



Publications 2018-2019

*denotes student; Bold denotes Institute member or faculty

Book Chapters

Balanay JG (2018). Noise and the Environment (Chapter 24). In P Knechtges, **GD Kearney** and B Resnick (Eds.), Environmental Public Health: The Practitioner's Guide (pp. 647-684). Washington, DC: APHA Press. (ISBN 978-0-87553-293-6)

Jaiswal, Y., Guan, Y., Moon K., and **Williams, L.L. (2019)**. Anthocyanins – Natural sources and traditional therapeutic uses. In Anthocyanins - Novel Antioxidants in Human Health and Diseases Prevention. Intech Open ISBN 978-953-51-7774-6

Jaiswal, Y. and **Williams, L.L. (2018)**. Aconite: Ethanopharmacological Benefits and Toxicity. In Innovation and Agricultural and Biological Engineering. CRC Press, Inc. (Accepted – In Press).

Jaiswal, Y. and Williams, L.L. **(2018)**. Spatio-Temporal Imaging and High-Resolution Mass Spectrometry Analysis: New Avenues in Herbal Discovery and Plant Metabolomics. Springer Publishing, Inc. (Accepted – In Press)

Publications – Peer Reviewed

Adongbede, E.* , Jaiswal, Y., Davis, S., Randolph, P. and **Williams, L.L. (2019)**. Antioxidant and antibacterial activity of the wild polypore-Trametes polyzona (Pers.) Justo. Journal of Food Science & Biotechnology. <https://doi.org/10.1007/s10068-019-00642-4>.

Ayad, A.A., **Williams, L.L. (2018)**. Stimulating the viability of Bifidobacterium spp. in synbiotic fermented milk by co-culturing with Lactobacillus paracasei 441 and inulin. Intl J Hort Agri Food Sci. 2(5):174-181.

Bansode, R.* , Randolph, P., Plundrich, N., Lila, M., and **Williams, L.L. (2019)**. Peanut protein-polyphenol aggregate complexation suppresses allergic sensitization to peanut by reducing peanut-specific IgE in C3H/HeJ mice. J. Food Chem. v 299 pp. 125025

Bunn JP, **Balanay JG** and **Richards SL** (2019). Evaluation of Barrier Sprays for Controlling Mosquitoes in Eastern North Carolina: Can Land Cover and Spatial Analyses Improve Predictions of Efficacy? *Journal of the American Mosquito Control Association* 35(1): 19-31. doi:10.2987/18-6762.1

Dillane D, **Richards SL**, **Balanay JG** and Langley R (2019). Risk Assessment and Recommendations for Forester Exposure to Hymenoptera. *Journal of Agromedicine*. 24(2): 146-156. doi:10.1080/1059924X.2019.1567425

Drake, F.N.* , Davis, S., Khatiwada, J.R., and **Williams, L.L. (2018)**. Identification and antimicrobial susceptibility of *Yersinia enterocolitica* found in chitterlings, raw milk and swine fecal samples. *Adv Microbiol* 8(10):804-820 10.4236/aim.2018.810053

Dugger-Webster, A.* & **LePrevost, C. E.** (2018). Following pesticide labels: A continued journey toward user comprehension and safe use. *Current Opinion in Environmental Science & Health* 4, 19-26.

Gerald, C. McClendon, C., Ranabhat, R., **Waterman, J.**, Kloc, L., Conklin, D., Barton, K., Khatiwada, J., and **Williams, L.L.** (2019). Sorrel Extracts Reduce Oxidant Production in Airway Epithelial Cells Exposed to Swine Barn Dust Extract In Vivo. *Mediators of Inflammation*. Doi.org/10.1155/2019/7420468.

Iloghalu, U.* , Holmes, B., Khatiwada, J. and **Williams, L.L. (2019)**. Selected plant extracts show antiviral effects against murine norovirus surrogate. *Adv Microbiol*. 9(4):372-384.

Jaiswal, Y., Liang, Z., Ho, A., Chen, H., **Williams, L.**, and Zhao, Z. (2018). Comparative pharmacognostical and UHPLC-QTOF MS analysis of two species of liliium. *World J Phar and Pharmaceutical Sci*. 7(12):159-167.

Johnson, T. K. B.* , **LePrevost, C. E.**, Kwak, T. J., & **Cope, W.G.** (2018). Selenium, mercury, and their molar ratio in sportfish from drinking water reservoirs. *International Journal of Environmental Research and Public Health* 5(9): article 1864 (17 pages).

