. McGorrin, D. Reed, C. Callan, and M. Danyluk. 2017. National and Regional FSMA Training Centers: Application of Lessons Learned. Round table Oral Presentation: International Association for Food Protection Annual Meeting. Tampa, FL.
- 17. **Shaw, A,** Oyarzabel, O., Deng, K., and J. Rogers. 2017. Tools to Improve Interactive Food Safety Training for Small Food Facilities. Oral Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10<sup>th</sup>, 2017
- 18. Arendt, S., K. Sauer, C. Strohbehn, L. Rajagopal, and A. Shaw. 2017. Handling of Leafy Greens in Foodservice Operations Serving Older Americans Before and After Intervention. Consumer Food Safety Education Conference. Washington, DC
- 19. Daraba, A.\*, Mendonca, A., Manu, D., Dickson, J. S., Sebranek, J., **Shaw, A.** and A. DiSpirito. 2016. Enhanced destruction of Salmonella enterica in carrot and berry juices by a combination of cinnamaldehyde and high-pressure processing. Poster Presentation: Global Food Safety Conference. San Antonio, TX.
- 20. Strohbehn, C., L. Rajagopal, Arendt, S., K. Sauer, A. Shaw, A. Roy, and K. Abdelmassih. 2016. Assessing food safety messages impacting foodservice workers' handling of leafy greens in facilities serving the elderly. Latin American Food Safety Conference. Cancun, Mexico.
- 21. Strohbehn, C., **Shaw**, **A**. and L. Naeve. 2015. Minimizing food safety risk at the farmer's markets through online education for producer vendors and market managers. Poster Presentation: 2015 National Extension Tourism Conference. Galveston, TX.
- 22. Dzubak, J.\*, **Shaw, A.**, Strohbehn, C., and L. Naeve. 2015. Food safety for students in school garden. Poster Presentation: School Nutrition Association. Salt Lake City, UT.

- 23. Manu, D.\*\*, Mendonca, A., Wang, F.\*\*, Daraba, A.\* and **A. Shaw**. 2015. Antibacterial effectiveness of cinnamaldehyde against *Escherichia coli* O157:H7 and *Salmonella enterica* in carrot and blackberry juice blends held at 4°c. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
- 24. **Shaw, A.**, Strohbehn, C., Wilson, L., Naeve, L. and P. Domoto. 2015. Assessment of food safety practices for small scale fruit and vegetable growers in the Midwest. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
- 25. Rajagopal, L., Arendt, S., Sauer, K., Strohbehn, C. and **A. Shaw**. 2015. Development of visual tools for training foodservice workers about safe handling of leafy greens. Poster Presentation: Foodservice Systems Management Education Council. Memphis TN.
- 26. Rajagopal, L., Arendt, S., Sauer, K., Strohbehn, C. and **A. Shaw**. 2015. Development and evaluation of visual-based tools for training foodservice workers about safe handling of leafy greens using a multi-pronged approach. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
- 27. Daraba, A.\*, Drummer, J., Mendonca, A. and **A. Shaw**. 2015. Effectiveness of PRO-SAN, a biodegradable antimicrobial, for killing *Salmonella* enterica and *Escherichia coli* O157:H7 on parsley and green onions used as fresh garnishes. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
- 28. Roy, A.\*, **Shaw, A.**, Rajagopal, L., Strohbehn, C., Arendt, S. and K. Sauer. 2015. Evaluation of intervention using microbial assessment of leafy greens and leafy greens contact surfaces in foodservice operations. Poster Presentation: Institute of Food Technologists. Chicago, IL.
- 29. **Shaw, A.** and C. Strohbehn. 2014. Effective online food safety education for school gardens and university farms. 2014 Consumer Food Safety Education Conference-Together: A Food Safety America. Washington D.C.
- 30. Svoboda, A.\* and **A. Shaw.** 2014. Effectiveness of broad-spectrum chemical intervention treatments against foodborne pathogens on artificially inoculated cantaloupe and watermelon. Oral Presentation. International Association for Food Protection Annual Meeting. Indianapolis, IN.
- 31. **Shaw, A.**, Rajagopal, L., Strohbehn, C., Sauer, K., and S. Arendt. 2014. Microbial assessment of leafy greens and leafy greens contact surfaces in retail foodservice operations. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.
- 32. **Shaw, A.**, Svoboda, A.\*, Mendonca, A. and S. Jung. 2014. Search for a natural intervention against *L. monocytogenes* in Wheatgrass Juice. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.
- 33. Dzubak, J.\*, **A. Shaw**, C. Strohbehn and L. Naeve. 2014. Development of an online food safety training for school gardens. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.
- 34. Paik, S., Mendonça, A., Daraba, A.\* and **A. Shaw**. 2014. Effect of starvation on resistance of *Escherichia coli* O157:H7 to ultraviolet radiation in 0.85% saline and in apple juice. Poster presentation: Institute of Food Technologists Annual Meeting. New Orleans, LA.

- 35. Daraba, A.\*, Mendonca, A., **Shaw**, **A.** and D. Manu. 2014. Viability of *Salmonella enterica* and *Escherichia coli* O157:H7 on romaine lettuce following repeated immersion in sanitizers with or without added exudate. Poster Presentation: Institute of Food Technologists Annual Meeting. New Orleans, LA.
- 36. Daraba, A.\*, Adiwijaya, Z., **Shaw**, **A.** and A. Mendonça. 2014. Effectiveness of PROSAN, a biodegradable vegetable wash, for killing *Salmonella enterica* and *Escherichia coli* O157:H7 on the surface of whole cucumbers. Poster Presentation: United Fresh Produce Association, S-294 Science Symposium. Chicago, IL.
- 37. Svoboda A.\* and **A. Shaw.** 2013. Effectiveness of chemical intervention treatments against *E. coli* O157:H7, Non-O157 STEC, *Listeria monocytogenes*, and *Salmonella*. Poster Presentation: International Food Protection Annual Meeting.
- 38. **Laury, A.,** Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado, C. and MM. Brashears. 2011. Reduction of methicillin-resistant *Staphylococcus aureus* (MRSA) on towels utilizing targeted directional microwave technology. Poster: General Meeting of the American Society for Microbiology.
- 39. Laury, A., Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado, C. and MM. Brashears. 2011. Re-distribution of methicillin-resistant *Staphylococcus aureus* (MRSA) during the laundering of cotton towels. Poster: General Meeting of the American Society for Microbiology.
- 40. **Laury, A.,** Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado C. and MM Brashears. 2011. Reduction of *Salmonella* on jalapeño peppers, peanuts, and dry dog food utilizing targeted directional microwave technology. Poster: Conference of International Food Protection Annual Meeting.
- 41. **Laury, A.,** Echeverry, AE., Gragg, SE., Alvarado, MA., Brown, AL., Narvaez-Bravo, C., Sunkara, P. and MM. Brashears. 2010. Electrostatically sprayed lactic acid bacteria as a preharvest intervention strategy for reduction of *Escherichia coli* O157:H7 on spinach plant. Poster: Conference of International Food Protection Annual Meeting.
- 42. Echeverry, AE., Miller, MF., Jackson, T., **Laury**, **A.**, Narvaez-Bravo, C., Chaney, WE., Brown, AL., Sunkara, P., Pond, AR. and MM. Brashears. 2010. In-Plant validation of hot water wash and lactic acid as interventions to control microbial pathogens in beef carcasses as part of a HACCP reassessment plan. Poster: Reciprocal American Meat Science Association.
- 43. **Laury, A.**, Alvarado, MA., Brooks, JC. and MM. Brashears. 2009. Inhibition of *Escherichia coli* O157:H7 and *Salmonella* in ground beef using modified atmosphere packaging systems. Poster: Reciprocal American Meat Science Association.
- 44. **Laury**, **A.** and MM. Brashears. 2009. Survival of lactic acid bacteria in various water sources and sandy loam soil. Poster: International Food Protection Annual Meeting.
- 45. **Laury, A.**, Alvarado, MV., Nace, G., Brooks, JC. and MM. Brashears. 2008. Evaluation of the reduction of *E.coli* O157:H7 and *Salmonella* spp. by spraying a lactic acid based antimicrobial product (Beefxide®) on USDA select beef tips. Poster: International Food Protection Annual Meeting.
- 46. **Laury**, **A.**, Loneragan, G., Platt, T., Branham, L., Ives, S., Engler, M., Thompson, D. and MM. Brashears. 2006. Changes in indicator populations due to therapeutic use of injectable antibiotics in feedlot cattle. Poster: International Food Protection Annual Meeting.

- 47. **Laury, A.,** and J. Sebranek. 2006. Use of carbon monoxide combined with carbon dioxide for modified atmosphere packaging of fresh pre-rigor pork sausage to improve shelf life. Poster: International Food Protection Annual Meeting.
- 48. **Laury**, **A.**, and J. Sebranek. 2006 .Evaluation of modified atmosphere packaging with carbon monoxide and carbon dioxide for fresh pre-rigor pork sausage and fresh post-rigor pork sausage. Poster: Reciprocal American Meat Science Association.

