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EDUCATION

- B.S., Animal Science, Seoul National University, 1992.
- M.S., Animal Science, Seoul National University, 1994.
- Ph.D., Poultry Science, Texas A&M University, 2000.

PROFESSIONAL AND ACADEMIC APPOINTMENTS

- Research Biologist, USDA-ARS Southern Plains Agricultural Research Center, 2001-2002.
- Assistant Professor, University of Arkansas, Department of Poultry Science, 2002-2008.
- Faculty member, University of Arkansas, Cell and Molecular Biology Program, 2003-present.
- Associate Professor, University of Arkansas, Department of Poultry Science, 2008-2016.
- Professor, University of Arkansas, Department of Poultry Science, 2016-present.

PROFESSIONAL MEMBERSHIPS

- American Society for Microbiology
- Poultry Science Association

OTHER PROFESSIONAL EXPERIENCE

- *Ad hoc* reviewer, USDA NRI (Ensuring Food Safety Program), 2002.
- *Ad hoc* reviewer, Binational Agricultural Research and Development Fund (United States-Israel), 2005
- Associate editor, Poultry Science, 2006-2012.
- CDC Review committee, CDC Special Emphasis Panel PAR07-231, CDC Public Health Research Dissertation Awards (R36), 2007.
- NIH Microbiology and Infectious Diseases Research Review Committee (MID), 2008.
- Editorial board of the journal *Agricultural, Food and Analytical Bacteriology*, 2010-present.
- *Ad hoc* reviewer for numerous peer-review journals (*Bioresource Technology*, *Journal of Applied Poultry Research*, *Trends in Biotechnology*, *Journal of Medical Microbiology*, *Foodborne Pathogens and Disease*, *Molecular Biotechnology*, *BMC Microbiology*, *Vaccine*, *Meat Science*, *Expert reviews of Vaccines*, and *PLOS one*).
- *Ad hoc* reviewer, NIFA SBIR grant proposal (Food Science and Nutrition), 2010.
- Editor, *Methods in Molecular Biology* series, High-throughput Next Generation Sequencing: Methods and Applications, Humana press, 2010.
- *Ad hoc* reviewer, BBSRC (Biotechnology and Biological Sciences Research Council) grant proposals, UK, 2012, 2015
- NIH review committee, International Collaborations in Infectious Diseases Research (ICIDR) U01 and U19 grants, 2014.
- Review Editor, the Editorial Board in Food Microbiology section, *Frontiers in Microbiology*. 2015.
- Review panel ZRG1 IDM-N(50) - NIH Dual Purpose with Dual Benefit: Research in Biomedicine and Agriculture, 2018

HONORS AND PROFESSIONAL RECOGNITION

- United States Department of Agriculture Certificate of Merit, March 2002.
- Hy-Line International Research Award, 2008.
- Zoetis Fundamental Science Award, 2013.

TEACHING EXPERIENCE

- POSC 5873 Molecular Analysis of Foodborne Pathogens, University of Arkansas at Fayetteville, 2003-present.
- POSC 5901 Poultry Science Graduate Seminar, University of Arkansas at Fayetteville, 2005-present

BOOKS

- 1) Kwon, Y.M. and S.C. Ricke (Eds), 2011. High-Throughput Next Generation Sequencing: Methods and Applications. Methods in Molecular Microbiology 733 - Springer Protocols, Humana Press, New York, NY 308 pp.

