

Jinquan Wang

301D Poultry Science Bldg. Auburn, AL, 36849

979-450-9269

jwang@auburn.edu

EDUCATION

University of Georgia

Doctor of Philosophy (PhD) in Poultry Science

May 2021

Dissertation: *Evaluation of novel feed ingredients in poultry diet*

University of Georgia

Master of Science in Statistics, GPA:3.82/4.00

May 2021

Texas A&M University

Bachelor of Science in Poultry Science

2015

PROFESSIONAL AND RESEARCH EXPERIENCE

Research Assistant Professor, Poultry Science Department, Auburn University Aug. 2024- present

- Nutritional and management strategies to reduce foodborne pathogen shedding in poultry live production
- Dietary ingredients on poultry gut health and foodborne pathogen shedding
- Organic mineral supplementation on broiler breeder, broiler and layer performance

Post-doc Research Associate, Poultry Science Department, UGA

2021- Aug. 2024

Supervisor: Drs. Harsha Thippareddi and Manpreet Singh

- Antimicrobial interventions on foodborne pathogen shedding and microbial diversity in poultry and poultry production environment
- Predictive microbiological models on bacteria survival and growth in different meats and environments
- Meta-analysis and systematic review on topics related to food safety and growth performance
- Organic mineral supplementation on broiler breeder health and performance

Graduate Research Assistant, Poultry Science Department, UGA

2016-2021

Supervisor: Dr. Woo Kyun Kim

- Evaluation of agricultural byproducts and alternative ingredients in poultry diet
- Evaluation of feed additives in broilers and layers
- Modeling the relative bioavailability of enzymes and minerals in broilers

Teaching Assistant, Poultry Science Department, UGA

2017-2021

POUL 3750, Integrated Animal Nutrition

- Guest lectures on the ingredients in poultry diet, feed formulation (Concept 5 and WUFFDA), avian digestive tract, and fat-soluble vitamins
- Prepared and led lab in gastrointestinal tract dissection, ingredient evaluation, ration formulation and production, and nutritional animal experiments

POUL 2020, Introductory Poultry Science

- Led lab discussion in the dissection of muscle and skeletal, gastrointestinal tract, reproductive tract

Graduate Consulting Assistants, The Statistical Consulting Center, UGA

2020

Supervisor: Dr. Dan Hall

- Assisting the clients from the College of Agricultural and Environmental Sciences