\*Shaw Post-Doc, Graduate, or Undergraduate Student

## Non-Refereed Presentations (Presentation, Poster, and Abstracts) at Conferences (20)

- 1. **Shaw, A.,** Enderton, A. and E. Johnsen\*. 2021. North Central Region Center for FSMA Training, Extension, and Technical Assistance: Impact of Produce Safety Alliance Grower Trainings in the North Central Region. National Association for State Department of Agriculture National Consortium for Food Safety. Virtual. December 7<sup>th</sup>-10<sup>th</sup>, 2021
- Johnsen, E.\*, and A. Shaw. 2021. NCR FSMA Expectations for FSOP Awardees. USDA Food Safety Outreach Program Grant Kickoff Webinar for FY 2021 FSOP Awardees. October 19<sup>th</sup>, 2021
- 3. Hannan, J., **Shaw, A.,** Rajagopal, R. Enderton, A., and E. Johnsen\*. 2020. Update for North Central Regional Center for Training, Extension, and Technical Assistance. National Association for State Department of Agriculture National Consortium for Food Safety. Virtual. December 9<sup>th</sup>-11<sup>th</sup>, 2020
- Hannan, J., Shaw, A., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2020. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Food Safety Outreach Program Directors Meeting. Virtual. August 18<sup>th</sup>-19<sup>th</sup>, 2020
- 5. Bhullar, M.\* and **A. Shaw**. 2019. Retail Produce Safety Drop. North Central Regional Center FSMA Annual Conference. Indianapolis, Indiana. June 10-12<sup>th</sup>, 2019
- Hannan, J., Shaw, A., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2019. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Western FSMA Center Meeting. Portland, Oregon. May 21<sup>st</sup>, 2019
- 7. **Shaw, A.,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2019. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Oral Presentation: NECEF Meeting. Albany, New York. February 4-6<sup>th</sup>, 2019
- 8. **Shaw, A.** 2019. FSMA Produce, Processing, and Holding. Oral Presentation: Ohio Produce Network. Dublin, Ohio. January 15-16<sup>th</sup>, 2019.
- 9. Bhullar, M.\* and A. Shaw. 2019. Retail Produce Safety Drop. Poster Presentation: North Central Regional Center FSMA Annual Conference. Indianapolis, Indiana. June 10-12<sup>th</sup>, 2019
- Shaw, A, Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Oral Presentation. USDA Food Safety Outreach Program Regional Director Meeting. Blacksburg, Virginia. August 20-22<sup>nd</sup>, 2018.
- Shaw, A, Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Southern Region Integrated Produce Safety Conference. Atlanta, Georgia. November 13-14<sup>th</sup>, 2018.

- 12. **Shaw, A,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen\*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Local Foods Conference. Brookings, South Dakota. November 1-2<sup>nd</sup>, 2018.
- 13. Mendonça, A., Daraba, A.\*, Woods, F., **Shaw**, **A.**, Ortiz, A., and G. Rodriguez. 2016. Effect of PRO-SAN, a Biodegradable Vegetable Wash, on Pathogen Viability and Selected Quality Characteristics in Fresh Basil and Cilantro. Poster presentation: United Fresh Produce Association, S-294 Science Symposium. Chicago IL
- 14. **Shaw, A.** 2016. Impact of Food Safety Modernization Act on the Grains Industry. GEAPS and Grain Journal, Webinar.
- 15. **Shaw, A.** 2016. Food Safety Concerns in Hydroponics Production. State Fruit and Vegetable Field Day. University of Arkansas. Rodgers, AR, Webinar
- 16. **Shaw, A**. 2014. Food safety in bulk grains: Developing food safety and recordkeeping plans. USDA ARS Soft Wheat Quality Laboratory 60<sup>th</sup> Research Review Conference. Wooster, OH.
- 17. **Shaw, A.** 2014. Food Safety Modernization Act. Opening Workshop. GEAPS. Omaha, NE.
- 18. **Shaw, A.** 2013. Food Safety Modernization Act and production impact on suppliers. Rousselot Inc. & Sonac USA. Denver, CO.
- 19. **Shaw, A.** 2013. Food safety in production environment. Midwest Poultry Association. Minneapolis, MN.
- 20. **Shaw, A.** 2012. Assessment of basic food safety knowledge by farmer market participants. International Food Protection Association Annual Meeting. Providence, RI.
- 21. **Shaw, A.** 2012. Ohio State University short course on fresh produce safety- "Regulatory Issues". OSU, Department of Food Engineering. Columbus, OH.
- 22. **Shaw, A.** 2012. Creating food safety and recordkeeping plans for the Food Safety Modernization Act. GEAPS Exchange 2012. Minneapolis, MN.

\*Shaw Post-Doc, Graduate, or Undergraduate Student

#### Book Chapters (1)

 Laury, A., A. Echeverry and MM Brashears. 2009. Fate of Escherichia coli O157:H7 in Meat, p. 31-53. In Fidel Toldra (ed.), Safety of Meat and Processed Meat. Springer Science, New York.

## Invited Research and Extension Presentations (34)

- 1. **Shaw, A.** May 28<sup>th</sup> 2020. From Local Favorites to Corporate Chains Retail food industry, how has COVID-19 changed food safety?. Virtual Educational Series by RCA Powered Up
- 2. Shaw, A. 2018. Food Safety on the Farm. St. Thomas US Virgin Islands.
- 3. Shaw, A. 2018. Food Safety on the Farm. St. Croix US Virgin Islands.
- 4. **Shaw, A,** Hannan, J., and M. Bhullar. 2017. Update on FSMA Regulations. Iowa State University's annual Fruit and Vegetable Field. Ames, IA.
- 5. Andrews, A., Wiemerslage, T., and **A. Shaw.** 2017. Update in Food Safety Research. 17<sup>th</sup> Annual Iowa Organic Conference. Iowa City, IA.
- 6. **Shaw, A.** 2017. U.S. food laws for meat, poultry, seafood, and non-protein foods 2017 Food and Human Health Symposium. Dalian Polytechnic University. Dalian, China. June 2017

- 7. **Shaw, A.** 2017. Produce Sanitizer and FSMA Update. Illinois Specialty Crop Conference. Springfield, IL
- 8. **Shaw, A.** 2016. Update in Food Safety Research.16<sup>th</sup> Annual Iowa Organic Conference. Iowa City, IA.
- 9. **Shaw, A.** 2016. Update on Food Safety Modernization Act regulations. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
- 10. **Shaw, A.** 2016. Food Safety Rules in the United States. The conference theme is "Enhancing Quality and Safety of Livestock and Livestock Products. Ethiopian Society of Animal Production annual conference. Addis Ababa, Ethiopia.
- 11. **Shaw, A.** 2015. Food Safety Modernization Act: Overview. Iowa Department of Inspection and Appeals. Cedar Rapids, IA.
- 12. **Shaw, A.** 2015. Food Safety Modernization Act: Qualified Individuals. Eurofins. Ankeny, IA.
- 13. **Shaw, A.** 2015. Farmers Market Food Safety Online Program. Iowa Farmers Market Association Annual Conference. Des Moines, IA.
- 14. **Shaw, A.** 2015. Update on FSMA Regulations. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
- 15. **Shaw, A.** 2014. Update in Food Safety Research.14<sup>th</sup> Annual Iowa Organic Conference. Iowa City, IA.
- 16. **Shaw, A.** 2014. Impact of new food safety regulations on your farm. Women Food & Ag Network Conference. Fairfield, IA.
- 17. **Shaw, A**. 2014. Food safety in the U.S. International Agricultural Trade and Food Safety Professional. Ames, IA.
- 18. **Shaw, A.** 2014.Traceability and biosecurity. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
- 19. **Shaw, A.** 2013. Food Safety Modernization Act impact to milk producers. Iowa Dairy Association. Des Moines, IA.
- 20. **Shaw, A.** 2013. Food safety farm to school. Farm to School Collaboration-Planting Seeds for Growth. Lake Iowa Nature Center. Ladora, IA.
- 21. **Shaw**, **A.** 2013. FSMA and on farm food safety. Midwest Aronia Association Annual Conference. West Des Moines, IA.
- 22. Shaw, A. 2013. Food safety training workshop. General Mills. Ankeny, IA.
- 23. **Shaw, A.** 2013. Food safety update: Risk and consequences. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
- 24. **Shaw, A.** 2012. Food Safety Modernization Act impact on local foods. Putting the Pieces Together: Building Partnerships in the Iowa Food System Conference. Ames, IA.
- 25. **Shaw, A.** 2012. From the perspective of bacteria—issues associated with toxicology, Toxicology Program Welcome and Orientation speaker. Ames, IA.
- 26. **Shaw, A.** 2012. On-Farm food safety risks. Local Food System Conference. Indian Hills, IA.
- 27. **Shaw, A.** 2012. On-Farm food safety. Midwest Aronia Association Annual Conference. West Des Moines, IA.
- 28. **Shaw, A.** 2012. Overview to Food Safety Modernization Act within animal feed industry. Dubuque Farmers Market Association. Dubuque, IA.
- 29. **Shaw, A.** 2012. Food safety in bulk grains: Developing food safety and recordkeeping plans. AAI Showcase and Conference, Grain and Feed Forum. Des Moines, IA.

- 30. **Shaw, A.** 2012. Food Safety: Prevention is key. Northeast Iowa Food & Farm Expo. Calmar, IA.
- 31. **Shaw**, **A.** 2012. Overview of Food Safety Modernization Act and personnel hygiene within popcorn industry. Jolly Time Popcorn. Sioux City, IA.
- 32. **Shaw, A.** 2012. Food safety and how it will impact your operation. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
- 33. **Shaw-Laury, A.** 2012. Which knowledge we gain from our teaching endeavor for food microbiology education: The experience of training agriculture teachers. 9<sup>th</sup> Congress of Slovenian Biochemical Society/5<sup>th</sup> Congress of Slovenian Microbiological Society/3<sup>rd</sup> CEFORM. Maribor, Slovenia.
- 34. **Shaw, A.** 2011. Overview of the Food Safety Modernization Act. Iowa Food Safety Task Force Meeting. Des Moines, IA.

## **GRANTS AND PROJECT FUNDINGS**

SUMMARY OF FUNDING of total sponsored projects directly to laboratory is \$3,946,027 from August 2011 to December 2021. The total grant awards were \$14,324,325 from August 2011 to December 2021.