REFEREED PAPERS

- 1) Min, H.K., Y.J. Choi, J.K. Ha, K.K. Cho, **Y.M. Kwon**, Y.H. Chang, and S.S. Lee. 1994. Isolation and identification of anaerobic rumen bacterium, *Actinomyces* sp. 40 and enzymatic properties of β -1,4-endoglucanase. Asian-Australasian J. Anim. Sci. **7**, 373-382.
- 2) **Kwon, Y.M.**, D.S. Yim, H.J. Lee, K.K. Cho, Y.J. Choi, and M.K. Baik. 1995. Random amplified polymorphic DNA patterns within Holstein cows and among various cattle breeds. Mol. Cells **5**, 393-396.
- 3) **Kwon, Y.M.**, K.N. Heo, Y.J. Choi, I.K. Han, and J.H. Woo. 1995. The effect of synthetic lysine and methionine on *in vitro* protein synthesis of weaning pigs. Nutr. Res. **15**, 429-437.
- 4) Ha, S.D., F.T. Jones, **Y.M. Kwon**, and S.C. Ricke. 1997. Survival of an unirradiated *Salmonella typhimurium* marker strain inoculated in poultry feeds after irradiation. J. Rapid Methods Automation Microbiol. **5**, 47-59.
- 5) **Kwon, Y.M.**, D.P. Kreig, F.-L. Kuo, J.B. Carey, and S.C. Ricke. 1997. Biocidal activity of a peroxidase-catalyzed sanitizer against selected bacteria on inert carriers and egg shells. J. Food Safety **16**, 243-254.
- 6) Kuo, F.-L., **Y.M. Kwon**, J.B. Carey, B.M. Hargis, D.P. Krieg, and S.C. Ricke. 1997. Reduction of *Salmonella* contamination on chicken egg shells by a peroxidase-catalyzed sanitizer. J. Food Sci. **62**, 873-874, 884.
- 7) Ha, S.D., K.G. Maciorowski, **Y.M. Kwon**, and S.C. Ricke. 1997. Indigenous poultry feed microflora response to ethyl alcohol addition. J. Rapid Methods Automation Microbiol. **5**, 309-319.
- 8) **Kwon, Y.M.**, J.R. Salinas, J.A. Durant, D.J. Nisbet, and S.C. Ricke. 1997. Volatile fatty acid sensitivity of a poultry *Veillonella* isolate from a continuous flow probiotic culture. J. Food Safety **17**, 59-67.
- 9) **Kwon, Y.M.**, S.D. Ha, and S.C. Ricke. 1998. Growth response of a *Salmonella typhimurium* poultry isolate to propionic acid in aerobic and anaerobic growth conditions. J. Food Safety **18**, 139-149.
- 10) McKee, S.R., **Y.M. Kwon**, J.B. Carey, A.R. Sams, and S.C. Ricke. 1998. Comparison of a peroxidase-catalyzed sanitizer with other egg sanitizers using a laboratory-scale sprayer. J. Food Safety **18**, 173-183.
- 11) **Kwon, Y.M.** and S.C. Ricke. 1998. Induction of acid resistance of *Salmonella typhimurium* by exposure to short-chain fatty acids. Appl. Environ. Microbiol. **64**, 3458-3463.
- 12) Ha, S.D., K.G. Maciorowski, F.T. Jones, **Y.M. Kwon**, and S. C. Ricke. 1998. Survivability of indigenous feed microflora and a *Salmonella typhimurium* marker strain in poultry feed treated with buffered propionic acid. Anim. Feed Sci. Technol. **75**, 145-155.
- 13) Ha, S.D., K.G. Maciorowski, **Y.M. Kwon**, F.T. Jones, and S. C. Ricke. 1998. Indigenous feed microflora and *Salmonella typhimurium* marker strain survival in poultry feed with varying levels of protein. Anim. Feed Sci. Technol. **76**, 23-33.