Knecht H, **Richards S**, **Balanay J** and White A (2018). Impact of Mosquito Age and Insecticide Exposure on Vector Competence of *Aedes albopictus* (Diptera: Culicidae) for Zika Virus. *Pathogens* 7(3): 67. doi:10.3390/pathogens7030067

LePrevost, C. E., Walton, A. L., **Thomas, G.**, & Lipscomb, A. (2018). Engaging outreach workers in the development of a farmworker health research agenda. *Environmental Research* 165, 19-22.

Moaddabdoost, Z.* , **Williams, L.L.**, and Chen, G. (2019). Design of a batch ultrasonic reactor for rapid pasteurization of juices. Part I: Reactor design and validation. *J. Food Eng* (Submitted – Under review).

Persaud, E.* & **LePrevost, C. E.** (2018). Risk perceptions and barriers to protective behavior use among chemical tank cleaners: An exploratory study. *Journal of Primary Prevention* 39(6), 611-618.

Radford CP, **Balanay JG**, Featherstone A and **Kelley T** (2018). Elevated Blood Lead Levels in Buncombe County Children: Implications of Lowering the North Carolina Intervention Level to the Centers for Disease Control and Prevention Blood Lead Reference Value. *Journal of Environmental Health* 80(10): 16-22.

Richards SL, Agada N, **Balanay JG** and White AV (2018). Permethrin Treated Clothing to Protect Outdoor Workers: Evaluation of Different Methods for Mosquito Exposure Against Populations of Differing Resistance Status. *Pathogen and Global Health* 112(1): 13-21. [doi: 10.1080/20477724.2018.1437692](https://doi.org/10.1080/20477724.2018.1437692)

Rose, MA, **Pories, ML**, **Tutor, R.** Challenges Farm Wives Perceive in Maintaining Farm Family Health: A Qualitative Study (in review)

Shen, Y., Song, X., Li, L., Sun, J., Jaiswal, Y., Huang, J., Liu, C., Yang, W., **Williams, L.**, Zhang, H. and Guan, Y. (2019). Protective effects of p-coumaric acid against hyperlipidemia and reactive oxygen species generation – an in vivo and in vitro evaluation. *Biomed and Pharmacotherapy*. 111:579-587

Sousan, S.; Gray, A.; Zuidema, C.; Stebounova, L.; Thomas, G.; Koehler, K.; and Peters, T. Sensor selection to improve estimates of particulate matter concentration from a low-cost network. *Sensors* 2018, 18, 3008.

Stern, R., and **Mozdiak, P.** (2019) Differential ammonia metabolism and toxicity between avian and mammalian species and effect of ammonia on skeletal muscle: A comparative review. *Journal of Animal Physiology and Animal Nutrition*, Volume 103 (3);774-785. doi.org/10.1111/jpn.13080

Stern, R. and **Mozdiak, P.** (2019). Glutamine synthetase in avian muscle contributes to a positive myogenic response to ammonia compared to mammalian muscle. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*, Volume 317, Issue 12019 Jun 28. <https://doi.org/10.1152/ajpregu.00232.2018>

Storm, J. F., **LePrevost, C. E.**, Arellano, C., & Cope, W. G. (2018). Certified Safe Farm implementation in North Carolina: Hazards, safety improvements, and economic incentives. *Journal of Agromedicine* 23(4), 381-392.

Sullivan KM, Poffley A, Funkhouser S, Driver J, Ross J, Ospina M, Calafat AM, Beard CB, White A, **Balanay J**, **Richards S**, Dyer M, Mathers TN and Meshnick S (2019). Bioabsorption and Effectiveness of Long-Lasting Permethrin-Treated Uniforms over Three Months Among North Carolina Outdoor Workers. *Parasites and Vectors* 12:52. doi:10.1186/s13071-019-3314-1

Wentz, L.M, Nieman, D.C., McBride, J.E., Gillitt, N.D., **Williams, L.L.** and Warin, R.F. (2018). Carbohydrate intake does not counter the post-exercise decrease in natural killer cell cytotoxicity. *Nutrients* 10 (11):1658. <https://doi.org/10.3390/nu10111658>

Williams, L.L. (2018). Anti-antigenic properties of peanuts skins' polyphenols enriched peanut protein mixture. November 12, 2018. *Science Trends*

Yu, J., Smith, I., Senaye-Karlton, B., Mikiashvili, N., and **Williams, L.L.** (2018). Impacts of different drying methods on mold viability and ochratoxin A content of grape pomace. *Intl J Appl Agric Sci* 4(2):35-42.