Project Role	Number of Funded	Intramural	Extramural	Total Funding
	Projects			
PI	18	\$56,945	\$3,233,460	\$3,290,405
Co-PI	15	\$16,220	\$639,402	\$655,622
Total	33	\$73,165	\$3,872,862	\$3,946,027

Project Title	Grantor	Role	Other Investigators	Project Duration	Total \$ Awarded (Allocated to Shaw Lab) I=Internal E=External
Ensuring Food Safety Competency of Produce Growers and Processors in the NCR Through Expanded Collaboration with Diversified Populations	USDA Food Safety Outreach Program	PI	E. Johnsen, A. Enderton, D. Fillius, K. Krishnamurthy, A. Deering, L. Nwadike, P. Tocco, A. Hultberg, C. Borgwordt, B. Chaves- Elizondo, J. Garden- Robinson, S. Ilic, R. Burrow, K. Krokowski	2021-2024	\$799, 757 (\$799,757) (E)

PI; Project Director; Supervised P&S position, and undergraduate students; Manage an extension team of 42 food safety educators and 80 active partners of academia, industry, non-profits, commodity groups and government. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research and assisted with the annual evaluation of the center and events. Competitive federal grant; multi-institutional grant with University of Illinois, ISU, Purdue

University, Kansas State University,	University of Mi	nnagata I	inaaln Univarsity U	niversity of Ne	hrada Linaala North
Dakota State University, The Ohio S					
Michigan State University, 75% cond					isconsin madison and
Developing a Coordinated Effort	PAR-16-137	PI	A. Naig,	2021-2022	\$85,000
within Iowa to Implement an	Funding of the		S. Coleman,	2021 2022	(\$85,000)
Infrastructure, Education,	FDA		T. Wiemerslage		(E)
Technical Assistance, and	Cooperative		A. Enderton		
Inventory Program in Alignment	Agreement		71. Enaction		
with the FDA's Produce Safety	PSR				
Rule	(Subcontract of				
Ruio	\$1.8 Million				
	through Iowa				
	Department of				
	Agriculture				
	and Land				
	Stewardship)				
PI; Project Director; Supervised P&S		eraraduate	students: Manage a r	research team o	of six faculty members
Shaw analyzed all quantitative and q					
external grant; Multi-disciplinary be					
75% concept; 90% writing and editir			ica agricultare, nospi	itality managen	nent and rood science,
Integrating vegetable, poultry, and	USDA	Co-PI	Nair, A. (PI),	2019-2023	\$2,000,000
cover cropping practices to	National	C0-1 1	E. Bobeck,	2019-2023	(\$163,000)
enhance resiliency in organic	Institute of		A. Plastina,		(\$103,000) (E)
production systems	Food and		D. Ahn,		(E)
production systems	Agriculture:		K. Delate,		
	Organic		M. McDaniel,		
	Agriculture		M. Pitesky,		
	Research and		M. Williams,		
	Extension		D. Gonthier,		
	Initiative		J. Mitchell,		
	Illitiative		D. Niemeier,		
			J. Dickson		
C- DI-I 4::1:-1		\: -1 C1-		.:1.:.11	
Co-PI; Leading microbiology research					
grant; Multi-institutional grant with					
animal science, horticulture, and for		oncept; 10	o writing and editing	g of the grant p	proposai (73% concept
design, writing and editing of microb Continued Successful	USDA Food	C- DI/	I II (DI)	2010	\$700.757
		Co-PI/	J. Hannan (PI),	2018-	\$799,757
Implementation of FSMA in the	Safety Outreach	PI as	R. Choudhary,	2022* (no	(\$171,616)
North Central Region through	Program	of June	A. Enderton,	cost	(E)
Adoption of a Systems Approach		2021	A. Topaloff,	extension	
and Stakeholder Engagement			M. Singh,	from 2021-	
			L. Nwadike,	2022)	
			A. Hultberg,		
			T. Eaton,		
			S. Browning,		
			J. Garden-		
			Robinson,		
			R. Burrows,		
			E. Silva,		
		1	S Ilic	1	İ

Co-PI/PI; This is the renewal of my NCR Center. Under USDA, I was unable to apply as a PI because of language in the 2018 Farm Bill which prohibited repeat PI on these grants. As a result, the new PI and I will jointly run the NCR Center. The PI left the university in June 2021 and I became sole PI of the project through the no cost extension. Supervised P&S position, and undergraduate students; Manage a research team of 15 faculty members and 26 advisory board members. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research and evaluation of center work. Competitive federal grant; multi-institutional grant with Southern Illinois University, ISU,

Madison and Michigan State Univer Assessing the food safety	Agriculture and	PI	Coleman, S. (Co-	2019-2020	\$10,000
knowledge gained from	Natural		PI)		(\$10,000)
underserved refugee populations in	Resources		M. Bhullar,		(I)
Iowa	Extension and		B. Perry,		
	Outreach		J. Hannan,		
	Guireach		D. Fillus,		
			A. Naig,		
			T. Wiemerslage,		
PI; Competitive internal grant; Shav					
Nutrition and Horticulture to comple		1			
Water testing for Produce growers	Agriculture and	PI	Bhullar, M.,	2019-2020	\$9,906
in Iowa	Natural		J. Hannan,		(\$9,906)
	Resources		D. Fillus,		(I)
	Extension and		A. Naig,		
	Outreach		T. Wiemerslage,		
			S. Coleman	1	
PI; Competitive internal grant; Shav grant proposal	v lab analyzed all m	icrobial sa	imples. 100% concep	ot; 75% writing	and editing of the
Agritourism Destination Safety	Great Plains	Collab	R. Hansen,	2017-2019	\$30,000
and Health Best Practices	Center for	orator	K. Meyer,		(\$500)
Workshop	Agricultural		S. Hoyle		(E)
	Health		(A. Shaw)		
Collaborator; Part of the Extension t Agriculture, Food Science, and Hort proposal (100% of concept design, v	ticulture at Iowa Sta	te Univers	sity; 0% concept; 5%	writing and ed	liting of the grant
Educating Iowans about the	Human	PI	N/A	2016-2017	\$2,365
importance of water food safety	Science				(\$2,365)
when growing fruits and	Extension and				(I)
vegetables	Outreach				
PI; Competitive internal grant; Shav grant proposal	•		imples. 100% concep		
Developing a Coordinated Effort	Iowa	PI	L. Naeve,	2016-2021	\$1,180,000
within Iowa to Implement an	Department of		S. Coleman,		(\$1,180,000)
Infrastructure, Education,	Agriculture and		A. Naig,		(E)
Technical Assistance, and	Land		J. Hannan,		
Inventory Program in Alignment	Stewardship		T. Wiemerslage		
with the FDA's Produce Safety	(subcontract of				
Rule	\$2.8 million				
	FDA PAR-16-				
	137)				
PI; Project Director; Supervised P&					
faculty members. Shaw analyzed all					
research. Competitive external grant					e, hospitality
management and food science; 75%		ng and ed			
North Central Region through	U.S. Food and	PI	C. Strohbehn,	2016-2019	\$950,000
Adoption of a Systems Approach	Drug		L. Naeve,		(E)
and Stakeholder Engagement	Administration:		J. Hannan,		
Framework	National		M. Hosier,		
	Institutes of		A. Enderton,		
	Health		A. Topaloff, M. Singh,		

			L. Nwadike,		
			M. Schermann,		
			T. Eaton,		
			S. Browning,		
			J. Garden-		
			Robinson,		
			R. Burrows,		
			E. Silva,		
			J. LeJeune		
PI; Project Director; Supervised P&S faculty members and 30 extension p grant; multi-institutional grant with Minnesota, Lincoln University, University, University and editing of the grant properties of Safety Innovations and Preventive Controls during Fresh and Fresh-Cut Produce Washing, Packing, and Retail Display  Co-PI; Lead of extension componen website; Shaw lab analyzed all quantorganizational between federal partners.	artners. Shaw lab a University of Illino versity of Nebraska versity of Wisconsinosal.  NIFA Standard Research and Extension Project  t; Supervised a PhI titative and qualitaters (USDA and FE	nalyzed all is, ISU, Pu -Lincoln, N n-Madison  Co-PI  D student, a tive data of OA), produce	quantitative and quantitative and quantitative and quantitative and quantitative to the control of the control	alitative data. Onsas State University, The University. 75  2016-2021  undergraduates es. Competitive ders) and acade	Competitive federal versity, University of Ohio State University, % concept; 90%  \$3,760,813 (\$167,402) (E)  a. Developed public internal grant; Multimia (6 universities);
10% concept; 5% writing and editing outreach plan)					
Development of a planning and	Leopold Center	Co-PI	Krejci, C. (PI),	2015-2017	\$49,948
decision tool for the Iowa regional	for Sustainable		A. Shaw		(\$500)
food hub logistics network	Agriculture at				(I)
	T C/ /				(1)
	Iowa State				
	University				
Co-PI; Lead extension microbiologic science; 5% concept; 5% writing and	University st; Competitive into			<u> </u>	ngineering and food
science; 5% concept; 5% writing and Integrating crops and livestock in a	University st; Competitive into d editing of the graduSDA		Delate, K. (PI),	between food e	ngineering and food \$1,924,000
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance	University st; Competitive into d editing of the grad USDA National	nt proposal	Delate, K. (PI), B Heins,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a	University st; Competitive into d editing of the graduSDA	nt proposal	Delate, K. (PI), B Heins, P. Pagliari,	<u> </u>	ngineering and food \$1,924,000
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance	University st; Competitive intellediting of the grade USDA National Institute of Food and	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety,	University st; Competitive inted editing of the grade USDA National Institute of Food and Agriculture:	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety,	University st; Competitive into d editing of the grad USDA National Institute of Food and Agriculture: Organic	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety,	University st; Competitive into d editing of the gra USDA National Institute of Food and Agriculture: Organic Agriculture	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety,	University st; Competitive into dediting of the grave USDA National Institute of Food and Agriculture: Organic Agriculture Research and	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety,	University st; Competitive into dediting of the grade USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension	nt proposal	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden,	<u> </u>	s1,924,000 (\$100,000)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience	University st; Competitive into dediting of the grade USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative	nt proposal Co-PI	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	2014-2018	\$1,924,000 (\$100,000) (E)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Ro	University st; Competitive into dediting of the graded length of the gra	nt proposal Co-PI robial samp	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	deral grant; Muscience, horticu	slti-institutional grant lture, and food science;
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw la	University st; Competitive into dediting of the graded length of the gra	nt proposal Co-PI robial samp	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	deral grant; Muscience, horticu	slti-institutional grant lture, and food science;
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw la with University of Minnesota and Re 25% concept; 25% writing and editional contents of the concept in the conce	University st; Competitive into dediting of the graded length of the gra	nt proposal Co-PI robial samp	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	deral grant; Muscience, horticu	slti-institutional grant lture, and food science;
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Re 25% concept; 25% writing and edition objectives)	University st; Competitive into dediting of the grave USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative ab analyzed all mice odale Institute; Mung of the grant prop	nt proposal Co-PI robial samp lti-disciplin posal (100%	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	deral grant; Muccience, horticu	ngineering and food  \$1,924,000 (\$100,000) (E)  alti-institutional grant lture, and food science; ng of microbial
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Re 25% concept; 25% writing and editional objectives)  Cover crops and strip tillage to promote soil quality, environmental sustainability, food	University st; Competitive into dediting of the granus USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative ab analyzed all mice and of the grant proposed in the grant proposed in the grant proposed in the proposed in the grant proposed	nt proposal Co-PI robial samp lti-disciplin posal (100%	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer  les. Competitive fe lary between dairy se concept design, w	deral grant; Muccience, horticu	ngineering and food  \$1,924,000 (\$100,000) (E)  alti-institutional grant lture, and food science; ng of microbial
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Re 25% concept; 25% writing and edition objectives)  Cover crops and strip tillage to promote soil quality, environmental sustainability, food safety, and profitability in cucurbit	University st; Competitive into d editing of the gra: USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative ab analyzed all micodale Institute; Mung of the grant proposition North Central Region Sustainable Agriculture	nt proposal Co-PI robial samp lti-disciplin posal (100%	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer  les. Competitive fe lary between dairy so concept design, w  Nair, A. (PI) D. Brainard,	deral grant; Muccience, horticu	ngineering and food  \$1,924,000 (\$100,000) (E)  alti-institutional grant lture, and food science; ng of microbial  \$198,353 (\$12,800)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Re 25% concept; 25% writing and editional objectives)  Cover crops and strip tillage to promote soil quality, environmental sustainability, food	University st; Competitive into dediting of the grade USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative ab analyzed all mice odale Institute; Mung of the grant proposition of the grant proposit	nt proposal Co-PI robial samp lti-disciplin posal (100%	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer  Deles. Competitive feetary between dairy seed to concept design, we will be a seed to concept design.	deral grant; Muccience, horticu	ngineering and food  \$1,924,000 (\$100,000) (E)  alti-institutional grant lture, and food science; ng of microbial  \$198,353 (\$12,800)
science; 5% concept; 5% writing and Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience  Co-PI; Lead microbiologist; Shaw lawith University of Minnesota and Re 25% concept; 25% writing and edition objectives)  Cover crops and strip tillage to promote soil quality, environmental sustainability, food safety, and profitability in cucurbit	University st; Competitive into d editing of the gra: USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative ab analyzed all micodale Institute; Mung of the grant proposition North Central Region Sustainable Agriculture	nt proposal Co-PI robial samp lti-disciplin posal (100%	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer  Deles. Competitive feetary between dairy seed to concept design, we will be a seed to concept design.	deral grant; Muccience, horticu	ngineering and food  \$1,924,000 (\$100,000) (E)  alti-institutional grant lture, and food science; ng of microbial  \$198,353 (\$12,800)

