Jinquan Wang

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EDUCATION

University of Georgia
Doctor of Philosophy (PhD) in Poultry Science May 2021

University of Georgia
Master of Science in Statistics May 2021

Texas A&M University
Bachelor of Science in Poultry Science Dec. 2015

PROFESSIONAL AND RESEARCH EXPERIENCE

Research Assistant Professor, Poultry Science Department, Auburn University 2024.8 - present

- Evaluate pre- and post-harvest interventions to reduce foodborne pathogen in poultry products
- Evaluate pre-evisceration procedures for their impact on carcass quality, product safety, and shelf life
- Develop and validate PCR based rapid *Salmonella* enumeration method on carcass rinsates

Post-doc Research Associate: Drs. Harsha Thippareddi and Manpreet Singh 2021.6 - 2024.8

Farm-to-fork project to support the integrator's effort to ensure food safety

- Conducted water treatment to reduce *Salmonella* and *Campylobacter* in broiler carcass and parts
- Bio-mapping in broiler processing plant to assist the facility in continuous improvement of their post-harvesting interventions to ensure food safety
- Cross-validated different platforms on detection and enumeration of *Salmonella* in carcass rinsates

Meat and poultry industry outreach project on regulatory compliance, food safety, and meat quality

- Addressed the scientific supporting document to support a process deviation of a meat processor
- Constructed predictive models on growth and inactivation of pathogens in meat and poultry products
- Identified the effect of contact time, temperature, concentration, and pH of peracetic acid at post-harvesting
- Evaluated of physicochemical parameters in chicken frankfurters and nuggets fabricated with myopathy breast meat

Collaborations, data mining, consulting and mentoring

- Analyzed and summarized the response data from questionnaire after Extension workshop.
- Constructed a predictive model using eggshell quality parameters on hatch of tertile eggs in broiler breeders with the data from 22,140 eggs of 738 breeder flocks in the U.S.

Research Assistant, Poultry Science Department 2016 - 2021
Mentor: Dr. Woo Kyun Kim

- Proposed and conducted numbers of projects on feed additive and ingredient evaluations and in broilers and laying hens.
- Supervised one undergraduate in broiler research and related lab techniques.

PEER-REVIEWED PUBLICATIONS

1. McConnell, A.D., Riggs, M.R., Manjankattil, S., Poudel, S., Jennings, M.M., Hughes, M.B., Huber, L., **Wang J**., Rawson, I., Srikumar, S. and Buhr, R.J., 2025. Efficacy of a novel two-sided drop-through photonic decontamination system on Salmonella and Campylobacter reduction on broiler parts. Journal of Food Protection, p.100574.

2. Singh A., Wang. J., Patil P., Subedi D., Mallavarapu B., Bhumanapalli S., Vaddu S., Dalloul R., Singh M., Thippareddi H. 2025. A systematic review and meta-analysis of the efficacy of alternatives to antibiotic growth promoters as strategies to reduce *Salmonella* in meat-type poultry (pre-harvest). Poultry Science. Revision submitted.
3. **Wang, J.,** Shi, H., White, D., Ko, H., Paneru, D., Sharma, M., Patterson, R. and Kim, W.K., 2025. Effects of liquid yeast cell wall on growth performance, intestinal development, immunity, and cecal Salmonella population of broilers. *Poultry Science*, p.105551.
4. Rivera R., **Wang J.**, Mishra A., Thippareddi. H, Singh M. 2025. Quantitative Microbial Risk Assessment of U.S. Broiler Processing Controls Against *Campylobacter* Prevalence in Cut-Up Parts and Comminuted Product. 2025. *Journal of Food Protection*. Under review.
5. Naeem. M., Jia. Z., **Wang J.**, Poudel. S., Manjankatti. S., Adhikari. Y. Bailey M., Bourassa. D. 2025 Advancements in machine learning applications in poultry farming: a literature review. Journal of Applied Poultry Research. Under review.
6. 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.
7. **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.
8. **Wang, J.,** Fenster D., Vaddu, S., Bhumanapalli, Kataria, J., Sidhu, G., Leone, C., Singh, M., R. Dalloul., and Thippareddi, H. In review. Colonization, Spread and Persistence of *Salmonella* (Typhimurium, Infantis and Reading) in Internal Organs of Broilers. In Review. Poul. Sci.
9. **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.
10. 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.
11. 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.
12. 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.
13. **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.
14. W. Kim., A. Singh., **J. Wang.,** and T. Applegate. 2022. Functional Role of Branched Chain Amino Acids in poultry: A review. Poult. Sci.
15. 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.
16. **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.
17. **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.
18. **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.
19. **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.

20. **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.
21. **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.
22. **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.
23. **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.
24. Attia, Y. A., Bovera, F., **Wang, J.**, Al-Harthi, 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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. Shafer R., **Wang J.,** Obe T. 2025. Dynamic prevalence and distribution of Salmonella enterica in chicken rinses across the United States. PSA, Raleigh, NC.
2. Poudel S., Bourassa D., **Wang J.** 2025 Assessing Population Dynamics and AMR Trends in *Salmonella* Infantis. PSA, Raleigh, NC.
3. Rajan S., **Wang J.,** Poudel S., Gomez K., Naeem M., Lockyear O., Rochell S., Bourassa D. 2025. Effect of dietary fat sources on performance, carcass yield and intestinal histomorphometry of broiler chickens. PSA, Raleigh, NC.

4. Kawaoku A., Mejia-Abaunza N., Fudge C., Ali M., Ma H., Bodempudi U., Liu T., Li G., **Wang J.,** Chen C. 2025 The interaction of dietary copper levels and litter conditions on broiler growth performance. PSA, Raleigh, NC.
5. **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.
6. **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.
7. **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.
8. D. Subedi., Mallavarapu, B., S. Bhumanapalli., **J. Wang**, H. Thippareddi. 2023. Inhibition of Clostridium perfringens Spore Germination and Outgrowth by Vinegar during Cooling of Cooked, Organic Turkey Roast. PSA, Philadelphia, PA.
9. Mallavarapu, B., D. Subedi, S. Bhumanapalli., P. Patil., R. Dlloul., M. Singh., 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.
10. S. Vaddu., A. Singh., **J. Wang.,** B. Kroft., Mallavarapu, B., D. Subedi, S. Bhumanapalli., **J. Wang**, 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.
11. P. Patil., **J. Wang.**, D. Subedi., S. Bhumanapalli., H. Thippareddi. Effect of cooling rates on the growth of Clostridium perfringens for cooked Roast Beef, Turkey, and Ham products. International Association of Food Protection Annual Meeting, Toronto, Canada.
12. **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.
13. **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.
14. **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.
15. **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.
16. **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.
17. **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.
18. **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.
19. **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.
20. **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.
21. **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.
22. **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.

23. **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.
24. **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.
25. **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.