PEER-REVIEWED PUBLICATIONS

1. **Wang, J.**, Fenster D., Vaddu, S., Bhumanapalli, Kataria, J., Sidhu, G., Leone, C., Singh, M., R. Dalloul., and Thippareddi, H. 2024. Colonization, Spread and Persistence of *Salmonella* (Typhimurium, Infantis and Reading) in Internal Organs of Broilers. *Poult. Sci.* p.103806.
2. Vaddu, S., **Wang, J.**, Sidhu, G., Leone, C., Singh, M. and Thippareddi, H., 2024. Relative resistance of *Salmonella* serotypes (Typhimurium, Infantis and Reading) to peroxyacetic acid on chicken wings. *Poultry Science*, p.103935.
3. Shi, H., **Wang, J.** and Kim, W.K., 2024. Interactive effects of calcium, phosphorus, and exogenous phytase on growth performance and bone ash in broilers under *Eimeria* or necrotic enteritis infections: a systemic review and meta-analysis. *Journal of Applied Poultry Research*.
4. **Wang, J.**, Vaddu, S., Bhumanapalli, S., Mishra, A., Applegate, T., Singh, M. and Thippareddi, H. 2023. A systematic review and meta-analysis of the sources of *Campylobacter* in poultry production (pre-harvest) and their relative contributions to the microbial risk of poultry meat. *Poult. Sci.*
5. **Wang, J.**, Vaddu, S., Bhumanapalli, S., Mishra, A., Applegate, T., Singh, M. and Thippareddi, H., 2023. A systematic review and meta-analysis of the sources of *Salmonella* in poultry production (pre-harvest) and their relative contributions to the microbial risk of poultry meat. *Poult. Sci.*
6. B. Kroft., C. Leone., **J. Wang.**, J. Kataria., G. Sidhu., S. Vaddu., S. Bhumanapalli., J. Berry., and H. Thippareddi., and M. Singh. In review. Influence of peroxyacetic acid concentration, temperature, pH, and treatment time on antimicrobial efficacy against *Salmonella* on chicken wings. *Poult. Sci.*
7. J. Choi, G. Liu, D. Goo, **J. Wang**, B. Bowker, H. Zhuang, WK. Kim. 2022. Effects of tannic acid supplementation on growth performance, gut health, and meat production and quality of broiler chickens raised in floor pens for 42 days. *Front. Physiol.*
8. Shi, H., **Wang, J.**, White, D., Martinez, O.J.T. and Kim, W.K., 2023. Impacts of phytase and coccidial vaccine on growth performance, nutrient digestibility, bone development and intestinal gene expression of broilers fed a nutrient reduced diet. *Poult. Sci.*
9. W. Kim., A. Singh., **J. Wang.**, and T. Applegate. 2022. Functional Role of Branched Chain Amino Acids in poultry: A review. *Poult. Sci.*
10. H Shi, **J Wang**, PY Teng, YH Tompkins, B Jordan, WK Kim. 2022. Effects of phytase and coccidial vaccine on growth performance, nutrient digestibility, bone mineralization, and intestinal gene expression of broilers.
11. **Wang, J.**, Kong, F., and Kim, W. K. 2021. Effect of almond hulls on performance, egg quality, nutrient digestibility, and body composition of laying hens. *Poult. Sci.*
12. **Wang, J.**, Su, S., Pender, C., Murugesan, R., Syed, B. and Kim, W.K. 2021. Effect of a Phytogenic Feed Additive on Growth Performance, Nutrient Digestion, and Immune Response in Broiler-Fed Diets with Two Different Levels of Crude Protein. *Animals*, 11:775.
13. **Wang, J.**, Zanghi, M., Xu, J. and Kim, W.K. 2021. Evaluation of using magnetic nanoparticle attached phosphorus species as supplemental phosphorous source in broiler diet. *J. Appl. Poult. Res.* 100169.
14. **Wang, J.**, Kong, F., and Kim, W. K. 2021. Effects of inclusion of almond hulls on broiler growth performance, nutrient digestibility, digestive tract traits and body composition. *J. Appl. Poult. Res.* 100149.
15. **Wang, J.**, Patterson, R., and W.K. Kim. 2021. Effects of phytase and multi-carbohydrase on growth performance, bone mineralization, and nutrient digestibility in broilers fed a nutritionally reduced diet. *J. Appl. Poult. Res.* 100146.
16. **Wang, J.**, Kong, F., and Kim, W. K. 2021. Effect of almond hulls as an alternative ingredient on broiler performance, nutrient digestibility and cecal microbiota diversity. *Poult. Sci.* 100169.
17. **Wang, J.**, Patterson, R., and W.K. Kim. 2021. Evaluation of a novel corn-expressed phytase on growth performance and bone mineralization in broilers fed different levels of dietary nonphytate phosphorus. *J. Appl. Poult. Res.* 100120.
18. **Wang, J.**, Choi, H., and Kim, W. K. 2020. Effects of dietary energy level and 1, 3-diacylglycerol on growth performance and carcass yield in broilers. *J. Appl. Poult. Res.* 29: 665-672.