TOPEL LENG MICTORIOGORIST Show lo	h analyzed all mic	robial same	oles Competitive ex	ternal grant: M	ulti-institutional grant
Co-PI; Lead microbiologist; Shaw la with Michigan State University; Mu					
editing of the grant proposal (100%)					cpt, 2570 writing and
Establishing a standard of identity	USDA-	Co-PI	Wilson, L.(PI)	2014-2016	\$23,558
for jams and jellies made from	Specialty Crop	0011	T. Boylston	2014 2010	(\$10,000)
aronia berries	Block Grant.		1. Boyiston		(E)
Co-PI; Lead microbiologist; Shaw la		rohial samr	oles Competitive fed	leral grant: Mii	
between food quality, food sensory a					
proposal (100% concept design, writ				70 WITHING and	editing of the grant
Market recovery options for	USDA	PI	J. Hannan,	2014-2016	\$40,258
berries damaged by spotted winged	Federal-State	11	C.Strohbehn,	2014-2010	(\$40,258)
drosophila	Marketing		C.Chase,		(E)
arosopinia	Improvement		R.Hansen,		
	Program		L.Wilson,		
	Trogram		C. Bregendahl		
PI; Lead microbiologist; Manage a to	eam of six faculty	members S		roraduate stude	ents: Shaw lah analyzed
all microbial samples. Competitive f					
microbiology; 75% concept; 75% wi					
microbial objectives)	ting and catting c	T the grant	proposar (10070 con	cept design, wi	iting and carting or
Minimizing food safety risk at the	USDA-	PI	C. Strohbehn,	2014-2016	\$24,000
farmers' markets through online	Agricultural		L. Naeve	20112010	(\$24,000)
education for producer vendors	marketing		2.1.00.0		(E)
and market managers	Service:				
	Specialty Crop				
	Block Grant				
PI; Lead extension microbiologist; S		rgraduate s	tudent: Manage a res	search team of	three faculty members.
Developed 1/3 of the educational cur					
agriculture, hospitality management					
Ensuring the safety of organic	United Natural	Co-PI	K. Delegate	2014-2015	\$5,000
apples and grapes through	Foods				DJ,000
	Foods			2011.2016	
ecologically-based plant protection	Foundation				(\$3,000)
ecologically-based plant protection				2011 2010	
	Foundation	robial sam	bles. Competitive ex		(\$3,000) (E)
	Foundation b analyzed all mic			ternal grant; M	(\$3,000) (E) ulti-disciplinary
Co-PI; Lead microbiologist; Shaw la	Foundation b analyzed all mice; 50% concept; 5			ternal grant; M	(\$3,000) (E) ulti-disciplinary
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje	Foundation b analyzed all mice; 50% concept; 5			ternal grant; M	(\$3,000) (E) ulti-disciplinary
Co-PI; Lead microbiologist; Shaw la between horticulture and food science	Foundation b analyzed all mice; 50% concept; 5	0% writing	and editing of the g	ternal grant; M rant proposal (	(\$3,000) (E) ulti-disciplinary 100% concept design,
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje Food safety, economics, and	Foundation b analyzed all mice; 50% concept; 5 cetives) Leopold Center	0% writing	and editing of the g	ternal grant; M rant proposal (	(\$3,000) (E) ulti-disciplinary 100% concept design, \$48,751 (\$6,720)
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje Food safety, economics, and environmental impacts of	Foundation b analyzed all mice; 50% concept; 5 ctives) Leopold Center for Sustainable	0% writing	Pattillo, D.A. (PI),	ternal grant; M rant proposal (	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje Food safety, economics, and environmental impacts of	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at	0% writing	Pattillo, D.A. (PI),	ternal grant; M rant proposal (	(\$3,000) (E) ulti-disciplinary 100% concept design, \$48,751 (\$6,720)
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje Food safety, economics, and environmental impacts of aquaponics in Iowa	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University	0% writing	Pattillo, D.A. (PI), KA. Rosentrater	ternal grant; M rant proposal (	(\$3,000) (E) ulti-disciplinary 100% concept design, \$48,751 (\$6,720) (I)
Co-PI; Lead microbiologist; Shaw la between horticulture and food scienc writing and editing of microbial obje Food safety, economics, and environmental impacts of aquaponics in Iowa	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all mice	0% writing  Co-PI  robial samp	Pattillo, D.A. (PI), KA. Rosentrater	ternal grant; M rant proposal ( 2014 ernal grant; Mu	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objection of safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and expression of the same property of the same prope	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sci	Co-PI  crobial samplence; 33%	Pattillo, D.A. (PI), KA. Rosentrater  oles. Competitive interconcept; 50% writing	ternal grant; M rant proposal ( 2014 ernal grant; Mu	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objection of safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and expression of the same properties of the same pr	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sci	Co-PI  crobial samplence; 33%	Pattillo, D.A. (PI), KA. Rosentrater  oles. Competitive interconcept; 50% writing	ternal grant; M rant proposal ( 2014 ernal grant; Mu	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objection of safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and editing risks of foodborne	Foundation b analyzed all mice; 50% concept; 5 cetives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sciditing of microbia	0% writing  Co-PI  robial sampence; 33% of lobjectives	Pattillo, D.A. (PI), KA. Rosentrater  bles. Competitive int concept; 50% writing)	ternal grant; M rant proposal ( 2014 ernal grant; Mu g and editing o	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)  ulti-disciplinary f the grant proposal
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objection of safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and editing risks of foodborne illness associated with handling leafy greens in retail foodservice	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sciditing of microbia USDA	0% writing  Co-PI  robial sampence; 33% of lobjectives	Pattillo, D.A. (PI), KA. Rosentrater  bles. Competitive inteconcept; 50% writing)  Arendt, S., (PI) C. Strohbehn, L. Rajagopal,	ternal grant; M rant proposal ( 2014 ernal grant; Mu g and editing o	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)  ulti-disciplinary f the grant proposal
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objective Food safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and editing microbiologist) mitigating risks of foodborne illness associated with handling leafy greens in retail foodservice establishments serving aging	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sciditing of microbia USDA National	0% writing  Co-PI  robial sampence; 33% of lobjectives	Pattillo, D.A. (PI), KA. Rosentrater  oles. Competitive interconcept; 50% writing)  Arendt, S., (PI) C. Strohbehn,	ternal grant; M rant proposal ( 2014 ernal grant; Mu g and editing o	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)  ulti-disciplinary f the grant proposal  \$424,846 (\$113,000)
Co-PI; Lead microbiologist; Shaw la between horticulture and food science writing and editing of microbial objective Food safety, economics, and environmental impacts of aquaponics in Iowa  Co-PI; Lead microbiologist; Shaw la between forestry, agricultural engine (100% concept design, writing and editing microbiologist) mitigating risks of foodborne illness associated with handling leafy greens in retail foodservice establishments serving aging	Foundation b analyzed all mice; 50% concept; 5 octives) Leopold Center for Sustainable Agriculture at Iowa State University b analyzed all micering and food sciditing of microbia USDA National Institute of	0% writing  Co-PI  robial sampence; 33% of lobjectives	Pattillo, D.A. (PI), KA. Rosentrater  bles. Competitive inteconcept; 50% writing)  Arendt, S., (PI) C. Strohbehn, L. Rajagopal,	ternal grant; M rant proposal ( 2014 ernal grant; Mu g and editing o	(\$3,000) (E)  ulti-disciplinary 100% concept design,  \$48,751 (\$6,720) (I)  ulti-disciplinary f the grant proposal  \$424,846 (\$113,000)
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	Iowa State				
	University				
PI; Lead extension microbiologist; S		udent and a	n undergraduate stu	dent; Manage a	research team of three
faculty members. Developed 33% of					
value added agriculture, hospitality i					
proposal					
Best practices food safety and food	Iowa	Co-PI	C. Strohbehn	2013	\$8,000
defense for retail foodservices	Department of		(PI),		(\$8,000)
	Inspection and		J. Meyer		(E)
	Appeals				
	(USDA Grant)				
Co-PI; Lead extension microbiologis					
disciplinary between hospitality man					
Borlaug FtF Fellow from Ethiopia	USDA/	Co-PI	D. Bjelland	2012-2015	\$29,825.40
(Food Safety- table eggs)	Foreign				(\$21,700)
	Agricultural				(E)
	Services				
PI; Competitive federal grant; Super		ellow; Shav	w lab analyzed all m	icrobial sample	es. 100% concept;
100% writing and editing of the gran		DI	0.0.11.1	2012 2015	Φ22.020
Statewide on-farm food safety	USDA-	PI	C. Strohbehn,	2012-2015	\$23,939
program	Agricultural		P. Domoto,		(\$23,939)
	marketing		L. Wilson,		(E)
	Service:		L. Naeve,		
	Specialty Crop Block Grant		M. Smith		
PI; Lead extension microbiologist; S	upervised an unde	rgraduate s	tudent: Manage a re	search leam of	SIX Jacilly members
Developed 20% of the educational c		titive exteri	nal grant; Multi-disc	iplinary betwee	n value added
agriculture, hospitality management	and food science;	titive extern 20% conce	nal grant; Multi-disc pt; 75% writing and	iplinary between editing of the g	en value added grant proposal
agriculture, hospitality management Food safety curriculum for the	and food science; National	titive exteri	nal grant; Multi-disc pt; 75% writing and C. Hurburgh	iplinary betwee	en value added grant proposal \$1,483,522
agriculture, hospitality management Food safety curriculum for the	and food science;  National Institutes of	titive extern 20% conce	nal grant; Multi-disc pt; 75% writing and C. Hurburgh (PI),	iplinary between editing of the g	en value added grant proposal \$1,483,522 (\$40,000)
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agriculture, hospitality management Food safety curriculum for the bulk agricultural product supply	and food science; National Institutes of Health	titive extern 20% conce Co-PI	nal grant; Multi-disc pt; 75% writing and C. Hurburgh (PI), J. Roth, G. Mosher	iplinary betwee editing of the § 2012-2014	en value added grant proposal \$1,483,522 (\$40,000) (E)
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	Initiatives		L. Naeve,		
	Proposal		J. Toering,		
	Ттороват		R.Wrage,		
			A. Vandehaar,		
			J. Hannan,		
			C. Bregendahl,		
			J. Lawrence		
Co-PI; Lead extension microbiologis	t: Competitive int	ernal grant:		hetween value	dded agriculture, ag
economics, horticulture, hospitality in grant proposal					
Equipping Iowa State University	Heddleson	PI	N/A	2012-2013	\$1,800
Extension specialist with food	Faculty Grant	FI	1 <b>N</b> / A	2012-2013	(\$1,800)
	raculty Grant				
safety knowledge to impact Iowans					(I)
lives	1 11000/ 0/1	1	1 ' 1 337 1	1 11 10 1:00	, , , , , , , , , , , , , , , , , , ,
PI; Competitive internal grant; Deve throughout Iowa. 100% concept; 100					erent extension offices
Food Safety/Good agricultural	Iowa	PI	A. Larson	2012	\$4,483
practices training for extension	Sustainable				(\$4,483)
educators	Agriculture				(I)
	Research &				
	Education				
PI; Lead extension microbiologist; [	Developed 100% o	f the educat	ional curriculum. Co	ompetitive exte	rnal grant; Multi-
disciplinary between value added ag					
Food Safety and Defense for	Iowa	PI	C. Strohbehn,	2012	\$8,000
Direct Sales: What Entrepreneurs	Department of		J. Meyer		(\$8,000)
need to know about regulations	Inspection and		,		(I)
	Appeals				
	(USDA Grant)				
PI; Lead extension microbiologist; Γ		the education	onal curriculum. Coi	mpetitive exter	nal grant: Multi-
disciplinary between hospitality mar					
Cross contamination of <i>E.coli</i>	North	PI	B. Nonnecke	2012	\$6,990
O157:H7 from handler's hand s to	American	11	D. Tronnecke	2012	(\$6,990)
	Strawberry				(E)
strawherries during collection and					
strawberries during collection and					
strawberries during collection and survivability during growth	Growers				
	Growers Association	dents: Shaw	v lah analyzed all m	icrohial sample	