Zuidema, C., Stebounova, L., **Sousan, S.**, Gray, A., Strohs, O., Thomas, G. Peters, T., & Koehler, K. (2019). Estimating personal exposures from a multi-hazard sensor network. *Journal of Exposure Science & Environmental Epidemiology*. Available at <https://www.nature.com/articles/s41370-019-0146-1>

Zuidema, C.,Sousan,S., Stebounova, L.,Gray, A. Liu, X.,Tatum,M., Stroh,O., Thomas, G., Peters,T., Koehler, K. (2019). Mapping occupational hazards with a multi-sensor network in a heavy-vehicle manufacturing facility, *Annals of Work Exposures and Health*, Volume 63, Issue 3, Pages 280–293, <https://doi.org/10.1093/annweh/wxy111>

Zuidema, C., Stebounova, L., **Sousan, S.**, Thomas, G., Koehler, K. & Peters, T. (2019) Sources of error and variability in particulate matter sensor network measurements, *Journal of Occupational and Environmental Hygiene*, 16:8, 564-574, DOI: [10.1080/15459624.2019.1628965](https://doi.org/10.1080/15459624.2019.1628965)

Publications – Non-Peer Reviewed

Burrack, H. J., Toennisson, A., & **LePrevost, C. E.** (2018). Protecting people and the environment when using pesticides. In 2018 Guide: Flue-cured tobacco. Raleigh, NC: North Carolina State University Cooperative Extension.

Marcom R, Grafft L, Wilson E, Bruce J, Jayaratne KSU and **Roberson G.** Behavioral health issues of NC farmers: What can't be fixed with tape and twine. *N C Med J.* 2018;79(6):378-381.

Posters & Presentations

Bailey, E. & Greer, A. (2019, March). Farmers and feces: A one health approach to emerging swine zoonoses. 2019 Agricultural Health and Safety Symposium, Durham, NC

Bailey, E. (2019, March). One health: Emerging diseases and opportunities for collaboration. 2019 Agricultural Safety and Health Symposium. Durham, NC.

Balanay JG, Beck N and Johnson T (2019, May). Assessment of Occupational Exposure to Heat Stress and Solar Ultraviolet Radiation among Groundskeepers in an Eastern North Carolina University Setting. American Industrial Hygiene Conference and Exposition, Minneapolis, MN,

Balanay JG (2019, March). Adsorption Characteristics of Activated Carbon Fibers in Respirator Cartridges for Toluene. American Industrial Hygiene Association Carolinas Spring Conference 2019, Concord, NC.

Carter D*, **Richards SL**, **Balanay JG** and Langley R (2019, March). Risk Assessment and Recommendations for Forester Exposure to Hymenoptera. North Carolina Agricultural Health and Safety Symposium, Research Triangle Park, NC.

Carter D*, **Richards SL** and **Balanay JG** (2019, May). Risk Assessment and Recommendations for Forester Exposure to Hymenoptera. American Industrial Hygiene Conference and Exposition (AIHce), Minneapolis, MN.

Daodu, J.* (2019, April) Examining the Relationship Between Physical Activity, Water Intake and Obesity. MPH Professional Paper poster presentation, Greenville, NC

Davis, T. *(2019, April) North Carolina Farmers' Respiratory Protection Compliance Study: A Cross-Sectional Study. MPH Professional Paper poster presentation, Greenville, NC

Farquhar, P., Hanson, C. and **Marcom, R.** (2019, April). Worker Protection Standard compliance. Workshop presented at the annual Farmworker Health Institute, Durham, NC.

Grafft L. (2018, October). Agricultural Trauma. Presented at the annual fall education conference for emergency nursing, Cary, NC.

Grafft, L and **Marcom, R.** (2019, January). Health and safety risks of North Carolina commercial fisherman. Rural Health Symposium, Greenville, NC.

Kyle, C. (2019, March). Exploring cultural capital in agricultural education spaces that provide training to military veterans. 2019 Agricultural Health and Safety Symposium, Durham, NC (poster).

Kyle, C. & Haugen, I. (2019, March). Exploring the sustainability and mental wellness of military veterans in agriculture. 2019 Agricultural Health and Safety Symposium, Durham, NC (poster).

Kyle, C., Marcom, R., Wilson, E. (2019, June) Community of Practice? Exploring the Facilitation Social Capital in an Agricultural Education Program for Military Veterans. NC Strive Conference, Raleigh, NC (poster).

Kyle, C., Dubinsky, J., and Steward, T. (2019, June). Utilizing Shared Experiences to Design a Humanities Education Courses for Military Veterans. NC Strive Conference, Raleigh, NC (poster).

Kyle, C. & Rodriguez, B. (2019, June). Cultivating a multi-organizational collaboration to assist farmers with limitations. NC Strive Conference, Raleigh, NC (poster)

Lawrie, R.* , Mitchell, R.* , Dhammi, A., Wallace, A., Hodgson, E. & **Roe, M.** (2019, March). Metabolic and epigenetic responses of human liver cells to DEET and Fipronil. 2019 Agricultural Health and Safety Symposium, Durham, NC (poster).