19. **Wang, J.**, Patterson, R., and Kim, W.K. 2019. Effects of Extra-Dosing phytase in combination with Multi-Carbohydrase on growth performance and bone mineralization using dual-energy x-ray absorptiometry in broilers. *J. Appl. Poult. Res.* 28: 772-778.
20. Attia, Y. A., Bovera, F., **Wang, J.**, Al-Harhi, M. A., and Kim, W. K. 2020. Multiple Amino Acid Supplementations to Low-Protein Diets: Effect on Performance, Carcass Yield, Meat Quality and Nitrogen Excretion of Finishing Broilers under Hot Climate Conditions. *Animals.* 10: 973.
21. Liu, N., Lin, L., **Wang, J. Q.**, Zhang, F. K., and Wang, J. P. 2019. Tetramethylpyrazine supplementation reduced *Salmonella* Typhimurium load and inflammatory response in broilers. *Poult. sci.*, 98: 3158-3164.
22. Hyeon, J. Y., Mann, D. A., **Wang, J.**, Kim, W. K., and Deng, X. 2019. Rapid detection of *Salmonella* in poultry environmental samples using real-time PCR coupled with immunomagnetic separation and whole genome amplification. *Poult. sci.* 98: 6973-6979.
23. Liu, N., **Wang, J. Q.**, Liu, Z. Y., Wang, Y. C., and Wang, J. P. (2018). Comparison of probiotics and clay detoxifier on the growth performance and enterotoxic markers of broilers fed diets contaminated with aflatoxin B1. *J. Appl. Poult. Res.* 27: 341-348.
24. Liu, N., **Wang, J. Q.**, Liu, Z. Y., Chen, Y. K., and Wang, J. P. 2018. Effect of cysteamine hydrochloride supplementation on the growth performance, enterotoxic status, and glutathione turnover of broilers fed aflatoxin B1 contaminated diets. *Poult. sci.* 97: 3594-3600.
25. Liu, N., **Wang, J. Q.**, Jia, S. C., Chen, Y. K., and Wang, J. P. 2018. Effect of yeast cell wall on the growth performance and gut health of broilers challenged with aflatoxin B1 and necrotic enteritis. *Poult. sci.* 97: 477-484.
26. Liu, N., **Wang, J.**, Deng, Q., Gu, K., and Wang, J. 2018. Detoxification of aflatoxin B1 by lactic acid bacteria and hydrated sodium calcium aluminosilicate in broiler chickens. *Livestock Sci.* 208: 28-32.
27. Liu, N., Lin, L., **Wang, J.**, Zhang, F., and Wang, J. P. 2018. Dietary cysteamine hydrochloride protects against oxidation, inflammation, and mucosal barrier disruption of broiler chickens challenged with *Clostridium perfringens*. *J. Anim. Sci.* 96: 4339-4347.
28. Liu, N., Ding, K., **Wang, J.**, Deng, Q., Gu, K., and Wang, J. 2018. Effects of lactic acid bacteria and smectite after aflatoxin B1 challenge on the growth performance, nutrient digestibility and blood parameters of broilers. *J. Anim. Physiol. Anim. Nutr.* 102: 953-961.
29. Liu, N., **Wang, J. Q.**, Gu, K. T., Deng, Q. Q., and Wang, J. P. 2017. Effects of dietary protein levels and multienzyme supplementation on growth performance and markers of gut health of broilers fed a miscellaneous meal based diet. *Anim. Feed Sci. Tech.* 234: 110-117.
30. Liu, N., Ding, K., **Wang, J. Q.**, Jia, S. C., Wang, J. P., and Xu, T. S. 2017. Detoxification, metabolism, and glutathione pathway activity of aflatoxin B1 by dietary lactic acid bacteria in broiler chickens. *J. Anim. Sci.* 95: 4399-4406.