# commodity grant; Multi-disciplinary between horticulture and food science; 50% concept; 50% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)

# Funded Positions from Grants (4)

Dates	Name	Role	Comments
2021-Present	Teresa	Project Coordinator/ Food Safety Extension	50% time paid by grant
	Wiemerslage,	and Outreach for FDA/ Iowa Department of	
	M.S.	Agriculture and Land Stewardship Cooperative	
		Agreement	
2017-Present	Ellen Johnsen	Project Coordinator for FDA North Central	Education and
		Regional Center for FSMA grant	Programming Expert
2018-2021	Dan Fillius, M.S.	Project Coordinator/ Food Safety Extension	Food Safety Expert
		and Outreach for FDA/ Iowa Department of	
		Agriculture and Land Stewardship Cooperative	
		Agreement	
2017-2018	Dr. Smaranda	Project Coordinator/ Food Safety Extension	Organic Food Safety
	Andrews	and Outreach for FDA/ Iowa Department of	Expert

Agriculture and Land Stewardship Cooperative	
Agreement	

# SUPERVISORY POSITIONS (6)

Dates	Name	Role	Comments
2021-Present	Andre Salazar,	Food safety extension specialist paid by ANR	Education Extension
	M.S.	Extension and Outreach	Specialist I
2017-Present	Ellen Johnsen	Project Coordinator for FDA North Central	Education Extension
		Regional Center for FSMA grant	Specialist III
2018-2021	Dan Fillius, M.S.	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Education Extension Specialist II
2017-2018	Dr. Smaranda Andrews	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Extension Lecturer
2013-2017	Dr. Aura Daraba	Post-Doctoral Research Associate	Associate Professor at Dunarea de Jos University of Galaţi, Romania
2012-2014	Heather Snyder, M.S.	Food Safety Extension and Outreach	Current Head of Food Microbiology Laboratory for Hormel

# STUDENT MENTORSHIP

Service to Graduate Student Research (38 Total; 14 as Major Professor: 6 PhD and 8 MS)

Student	Degree	Role	<b>Graduation Date</b>
Baidini Ghosh	MS Food Science	Major Professor	2023
Chinwendu Ozoh	PhD Food Science	Major Professor	2023
Lillian Nabwiire	PhD Food Science	Major Professor	2023
Michael Cropp	PhD Meat Science	Committee Member	2023
Justin Anast	PhD Microbiology	Committee Member	2022
Bridget Perry	PhD Food Science	Major Professor	2022
Shalini Wijeratne	MS Food Science	Committee Member	2022
Warren Johnson	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	December 2021
Emalie Thomas-Popo	PhD Food Science	Committee Member	December 2021
William (Bill) Knapp	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	December 2021
Moriah Bilenky	PhD Horticulture	Committee Member	May 2021
Boya Luo	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2020
Lillian Nabwiire	MS Food Science and Horticulture	Major Professor	May 2020
Manreet Bhullar	PhD Food Science	Major Professor	December 2019
Ana Lorena Monge	PhD Food Science	Major Professor	December 2019
Samuel Kiprotich	MS Food Science	Committee Member	December 2019
Jacques Overdiep	MS Food Science	Major Professor	May 2018

Niraja Shivalingaiah	MS Food Science	Major Professor	May 2018
Nathan Eylands	MS Horticulture at University of Arkansas	Committee Member	December 2018
Joshua Nazareth	MS Food Science	Major Professor	May 2017
Amber Kastler	MS GPIDEA-Dietetics Masters of Food and Consumer Science	Committee Member	May 2017
John Fox	MS Food Science	Committee Member	May 2017
Kelsey Choquette	MS Food Science	Committee Member	May 2017
Fei Wang	PhD Microbiology	Committee Member	May 2017
Amy Henry	MS Agricultural Education	Committee Member	May 2017
Bella Chan	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2017
Dawei Li	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2017
William L. Solomon	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2016
David Manu	PhD Food Science	Committee Member	May 2016
Cathleen Taylor	MS Agricultural Education	Committee Member	May 2016
Mani Kumar Badvela	PhD Meat Science	Committee Member	May 2016
Kun Xie	MS Food Engineering	Committee Member	May 2016
Sai Elumalai	MS Food Science	Major Professor	May 2015
Amber Roy (Noterman)	MS Food Science	Major Professor	May 2015
John Dzubak	MS Food Science	Major Professor	May 2015
Amanda Svoboda	PhD Food Science	Major Professor	May 2015
Megan Myers	MS Meat Science	Committee Member	May 2015
Cynthia Dawso Van Druff	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2011

Service to Undergraduate Student Research (16)

Student	Degree	Role	Graduation Date
Kylie Plagakis	Dietetics	Research	May 2024
Alexander Krob	Genetics	Research	May 2024
Alexias Townsend	Animal Science	Research	May 2024
Siri Makanga	Microbiology	Research	May 2019
Kathryn Hinshaw	Microbiology	Research	May 2018
Yuliya Kovalenk	Food Science	Research	May 2017
Morgan Denzer	Food Science	Research	May 2017
Carlos Poemape	Architect/ agronomy	Research	May 2017
Lucille Little	Animal Science	Research	May 2015
Jodie Johnson	Ag Education	Research	May 2015
Nicholas Gross	Horticulture	Research	December 2015
Kara Helterbran	Microbiology	Research	August 2015
Erina Gunawan	Food Science	Research	May 2014
Cody Henkle	Dairy Science	Research	May 2014
We Yeok (Patrick)	Food Science	Research	May 2013
Beatrice Jie	Food Science	Research	August 2013