Lipscomb, A., **LePrevost, C. E., Thomas, G.,** & Walton, A. L. (2019, April). Tools to promote partnerships between farmworker health outreach workers and researchers. Workshop presented at the annual Farmworker Institute Summit and Networking Event, Chapel Hill, NC.

Marcum R. (2018, August). Pesticide Labels & Compliance. Presented at the American Association of Pesticide Safety Educators meeting. San Antonio, TX.

Marcum R. (2018, September). Medical clearance and fit testing: Inspection 101. Presented at the EPA Region 4 Basic Pesticide and Use Concerns Pesticide Inspector Recertification Training. Asheville, NC.

Marcum R. (2018, September). Respirator hands on. Interactive presentation at the EPA Region 4 Basic Pesticide and Use Concerns Pesticide Inspector Recertification Training. Asheville, NC.

Marcum R. (2018, September). Respirator requirements under the WPS. Webinar presentation at Tribal Pesticide Inspector Recertification Training, Poplar, MT.

Marcum R. (2018, October). Unraveling the Mystery of Respiratory Protection: Labels and Equipment. Presented at the EPA Region 3 Pesticide Inspectors' Workshop. Pocono Lodge, PA.

Marcum R. (2018, October) WPS respiratory compliance tips for growers & inspectors. Presented at the EPA Region 3 Pesticide Inspectors' Workshop. Pocono Lodge, PA.

Paul, M.* (2019, April) Fishermen health & safety. MPH Professional Paper poster presentation, Greenville, NC.

Reese K, **Balanay JG** and Tebehaevu O (2018). Volatile Organic Compound (VOC) Emission in a University Printing Press Facility in Eastern North Carolina. National Environmental Health Association's Annual Educational Conference and Exhibition (NEHA AEC), Anaheim, CA, June 2018.

Rhodes, C. Agromedicine (2018, December). NC Academy of Family Physicians Winter Weekend, Asheville, NC.

Rose, MA, **Pories, ML, Tutor, R.** (2019, March) Farm wives' perceptions of challenges to their family health. Collaborative Research Day, Greenville, NC (poster).

Sousan, S. (2019, January). Advanced self-powered systems of integrated sensors and technologies. Advancements in Exposure Measurements, Raleigh, NC.

Sousan, S. (2019, March). Advancements in exposure measurements and low-cost sensors in agriculture. 2018 Agricultural Health and Safety Symposium, Durham, NC.

Travanty, N.*, Ponnusamy, L., & Apperson, Charles (2019, March). Is there a difference between the bacterial communities of monogyne and polygyne fire ant colony soils? 2019 Agricultural Health and Safety Symposium, Durham, NC. (poster)

Williams, LL. (2019, March). Epidemiological approaches for food safety and quantitative risk assessment for foodborne pathogens. 2018 Agricultural Health and Safety Symposium, Durham, NC.

Media

Jarvis, C. (2018, December 17). Storms, Tariffs and Tradewars – Where do farmers turn when they face unprecedented stress? News & Observer. Retrieved from: <https://www.newsobserver.com/news/business/article222672395.html> (**Marcom**)

Knopf, T. (2019, February 27). As mental health needs rise among farmers, experts are reaching out. NC Health News. Retrieved from: <https://www.northcarolinahealthnews.org/2019/02/27/as-mental-health-needs-rise-among-farmers-experts-are-reaching-out/> (**Marcom**)

(2019, February 28). Rural America Live: Rural Stress. [Television broadcast]. Nashville, TN: RFD-TV. (Collaboration with University of Nebraska Medical Center) (**Marcom**)

Zachary, K. (2019, April 2). Agricultural health, safety issues addressed during collaborative N.C. symposium. Retrieved from <https://blog.ecu.edu/sites/ecunow/blog/2019/04/02/agricultural-health-safety-issues-addressed-during-collaborative-n-c-symposium/> (**Marcom**)

Barnes, G. (2019, May 20). \$2 billion Roundup verdict may be just the beginning. NC Health News. Retrieved from https://www.northcarolinahealthnews.org/2019/05/30/pesticides_cancer_link_questions/ (**Marcom**)

Armstrong, M. (2019, June 3). Farmer stress: A situation getting as bad As the 80s some say. Sound Cloud. Retrieved from https://soundcloud.com/broadcaster-max-armstrong/farmer-stress-a-situation-getting-as-bad-as-the-80s-some-say?fbclid=IwAR22c3jIQ-qM-2QIFgPOki5MdG5WyzfCQE3s3_8uuPYTfjIU9NDRI4ALiRc (**Grafft**)