PRESENTATIONS

1. **Wang, J.**, C. Chen., A. Jasek., C. Morris., R. Burin and D. Neves. 2024. Effect of amino acid complexed mineral supplementation on eggshell translucency, coloration lightness, thickness, breaking strength and hatch of fertile eggs in broiler breeders. PSA, Louisville, KY.
2. A. Singh., **J. Wang.**, Vaddu, S., Mallavarapu, B., D. Subedi, S. Bhumanapalli., Singh, M., and H. Thippareddi. 2023. A Systematic Review and Meta-Analysis of the Efficacy of Pre-Harvest Interventions to Reduce *Salmonella* Populations in Broilers.
3. **Wang, J.**, C. Chen., A. Jasek., C. Morris., R. Burin and D. Neves. 2024. Determination of Eggshell Translucency as a Novel Non-invasive Predictive Tool for the Hatch of Fertile Eggs in Broiler Breeders. IPPE, Atlanta, GA.
4. **Wang, J.**, D. Fenster., S. Vaddu., S. Bhumanapalli., T. Belem., A. Singh, R. Dalloul., J. Kataria., G. Sidhu., C. Leone., M. Singh., H. Thippareddi. 2023. Translocation of *Salmonella* from the Gastro-intestinal Tract to Internal Organs of Broilers. PSA, Philadelphia, PA.
5. **Wang, J.**, Vaddu, S., Bhumanapalli, S., Mishra, A., Applegate, T., Singh, M. and Thippareddi, H., 2023. A systematic review and meta-analysis of the sources of *Salmonella* in poultry production (pre-harvest) and their relative contributions to the microbial risk of poultry meat. PSA, Philadelphia, PA.

6. S. Vaddu., A. Singh., **J. Wang.**, B. Kroft., Mallavarapu, B., D. Subedi, S. Bhumanapalli., H. Thippareddi. 2023. Effects of *Salmonella* co-infection with *Eimeria* maxima and *Clostridium perfringens* on growth performance and pathogen shedding in broilers. PSA, Philadelphia, PA.
7. **Wang, J.**, A. K. Singh, J. Choi, B. Bowker, Z. Hong, and W. K. Kim. 2022 Effects of almond hulls on growth performance, carcass yield, and breast fillet meat quality in broilers raised in floor pens. PSA, San Antonio, TX.
8. **Wang, J.**, J. Liu., H. Shi., A. Singh., J. Choi., H. Ko., L. Barnard., B. Lumpkins, G. Mathis., and W.K. Kim. 2022. Evaluation of an encapsulated calcium butyrate on serum antioxidative characteristics, gut barrier function and inflammatory responses in broiler chickens under a necrotic enteritis challenge. PSA, San Antonio, TX.
9. **Wang, J.**, J. Liu., H. Shi., A. Singh., J. Choi., H. Ko., L. Barnard., B. Lumpkins, G. Mathis., and W.K. Kim. 2022. Evaluation of an encapsulated calcium butyrate on performance and necrotic enteritis mitigation in broiler chickens. IPPE, Atlanta, GA.
10. **Wang, J.**, D. Fenster., S. Vaddu., S. Bhumanapalli., T. Belem., A. Singh, R. Dalloul., J. Kataria., G. Sidhu., C. Leone., M. Singh., H. Thippareddi. 2022. Translocation and Persistence of *Salmonella* in Internal Organs of Broilers. IPPE, Atlanta, GA.
11. **Wang, J.**, Kong, F., and Kim, W. K. 2021. Effects of inclusion of almond hulls on broiler growth performance, nutrient digestibility, digestive tract traits and body composition. PSA virtual meeting.
12. **Wang, J.**, F, Kong., and W.K. Kim. 2020. Effect of almond hull as an alternative ingredient on laying hen performance, egg quality, and body composition. IPPE, Atlanta, GA.
13. **Wang, J.**, F, Kong., and W.K. Kim. 2019. Effect of using almond hulls as an alternative ingredient on broiler performance and nutrient digestibility. PSA, Montreal, QC, Canada.
14. **Wang, J.**, J. Xu., and W.K. Kim. 2019. Evaluation of a magnetic nanoparticle attached phosphorus compound as a novel phosphorus source for broilers. ESPN, Poland.
15. **Wang, J.**, R. Patterson, and W.K. Kim. 2019. Effect of combination of phytase and multi-carbohydrate enzymes on nutrient digestibility and bone mineralization in broilers. IPPE, Atlanta, GA.
16. **Wang, J.**, M. Coelho., A. Troescher., P. Ader., W.K. Kim. Assessment of superdosing phytase on broiler phosphorus digestibility, ileal digestible energy and bone ash. PSA, San Antonio, TX.
17. **Wang, J.**, M. Coelho., A. Troescher., W.K. Kim. 2018. Assessment of a superdosage of phytase (Natuphos) on broiler performance fed a reduced calcium, available phosphorus and metabolizable energy diet. IPPE, Atlanta, GA.
18. **Wang, J.**, C. Pender., B. Syed., G.R. Murugesan., W.K. Kim. 2018. Assessment of a phytogenic feed additive (Biomin P.E.P. 125) effect on broiler performance fed a standard or protein reduced diet. IPPE, Atlanta, GA.
19. **Wang, J.**, P. D. Sedlacek, H. Choi, and W.K. Kim Effects of 1,3-Diacylglycerol (DAG) on growth performance and carcass characteristics in broilers. PSA, Orlando, FL.
20. **Wang, J.**, R. Patterson, and W.K. Kim. 2017. Effects of combination of phytase and multi-carbohydrate enzymes on growth performance and bone mineralization in broilers. IPPE, Atlanta, GA.