- 14) **Kwon, Y.M.** and S.C. Ricke. 1998. Survival of a *Salmonella typhimurium* poultry isolate in the presence of propionic acid under aerobic and anaerobic conditions. *Anaerobe* **4**: 251-256.
- 15) **Kwon, Y.M.** and S.C. Ricke. 1999. *Salmonella typhimurium* poultry isolate growth response to propionic acid and sodium propionate under aerobic and anaerobic conditions. *Int. Biodeterioration and Biodegradation* **43**, 161-165.
- 16) **Kwon, Y.M.**, C.L. Woodward, J. Peña, D.E. Corrier, S.D. Pillai, and S.C. Ricke. 1999. Comparison of methods for processing litter and air filter matrices from poultry houses to optimize polymerase chain reaction detection of *Salmonella typhimurium*. *J. Rapid Methods Automation Microbiol.* **7**, 103-111.
- 17) Knape, K.D., J.B. Carey, R.P. Burgess, **Y.M. Kwon**, and S.C. Ricke. 1999. Comparison of chlorine with an iodine based compound on eggshell surface microbial populations in a commercial egg washer. *J. Food Safety* **19**, 185-194.
- 18) Erickson, A.M., I.B. Zabala Díaz, **Y.M. Kwon**, and S.C. Ricke. 2000. A bioluminescent *Escherichia coli* auxotroph for use in an *in vitro* lysine availability assay. *J. Microbiol. Methods* **40**, 207-212.
- 19) **Kwon, Y.M.**, C.L. Woodward, S.D. Pillai, J. Peña, D.E. Corrier, J.A. Byrd, and S.C. Ricke. 2000. Litter and aerosol sampling of chicken houses for rapid detection of *Salmonella typhimurium* contamination using gene amplification. *J. Industrial Microbiol. Biotech.* **24**, 379-382.
- 20) **Kwon, Y.M.**, C.L. Woodward, D.E. Corrier, J.A. Byrd, S.D. Pillai, and S.C. Ricke. 2000. Recovery of a marker strain of *Salmonella typhimurium* in litter and aerosols from isolation rooms containing infected chickens. *J. Environ. Sci. Health* **B35**, 517-525.
- 21) **Kwon, Y.M.** and S.C. Ricke. 2000. Efficient amplification of multiple transposon-flanking sequences. *J. Microbiol. Methods* **41**, 195-199.
- 22) **Kwon, Y.M.**, S.Y. Park, S.G. Birkhold, and S.C. Ricke. 2000. Induction of resistance of *Salmonella typhimurium* to environmental stresses by exposure to short-chain fatty acids. *J. Food Sci.* **65**, 1037-1040.
- 23) **Kwon, Y.M.**, L.F. Kubena, D. J. Nisbet, and S. C. Ricke. 2002. Functional screening of bacterial genome for virulence genes by transposon footprinting. *Methods in Enzymology.* **358**, 141-152.
- 24) Park, S.Y., **Y.M. Kwon**, S.G. Birkhold, L.F. Kubena, D.J. Nisbet, and S.C. Ricke. 2002. Application of a transposon footprinting technique for rapid identification of *Salmonella typhimurium* Tn5 mutants required for survival under desiccation stress conditions. *J. Rapid Methods and Automation in Microbiology* **10**, 197-206.
- 25) Nutt, J.D., S.D. Pillai, C.L. Woodward, K.L. Sternes, I.B. Zabala-Díaz, **Y.M. Kwon**, and S.C. Ricke. 2003. Use of a *Salmonella Typhimurium hila* fusion strain to assess effects of environmental fresh water sources on virulence gene expression. *Water Research* **37**, 3319-3326.
- 26) **Kwon, Y.M.**, L.F. Kubena, D.J. Nisbet, and S.C. Ricke. 2003. Isolation of *Salmonella typhimurium* Tn5 mutants defective for survival on egg shell surface using transposon footprinting. *J. Environ. Sci. Health B* **38**, 103-109.
- 27) **Kwon, Y.M.**, L.F. Kubena, D.J. Nisbet, and S.C. Ricke. 2003. Genetic screening for identification of *Salmonella typhimurium* Tn5 mutants with hypersensitivity to short-chain fatty acids. *J. Rapid Methods and Automation in Microbiology* **11**, 89-95.
- 28) **Kwon, Y.M.**, and M. M. Cox. 2004. Improved efficacy of whole genome amplification from bacterial cells. *BioTechniques* **36**, 40-44.
- 29) Ricke S.C., S.Y. Park, R.W. Moore, **Y.M. Kwon**, C.L. Woodward, J.A. Byrd, D.J. Nisbet, and L.F. Kubena. 2004. Feeding low calcium and zinc molt diets sustains gastrointestinal fermentation and limits *Salmonella enterica* serovar Enteritidis colonization in laying hens. *J. Food Safety* **24**, 291-308.
- 30) Nutt, J.D., C.L. Woodward, L.F. Kubena, D.J. Nisbet, **Y.M. Kwon**, and S.C. Ricke. 2004. Potential for rapid *in vitro* assays to measure foodborne *Salmonella* virulence in foods – a review. *J. Rapid Methods Auto. Microbiol.* **12**, 234-246.
- 31) Woodward, C.L., **Y.M. Kwon**, L.F. Kubena, J.A. Byrd, R.W. Moore, D.J. Nisbet, and S.C. Ricke. 2005. Reduction of *Salmonella enterica* serovar Enteritidis colonization and invasion by an alfalfa diet during molt in Leghorn hens. *Poultry Sci.* **84**, 185-193.