Summer Internship Student Research (19)

Student	Program	Role	Date
Daysia Williams	George Washington Carver	Research Intern	Summer 2019
Tuskegee University	Scholar Intern		
Mikuel Hicks	George Washington Carver	Research Intern	Summer 2019
Tuskegee University	Scholar Intern		

Jessyca Martinez-Velez	George Washington Carver	Research Intern	Summer 2019
University of Puerto Rico	Scholar Intern		
Kelvin Lopez Alonzo	George Washington Carver	Research Intern	Summer 2019
University of Puerto Rico	Scholar Intern		
Briana Young	George Washington Carver	Research Intern	Summer 2018
Central Michigan University	Scholar Intern		
Keith Fennel	George Washington Carver	Research Intern	Summer 2018
North Carolina A&T	Scholar Intern		
University			
Yazrah Randall	George Washington Carver	Research Intern	Summer 2017
Tuskegee University	Scholar Intern		
Jasmine Roberts	George Washington Carver	Research Intern	Summer 2016
Tuskegee University	Scholar Intern		
Terry Vines	George Washington Carver	Research Intern	Summer 2016
Tuskegee University	Scholar Intern		
Cecile Cesarini	PUF 6 month France intern from	Research Intern	Mar-Sept 2016
France	ONIRIS Food Science School		
Bridget Perry	George Washington Carver	Research Intern	Summer 2015
Tuskegee University	Scholar Intern		
Jason White	George Washington Carver	Research Intern	Summer 2015
Tuskegee University	Scholar Intern		
Bryant Moore	George Washington Carver	Research Intern	Summer 2015
Tuskegee University	Scholar Intern		
Che Deer	George Washington Carver	Research Intern	Summer 2014
Oklahoma	Scholar Intern (High School)		
Nehu Manu	George Washington Carver	Research Intern	Summer 2014
New York	Scholar Intern (High School)		
Asana Zilk	George Washington Carver	Research Intern	Summer 2014
Iowa	Scholar Intern (High School)		
Adalissa Ortiz	George Washington Carver	Research Intern	Summer 2013
Missouri	Scholar Intern (High School)		
Genevieve Sullivan	Cornell University Exchange	Research Intern	Summer 2013
Courtney Williams	George Washington Carver	Research Intern	Summer 2012
Central Missouri University	Scholar Intern		

# **EXTENSION PROGRAMMING**

# Workshops Conducted

- 1. Biological soil amendments of animal origin workshop with US Food and Drug Administration
  - a. 2019-1 Course (50 participants)
- 2. Cleaning and Sanitation: Food Safety Basics workshop with US Food and Drug Administration
  - a. 2022-1 Course (35 participants)
- 3. Food Microbiology for Industry-Short Course
  - a. 2019, 2020, and 2021 cancelled due to COVID-19 Pandemic
  - b. 2017-1 Course (25 participants)
  - c. 2016-3 Course (41 participants)
  - d. 2015-1 Course (25 participants)

- 4. Food Safety Modernization Act Preventive Controls for Human Food Course
  - a. 2020 no course due to COVID-19 Pandemic
  - b. 2019- 2 Courses (46 participants)
  - c. 2018-1 Course (32 participants)
  - d. 2017-2 Course (101 participants)
  - e. 2016-3 Course (51 participants)
- 5. Food Safety Modernization Act Informational Webinars
  - a. 2016-5 Webinars (69 participants)
  - b. 2016-1 Half-Day Workshop (97 participants)
  - c. 2016-1 Full-Day Workshop (65 participants)
- 6. Food Safety Topic Driven Workshops
  - a. 2015- GEAPS Distance Education Seminar through Kansas State (22 participants)
  - b. 2015-1 Lunch and Learn Workshop for Extension agents (20 participant)
  - c. 2014- 1 Half Day Food Safety Workshop for food industry (22 participants)
  - d. 2013-1 Half Day Food Safety Workshop for food industry (50 participants)
  - e. 2013- 2 Lunch and Learn Workshop for Extension agents (40 participants)
  - f. 2012- 2 Farm Food Safety Full Day Short Course for growers (95 participants)
  - g. 2012-1 Half Day Workshop for food industry (55 participants)
  - h. 2012- 2 Lunch and Learn Workshop for Extension agents (40 participants)
  - i. 2012- Microbiology on the Farm Webinar Series for growers (102 participants)
  - j. 2012- GEAPS Distance Education Seminar through Kansas State (25 participants)
  - k. 2011- Four -1 Hour Workshop for food industry (200 participants)
- 7. Good Agricultural Practices
  - a. 2018- Moved course online
  - b. 2017-5 Courses (50 participants)
  - c. 2011-2016- 17 Courses (238 participants)
- 8. Hazard Analysis Critical Control Point for Non-Meat Industries Short Course
  - a. 2015-1 Course (30 participants)
  - b. 2014-1 Course (29 participants)
  - c. 2013-1 Course (31participants)
- 9. International Food Safety Program
  - a. 2019-2021 cancelled due to COVID-19 Pandemic
  - b. 2018-1 Course (9 participants; China)
  - c. 2016- 5 Course (62 participants; Philippians, Haiti, Armenian, Venezuela, Nigeria)
- 10. Market Ready Workshop (administrated by FEED Extension Program at ISU)
  - a. 2020- Moved to online course
  - b. 2019- Cancelled due to COVID-19 pandemic
  - c. 2018-1 Workshop (21 participants)
  - d. 2015- 3 Workshops (56 participants)

- e. 2014- 2 Workshops (41 participants)
- 11. News and Blast Regional 1.5 Day Workshops: Produce Safety Educators Professional Development Event
  - a. 2019-Minneapolis, MN (60 In-person; 30 Online participants)
  - b. 2018-Detroit, MI (50 In-person; 20 Online participants)
- 12. Produce Safety Alliance for Produce Safety Alliance Grower Training
  - a. 2021- 2 Remote Courses (19 participants)
  - b. 2020-8 Courses (140 participants)
  - c. 2019-12 Courses (211 participants)
  - d. 2018-12 Courses (231 participants)
  - e. 2017-4 Courses (73 participants)
  - f. 2016-1 Course (22 participants; Train the Trainer)
- 13. On Farm Food Safety Plan Development
  - a. 2018- Course moved to FEED extension group for administration
  - b. 2017-2 Courses (86 participants)
  - c. 2011-2016- 10 Courses (186 participants)
- 14. On-Farm Readiness Reviews
  - a. 2020-2021- 2 In-Person in 2020; 10 In-Person and 3 Virtual Farms in 2021
  - b. 2019-2020-11 Farms
  - c. 2018-2019- 10 Farms

# Extension Online Curriculum Developed

- 1. North Central Region Produce Food Safety Curriculum
  - a. https://www.ncrfsma.org/resources-topic
- 2. Online Food Safety Education for School Gardens
  - a. <a href="http://www.safeproduce.cals.iastate.edu/elementary/">http://www.safeproduce.cals.iastate.edu/elementary/</a>
- 3. Online Food Safety Education for University Farms
  - a. http://www.safeproduce.cals.iastate.edu/university/
- 4. Online Food Safety Education for Farmers Markets
  - a. <a href="http://www.safeproduce.cals.iastate.edu/farmersmarket/">http://www.safeproduce.cals.iastate.edu/farmersmarket/</a>

#### **Extension Publications Download Data**

- 1. FS 10 Make Food Safety a Priority at Your Farmers Market Booth (2016)
  - a. Downloads: 2021-116; 2020-105; 2019-107; 2018-127
- 2. FS 11 Make Food Safety a Priority for Your CSA (2016)
  - a. Downloads: 2021-369; 2020-492; 2019-886; 2018-129
- 3. FS 24 Marketing Local Foods in Iowa Whole Fruits and Vegetables (2018)
  - a. Downloads: 2021- 64; 2020- 64; 2019- 24; 2018- 132
- 4. FS 29 Optimal Aronia Berry Harvest (2018)
  - a. Downloads: 2021-271; 2020-144; 2019-132; 2018-40
- 5. FS 30 Checklist for Retail Purchasing of Local Produce (2018)
  - a. Downloads: 2021- 215; 2020- 220; 2019- 230; 2018- 650
- 6. FS 31 Ensuring Food Safety: Wineries (2019)