INSTRUCTIONAL ACTIVITIES

Mentorship

Elise Nanista (2019-2020, Bachelor of Science): Effect of magnetic nanoparticle attached phosphorus species as supplemental phosphorous source on broiler bone health. 2019. College of Agriculture and Environmental Sciences undergraduate research competition; Current Ph.D. student at the Department of Genetics at UGA

Assisted in mentoring Thiago Bethlehem (2021-2022, Master of Science) with the thesis: Physicochemical Characteristics of Chicken Frankfurters Fabricated using Spaghetti Meat

Assisted in mentoring Sujitha Bhumanapalli (2021-2023, Master of Science) with the thesis: Development and Validation of Dynamic Predictive Model for the Germination and Outgrowth of *Bacillus Cereus* Spores in Cooked Turkey, Beef and Ham Meat

Assisted in mentoring Sasikala Vaddu (2021-2023, Doctor of Philosophy) with the dissertation: *Salmonella* Shedding and Gut Health in Broilers Affected with Necrotic Enteritis

Assisted in mentoring Bharath Mallavarapu (2022-2024, Master of Science) with the thesis: Impact of Chlorine Dioxide treatment of Water during Egg Lay by Broiler Breeders on *Salmonella* Prevalence and Concentrations in a Hatchery; Current Ph.D. student at the Department of Poultry Science and USDA-ARS at UGA

Assisted in mentoring Deepak Subedi (2022-2024, Master of Science) with the thesis: Effect of Chlorine Dioxide Treatment in Drinking Water on Prevalence and Concentrations of *Salmonella* and *Campylobacter* in Broiler Grow-out at Commercial Broiler Houses; Current research fellow at USDA-ARS, Philadelphia

Assisted in mentoring Pranita Patil (2022-2024, Master of Science) with the thesis: Effect of Chlorine Dioxide Treatment in Drinking Water During Grow-out on *Salmonella* Prevalence and Concentrations on Broiler Carcasses and Parts During Processing; QC manager of a meat processor in Augusta, GA

Teaching Assistant/Guest Lecture

Spring 2022	POUL (FDST) 4860 Poultry Processing	Dr. Harsha Thippareddi
Fall 2021	POUL 3750 Integrated Animal Nutrition	Dr. Woo Kyun Kim
Spring 2017	POUL 2020 Introductory Poultry Science	Dr. Drew Benson

Extension Workshop

Led discussion in Avian Academy for Poultry Science for middle and high school STEM and Vo-Ag teachers (2022-2023).

Ad hoc reviewer

MDPI Journals (Foods, Microorganisms, Animals, Agriculture)
Journal of the Science of Food and Agriculture
Archives of Animal Nutrition
Microbial Pathogenesis
Journal of Applied Poultry Research
Poultry Science
Preventive Veterinary Medicine