- 32) Gundelley, R., G.W. Youm, and **Y.M. Kwon**. 2007. Survival of bacterial pathogens on antimicrobial conveyer belts. *J. Rapid Methods and Automation in Microbiology* **15**, 259-266.
- 33) Hansen, C.R., A. Khatiwara, R. Ziprin, and **Y. M. Kwon**. 2007. Rapid construction of *Campylobacter jejuni* deletion mutants. *Letters in Applied Microbiology* **45**, 599-603
- 34) Cox, M. M., S. L. Layton, T. Jiang, K. Cole, B. M. Hargis, L. R. Berghman, W. G. Bottje, and **Y. M. Kwon**. 2007. Scarless and site-directed mutagenesis in *Salmonella enteritidis* chromosome. *BMC Biotechnology* **7**, 59.
- 35) Vesela, C., J. Lingbeck, **Y.M. Kwon**, and S.C. Ricke. 2008. Extracellular antimutagenic activities of selected probiotic *Bifidobacterium* and *Lactobacillus* spp. as a function of growth phase. *J. Environ. Sci. Health, Part B* **43**, 193-198.
- 36) Kim, J.N., G.W. Yum, and **Y.M. Kwon**. 2008. Essential genes in *Salmonella* Enteritidis as identified by TnAraOut mutagenesis. *Curr. Microbiol.* **57**, 391-394.
- 37) Choi, I. H., J. N. Kim, and **Y. M. Kwon**. 2008. Effects of chemical treatments on pH and bacterial population in poultry litter: a laboratory experiment. *Br. Poult. Sci.* **49**, 497-501.
- 38) Layton, S. L., D. R. Kapczynski, S. Higgins, J. Higgins, A. D. Wolfenden, K. A. Liljebjelke, W. G. Bottje, D. Swayne, L. R. Berghman, **Y. M. Kwon**, B. M. Hargis, and K. Cole. 2009. Vaccination of chickens with recombinant *Salmonella* expressing M2e and CD154 epitopes increase protection and decrease viral shedding after low pathogenic avian influenza challenge. *Poultry Science* **88**, 2244-2252.
- 39) Calhoun, L. N., and **Y. M. Kwon**. 2010. The effect of long term propionate adaptation on the stress resistance of *Salmonella* Enteritidis. *J. Appl. Microbiol.* **109**, 1294-1300.
- 40) Calhoun, L. N., and **Y. M. Kwon**. 2010. Proteomic analysis of *Salmonella enterica* serovar Enteritidis following propionate adaptation. *BMC Microbiology* **10**, 249.
- 41) Wolfenden R. E., S. L. Layton, A. D. Wolfenden, A. Khatiwara, G. Gaona-Ramírez, N. R. Pumford, K. Cole, **Y. M. Kwon**, G. Tellez, L. R. Bergman, and B. M. Hargis. 2010. Development and evaluation of candidate recombinant *Salmonella*-vectored *Salmonella* vaccines. *Poult Sci.* **89**, 2370-2379.
- 42) Calhoun, L. N. and **Y. M. Kwon**. 2011. The ferritin-like protein Dps protects *Salmonella* Enteritidis from the Fenton-mediated killing mechanism of bactericidal antibiotics. *Int. J. Antimicrob. Agents* **37**, 261-265. Layton, S. L., M. J. Morgan, K. Cole, **Y. M. Kwon**, D. J. Donoghue, B. M. Hargis, and N. R. Pumford. 2011. Evaluation of *Salmonella*-vectored *Campylobacter* peptide epitopes for reduction of *Campylobacter jejuni* in broiler chickens. *Clin. Vaccine Immunol.* **18**, 449-454.
- 43) Singh, P., and R. Nayak, and **Y. M. Kwon**. 2011. Target-enrichment through amplification of hairpin-ligated universal targets for next-generation sequencing analysis. *Methods Mol. Biol.* **733**, 267-278.
- 44) Dawoud, T. M., P. Hererra, I. Hanning, **Y. M. Kwon**, and S. C. Ricke. 2011. *In vitro* Invasion of Laying Hen Ovarian Follicles by *Salmonella* Enteritidis strains. *Poultry Science* **90**, 1134-1137.
- 45) Shivaramaiah, S., J.R. Barta, S.L. Layton, C. Lester, **Y.M. Kwon**, L.R. Berghman, B.M. Hargis, and G. Tellez. 2010. Development and evaluation of an Δ aroA / Δ htrA *Salmonella enteritidis* vector expressing *Eimeria maxima* TRAP family protein EmTFP250 with CD 154 (CD 40L) as candidate vaccines against coccidiosis in broilers. *Int. J. Poult. Sci.* **9**, 1031-1037.
- 46) Calhoun, L. N., J. N. Kim, Y. Ren, J. J. Song, and **Y. M. Kwon**. 2011. The DNA-binding protein Dps functions as a global regulator in starved *Salmonella enterica* serovar Enteritidis during starvation. *Int. J. Microbiol. Res.* **3**, 136-147.
- 47) Singh, P., S.L. Foley, R. Nayak, and **Y.M. Kwon**. 2012. Multilocus sequence typing of *Salmonella* strains by high-throughput sequencing of selectively amplified target genes. *J. Microbiol. Methods* **88**, 127-133.
- 48) Khatiwara, A., T. Jiang, S.S. Sung, T. Dawoud, J.N. Kim, D. Bhattacharya, H.B. Kim, S.C. Ricke, and **Y.M. Kwon**. 2012. Genome scanning for conditionally essential genes in *Salmonella*. *Appl. Environ. Microbiol.* **78**, 3098-3107.
- 49) Kim, B.U., S.W. Kim, Y.H. Hong, M.A. Jeong, Y.S. Ryu, H.C. Park, J.H. Jung, **Y.M. Kwon**, I.S. Choi, S.S. Lee, C.W. Kim, and K.K. Cho. 2012. Protein expression in pig species *Longissimus dorsi* muscles