- a. Download: 2021-93; 2020-50; 2019-93
- 7. FS 32 Ensuring Food Safety in the Vineyard: Table Grapes (2019)
  - a. Downloads: 2021- 68; 2020- 52; 2019- 27
- 8. FS 33 Ensuring Food Safety in the Vineyard: Wine Grapes (2019)
  - a. Downloads: 2021- 33; 2020- 49; 2019- 22
- 9. FS 34 Reducing food safety risk on produce farm (2020)
  - a. Downloads: 2021-13; 2020-14
- 10. FS 35A Reducing food safety risk on produce farm: Agricultural Water (2020)
  - a. Downloads: 2021-8; 2020-13
- 11. FS 35B Reducing food safety risk on produce farm: Cleaning and Sanitizing (2020)
  - a. Downloads: 2021-12; 2020-16
- 12. FS 35C Reducing food safety risk on produce farm: Handwashing (2020)
  - a. Downloads: 2021-12; 2020-12
- 13. FS 35D Reducing food safety risk on produce farm: Worker Hygiene and Health (2020)
  - a. Downloads: 2021- 9; 2020-12
- 14. FS 35E Reducing food safety risk on produce farm: Harvest and Post Harvesting Handling (2020)
  - a. Downloads: 2021-13; 2020-15
- 15. FS 35F Reducing food safety risk on produce farm: Biological Soil Amendments of Animal Origin (2020)
  - a. Downloads: 2021-8; 2020-10
- 16. FS 36A Manager's Responsibility: Employees Reporting Foodborne Illness (2020)
  - a. Downloads: 2021-18; 2020-7
- 17. FS 36B Employee Health and Personal Hygiene: Training for Employees (2020)
  - a. Downloads: 2021- 37; 2020- 5
- 18. FS 37 Stocking and Rotation of Produce: Best Practices for Retail Employees (2020)
  - a. Downloads: 2021- 52; 2020- 11
- 19. FS 37B Display Case Cleaning (2020)
  - a. Downloads: 2021- 16; 2020- 4
- 20. FS 38 Handwashing (2020)
  - a. Downloads: 2021-28; 2020-5
- 21. FS 44 FSMA Summary for Hops Growers (2020)
  - a. Downloads: 2021- 15; 2020- 12
- 22. FS 45 Federal and State Regulations on Selling Fermented Food (2020)
  - a. Downloads: 2021-41; 2020-8
- 23. FS 46 Federal and State Regulations on Selling Frozen and Dehydrated Foods (2020)
  - a. Downloads: 2021-31; 2020-8
- 24. FS 47 Federal and State Regulations on Selling Jams and Jellies (2020)
  - a. Downloads: 2021-21; 2020-6
- 25. FS 48 Federal and State Regulations on Selling Pickled Vegetables (2020)
  - a. Downloads: 2021-24; 2020-6
- 26. HS 007 Leafy Green Safe Handling Posters (2014)
  - a. Downloads: 2021-163; 2020-145; 2019-163; 2018-301
- 27. SP 0328 Garden Produce in Floods (2013)
  - a. Downloads: 2021- No Longer Available; 2020- 123; 2019- 156; 2018- 177
- 28. PM 1974 a On-farm Food Safety: Guide to Good Agricultural Practices (GAPs) (2013)

- a. Downloads: 2021-772; 2020-510; 2019-506; 2018-890 (No longer available)
- 29. PM 1974 b On-farm Food Safety: Food Handling Guide (2013)
  - a. Downloads: 2021- 473; 2020- 510; 2019- 506; 2018- 423 (No longer available)
- 30. PM 1974 c On-farm Food Safety: Cleaning and Sanitizing Guide (2013)
  - a. Downloads: 2021-839; 2020-1232; 2019-6317; 2018-3992
- 31. PM 1974 d Guide to Liquid Sanitizer Washes with Fruit and Vegetables (2013)
  - a. Downloads: 2021-1223; 2020-3518; 2019-699; 2018-415
- 32. PM 1974 e Food Pantry Produce Donations Grower Information (2013)
  - a. Downloads: 2021-213; 2020-216; 2019-130; 2018-195

**Extension Webpages** 

Website	Unique Views	Views	Average time on	Downloads
			page	
Iowa Produce Safety	2021: 1521	2021: 2372	2019: 1.44 min	2021: 104
Safeproduce.cals.iastate.edu	2020: 1873	2020: 2325	2018: 1.15 min	2020: 268
_	2019: 5633	2019: 7555	2017: 1.32 min	2019: 3528
	2018: 114	2018: 136		2018: 3,500
	2017: 518	2017: 542		2017: 9,800
North Central for FSMA	2021: 1131	2021: 1588	2019: 2.54 min	2021: 297
Training, Extension, and	2020: 2087	2020: 3252	2018: 0.02 min	2020: 702
Technical Assistance	2019: 1865	2019: 3259	2017: 0.57 min	2019: 344
Ncrfsma.org	2018: 1200	2018: 1500		2018: 7330
_	2017: 835	2017: 865		2017: -
Food Safety Innovations and	2021: 806	2021: 995	2019: 1.45 min	2021: 19
Preventive Control	2020: 1268	2020: 1440	2018: 1.92 min	2020: 155
Producefoodsafety.org	2019: 674	2019: 760		2019: 55
	2018: 306	2018: 395		2018: 1076

## Social Media Account

North Central Regional Food Safety Modernization Act (NCR FSMA) Facebook Page

	Likes	Total Reach	Shares
NCR FSMA	2021:156	2021: 52	2021: 23
	2020: 144	2020: 13	2020: 11
	2019: 124	2019: 2550	2019: 350
	2018: 57	2018: 13.5	2018: 1
	2017: 60	2017: 240	2017: 150

## TEACHING: Currently no teaching appointment at Iowa State University

- Agricultural Education and Studies 111: Dean's Leadership- Dr. Carmen Bain and Dean Robinson Faculty
  - o Taught: Fall of 2020 and 2021 (~20 students per class)
- Animal Science 684: Meat Science Seminar- Dr. Joseph Sebranek
  - o Spring 2018, 2016, and 2014 (~10 students per class)
- Animal Science/Food Science/Hospitality Management 489: Issues in Food Safety-Dr. Ani Naig
  - o Spring 2013, 2014, 2019, and 2020 (~20 students per class)
- Food Science and Human Nutrition
  - o 208X: Dairy Foods Current Issues and Controversies-Dr. Stephanie Clark

- Spring 2012, 2013, 2014, and 2017 (~30 students per class)
- o 405: Food Quality Assurance-Drs. Lester Wilson and Joey Talbert
  - Spring 2012, 2017, and 2018 (~40 students per class)
- o 471: Food Processing-Dr. Stephanie Jung
  - Spring 2013 (~30 students per class)
- o 420: Food Microbiology-Dr. Aubrey Mendonca
  - Spring 2012 (~40 students per class)
- Horticulture
  - o 331: Hydroponics-Dr. Chris Currey
    - Fall 2014, 2015, 2016, 2017, 2018, and 2019 (~30 students per class)
  - o 376: Field Production of Horticultural Corps-Drs. Diana Cochane and Ajay Nair
    - Fall 2015, 2016, 2017, 2018, 2019, and 2020 (~25 students per class)
  - o 422: Post Harvest Processing-Dr. Dick Gladden
    - Fall 2014 and 2019 (~25 students per class)
  - o 461: Fruit Production-Dr. Gail Nonnecke
    - Spring 2013, 2014, 2016, 2018, 2020, and 2021 (~30 students per class)
  - o 471: Vegetable Production-Dr. Ajay Nair
    - Spring 2012, 2014, 2018, 2019, 2020, and 2021 (~20 students per class)
  - o Department Seminar Series- Dr. Kathleen Delegate
    - Spring 2014 and 2018 (~25 students/staff/faculty per class)
- Kinesiology 110: Personal and Consumer Health- Dr. Tyanez Jones
  - o Fall 2014 and Spring 2015 (~200 students per class)
- Master of Business Administration: Traceability Course-Drs. Byron Brehm-Stecher,
   James Dickson, Shannon Coleman, Gretchen Mosher, and Angela Shaw
  - Lead person in development of Course: Fall 2020 and 2021 offered (~15 students per class)
- Courses taught at Texas Tech University include Introduction to Food Microbiology with laboratory, Introduction to Hazard Analysis Critical Control Points (HACCP), and Introduction to Sanitation.

#### SERVICE AND OUTREACH

# <u>Institutional Service- University Level</u>

- 2020-Present: At Large Faculty Senator for College of Agriculture and Life Sciences at Iowa State University
- 2020-Present: Member of Athletic Council at Iowa State University
- 2020-Present: Extension Faculty Taskforce at Iowa State University within Provost Office
- 2020-2021: COVID-19 Initiative Team Food at Iowa State University Extension and Outreach
- 2019-Present: Lead of the Program of Work (POW) Produce Safety Team at Iowa State University Agriculture and Natural Resources Extension and Outreach
- 2018-Present: Member of George Washington Carver Faculty Council at Iowa State University

- 2017-Present: Black Faculty and Staff Association at Iowa State University
  - 1. Incoming Chair (2017); Current Chair (2018-2019; 2020-2021); Past Chair (2019-2020; 2021-Present)
  - 2. Awards Committee: 2019-Present
  - 3. Welcome Committee: 2012-Present
- 2017: Search Committee Member for Director of Extension and Outreach at Iowa State University
- 2013: Search Committee Member for Families Extension Program at Iowa State University

# Institutional Service- College Level

- 2019-2021: Member of Search Committee for Associate Dean of Academic Innovation for the College of Agriculture and Life Sciences
- 2015-2017 and 2019-2021 Member of College of Agriculture and Life Sciences Diversity and Inclusion Committee
- 2018-2019: Member of College of Agriculture and Life Sciences Task Force for CALS Student Council.
- 2012: Search Committee Member for Assistant Dean for Diversity for College of Agriculture and Life Sciences in at Iowa State University

# Institutional Service- Department of Food Science and Human Nutrition

- 2022: Search Committee Member for Department Chair for Food Science and Human Nutrition
- 2020-Present: Member of Food Science and Technology Graduate Advisory Committee for the Department of Food Science and Human Nutrition
- 2015-Present: Lead of Signature Area Community Health and Food Science Education
- 2015-2016; 2021-Present: Member of Awards Committee for Department of Food Science and Human Nutrition
- 2020-2021: Member of Department Advisory Committee for the Department of Food Science and Human Nutrition
- 2019-2021: Chair of Equity, Diversity and Inclusion Committee for the Department of Food Science and Human Nutrition
- 2021, 2019, 2018, 2017, 2016: Iowa FFA Food Science Contest Product Development and Complaint Letter Judge
- 2019-2020: Chair of Faculty Review Committee for the Department of Food Science and Human Nutrition
- 2018-2019: Task Force Equity for the Department of Food Science and Human Nutrition
- 2018-2019: Chair of Search Committee for Assistant Professor of Enology in Department of Food Science and Human Nutrition at Iowa State University
- 2017-2019: Chair of the Graduate Student Admission and Recruitment Committee for Department of Food Science and Human Nutrition
  - Initiated a change in the graduate student admission policy toward an inclusive approach based on research, teaching, extension, and work experience. Previous admission policy evaluated solely on GPA and GRE scores.
  - Developed a protocol guide for the committee that included the history of the committee policies and details of procedures.

- 2014-2017: Co-Coach of the Iowa State University Institute of Food Technologist College Bowl Team
- 2012-2017 and 2019-2020: Member of Graduate Admissions and Recruitment Committee for Department of Food Science and Human Nutrition
- 2016-2017: DAC Committee for Department of Food Science and Human Nutrition
- 2014-2017: Member of Undergraduate Recruitment Committee for Department of Food Science and Human Nutrition
- 2016: Member of Website Development Committee for Department of Food Science and Human Nutrition
- 2013-2018: Youth Food Science Education Promotion (K-12): World Food Prize/ Youth Institute/World Food Interactive Session. 2013-2018
- 2012-2013: Member of Seminar Committee for Department of Food Science and Human Nutrition
- 2011-2018: Youth Food Science Education Promotion (K-12): Science Bound Laboratory Interactive Sessions. 2011-2018

#### Community-Based Service

- The Ames Youth and School Action Team: A non-partisan group of concerned citizens whose intention is to shine light on racial and ethnic disparities that exist throughout the Ames Community School District. Founded in January 2017. Founding member
  - o Steering Committee Member. 2017-Present
  - o 2019: 45 general members; 11 steering committee members; 2018: 50 general members, 10 steering committee; 2017: 50 general members; 12 steering committee members
- Hope in Christ Back to School Backpack Give Away Event: Faith based backpack give away that serves between 300-500 K-12 students.
  - o Speaker. Every August 2017-2019; 2021
- Passion Academy: Sixth and seventh grade student of color career promotion program at Ames Middle School in Ames, Iowa, managed by faculty, staff, graduate and undergraduate students of color from Iowa State University. Founded in April 2016.
  - o Director and developer of program. Spring 2017-Winter 2019
  - o 2018-2019: 20 participants; 2017-2018: 50 participants; Spring 2016: 20 participants. Delayed due to COVID-19.

#### PROFESSSIONAL AND ACADEMIC MEMBERSHIP

- National Chair
  - 2018-Present: Chair/ Co-Chair of USDA Funded North Central Region Center for FSMA Training, Extension, and Technical Assistance
  - 2013-2020: Chair of FDA Funded North Central Region Center for FSMA Training, Extension, and Technical Assistance
  - 2011-2016; 2017-Present: S-294 USDA Multi State Research Project: Quality and Safety of Fresh-cut Vegetables and Fruits. Lead for Iowa State University (2013-2016; 2017-Present) President Elect (2013-2016)
- National Member

- 2020-Present: Inaugural Chair of International Association for Food Protection Diversity and Equity Committee
- 2020-2021: Taskforce Member to develop a Diversity Equity and Inclusion Committee for International Association for Food Protection
- 2020-Present: Member of International Association for Food Protection Program Committee
- 2020-2021: Member of CEA (Controlled Environment Agriculture) Food Safety Coalition Advisory Council
- 2010-Present: Member of The American Society for Microbiology
- o 2011-Present: Member of Egg Industry Center Advisory Board
- o 2006-Present: Member of Institute of Food Technologist
- o 2005-Present: Member of International Association for Food Protection
- o 2005-Present: American Meat Science Association
- o 2012-Present: Food Safety Preventive Controls Alliance
- o 2012-Present: NC-213 The U.S. Quality Grains Research Consortium

#### State Member

- o 2011-Present: Member of Iowa Food Safety Task Force
- 2011-2018: Iowa Section Institute of Food Technologist (Past President, President, President Elect, Member at Large)
- o 2012-2017: Member of Regional Food System Working Group (RFSWG)
- o 2012-2016: Member of The Iowa Food System Working Group (IFSWG)

#### Scientific Review Activities

- o 2019-Present: Elmer Marth Educator Award Committee (Chair 2021)
- o 2018-Present: Tenure and Promotion from Peer Institutions
- o 2017-Present: Foods
- o 2010-Present: Food Control
- o 2010-Present: Foodborne Pathogens and Disease
- o 2010-Present: Journal of Food Science
- o 2006-Present: Journal of Food Protection (editorial board 2018-2020)
- 2008-2020: Meat Science

#### Grant Proposal Review

- o 2020: USDA Value Added Producers Grants Program
- o 2017: USDA 1890 Facility Research
- o 2015: USDA Higher Education
- o 2014: USDA Higher Education
- o 2013: USDA 1890 Facility Research
- o 2013: USDA Non-Land Grant Institutions Reviewer
- o 2013: Baily Research Award; University internal grant, Iowa State University
- o 2011: USDA SBIR Phase I reviewer

# Equity, Diversity and Inclusion Presentations

- Shaw, A. 2020. Equity is Lifestyle not a Choice. Iowa State University Department of Agronomy. Diversity Seminar Series. February 25<sup>th</sup>, 2020. Ames, Iowa
- Shaw, A. 2020. Equity Diversity and Inclusion Survey Consult. Iowa State University Department of Plant Pathology and Microbiology Diversity Equity and Inclusion Committee Meeting. June 16<sup>th</sup>, 2020. Virtual.
- Shaw, A., and E. Johnsen. 2018. Passion Academy: Empowering Middle School Students of Color in Predominately White Schools. The Institute for the Study and Promotion of Race and Culture (ISPRC) 18th annual Diversity Challenge: Making Race and Culture Work in the STEM Era: Bringing All People to the Forefront. October 19-20<sup>th</sup>, 2018 at Boston College, Chestnut Hill, Massachusetts. <a href="https://www.bc.edu/content/dam/bc1/schools/lsoe/sites/isprc/Diversity%20Challenge/2018%20DC%20Abstracts.pdf">https://www.bc.edu/content/dam/bc1/schools/lsoe/sites/isprc/Diversity%20Challenge/2018%20DC%20Abstracts.pdf</a>

# **Professional Improvement Training**

- 1. Every March 2011 through 2019; 2021: Iowa State Conference on Race and Ethnicity (ISCORE) Conference (Ames, IA)
- 2. 2019-2020: Lead 21 program purpose is to develop leaders in land grant institutions and their strategic partners who link research, academics, and extension in order to lead more effectively in an increasingly complex environment, either in their current position or as they aspire to other positions (Minneapolis, Denver, Washington DC)
- 3. November 2020: Writing Successful Grants and Write Winning Grant Proposals
- 4. February 2020: Just Mercy Book Read and Discussion (Ames, IA)
- 5. October 2019: Deaf Culture 2 Part Series (Ames, IA)
- 6. September 2019: Managing Abism (Ames, IA)
- 7. May 2020: National Conference on Race and Ethnicity Conference (NCORE) Conference (Portland, Oregon)
- 8. February 2019: White Fragility with Dr. Robin DiAngelo (Ames, IA)
- 9. April 2018: Privileging the Privileged: How bias, power and privilege impact graduate school funding and admissions (Ames, IA)
- 10. April 2018: Cross cultural communication; creating mutual understanding in a diverse academic environment (Ames, IA)
- 11. March 2018: Train the Trainer On-Farm Readiness Review (Florida)
- 12. March 2018: "That's Not What I Meant": Understanding intent vs impact in an academic environment (Ames, IA)
- 13. September 2018: Managing Unconscious Bias: Strategies for the Classroom (Ames, IA)
- 14. October 2017: Breaking Bias (Ames, IA)
- 15. October 2016: Writing Successful Grants and Write Winning Grant Proposals
- 16. October 2016: Creating an Inclusive Classroom (Ames, IA)
- 17. December 2016: Train the Trainer Produce Safety Alliance (Minneapolis, MN)
- 18. August 2015: Grant coach for FDA/NIH proposal
- 19. December 2015: Train the Trainer Food Safety Modernization Act Preventive Controls for Human Food (Minneapolis, MN)
- 20. November 2015: Annual Iowa Organic Conference (Iowa City, IA)

- 21. August 2015: Implementing SQF Systems (Des Moines, IA)
- 22. July 2015: International Association of Food Protection Conference (Portland, OR)
- 23. July 2015: IFT Strategic Leadership Conference (Chicago, IL)
- 24. July 2015: Institute for Food Technologist (Chicago, IL)
- 25. June 2015: S294 Conference/ United Fresh Produce Conference (Chicago, IL)
- 26. June 2015: Food Safety Preventive Control Train the Trainer (Bedford, IL)
- 27. October 2014: S1056 Enhancing Microbial Food Safety by Risk Analysis (San Juan, PR)
- 28. November 2014: Annual Iowa Organic Conference (Iowa City, IA)
- 29. April 2014: USDA AMR Group GAP Internal Auditor Training (LaFarge, WI)
- 30. April 2014: FDA Traceback Course (Clive, IA)
- 31. August 2013: 2013 Fruit and Vegetable field day (Horticulture Farm, Ames, IA)
- 32. July 2013: IFT Strategic Leadership Conference (Chicago, IL)
- 33. July 2013: Institute for Food Technologist (Chicago, IL)
- 34. July 2013: International Association of Food Protection Conference (Charlotte, NC)
- 35. May 2013: S294 Conference/ United Fresh Produce Conference (San Diego, CA)
- 36. April 2013: Annual Egg Industry Issues Forum (St. Louis, MO)
- 37. January 2013: FDA Risk Based Inspection Course (Fairgrounds, Des Moines, IA)
- 38. April 2012: FDA Foodborne Illness half day workshop (Gateway Hotel, Ames, IA)
- 39. April 2012: United Fresh Produce Conference (Dallas, TX)
- 40. March 2012: FDA Retail Food Program Standard 2 Training Regulatory Staff Workshop given by FDA (State Hygiene Laboratory at DMACC, Ankeny, IA)
- 41. March 2012: FDA 312 Special Processes at Retail Workshop given by FDA (State Hygiene Laboratory at DMACC, Ankeny, IA)
- 42. December 2011: Food Label and Food Legislation Seminar-Food Policy Conference given by IFT (Arlington, VA)
- 43. September 2012: Writing Successful Grants and Write Winning Grant Proposals
- 44. September 2011: College of Agriculture and Life Sciences New Faculty Orientation, Grants and Proposals Workshop
- 45. September 2011: "Ten Inexpensive Ways to Stimulate Proposal Development," a webinar by Dr. Robert Porter, Director of Research Development at the University of Tennessee
- 46. September 2011: Grant Writing Seminars: Basic principles and Submitting a grant to NSF and NIH