- among different breeds and growth stages. *Journal of Life Science*. **22**, 713-722.
- 50) Kim, J. N., and **Y.M. Kwon**. 2013. Genetic and phenotypic characterization of the RyhB regulon in *Salmonella* Typhimurium. *Microbiol. Res.* **168**, 41-49.
- 51) Singh, P., A. Karimi, K. Devendra, P. W. Waldroup, K. K. Cho, and **Y.M. Kwon**. 2013. Influence of Penicillin on microbial diversity of the cecal microbiota in broiler chickens. *Poultry Science* **92**, 272-276.
- 52) Singh, P., S. L. Foley, R. Nayak, and **Y.M. Kwon**. 2013. Massively parallel sequencing of enriched target amplicons for high-resolution genotyping of *Salmonella* serovars. *Molecular & Cellular Probes* **27**, 80-85.
- 53) Wang, R., J. Zhao, T. Jiang, **Y.M. Kwon**, H. Lu, P. Jiao, M. Liao, and Y. Li. 2013. Selection and characterization of DNA aptamers for use in detection of avian influenza H5N1. *Journal of Virological Methods* **189**, 362-369.
- 54) Singh, P., and **Y.M. Kwon**. 2013. Comparative analysis of *Campylobacter* populations within individual market age broilers using *fla* gene typing method. *Poultry Science* **92**, 2135-2144.
- 55) Kim, J.N., and **Y.M. Kwon**. 2013. Identification of Target Transcripts Regulated by Small RNA RyhB Homologs in *Salmonella*: RyhB-2 regulates motility phenotype. *Microbiol. Res.* **168**, 621-629.
- 56) Kim, J.N., and **Y.M. Kwon**. 2014. Phenotypic characterization of *Salmonella* RyhB-1 mutations that modulate target regulation. *Current Microbiol.* **69**, 212-217.
- 57) Dawoud, T., T. Jiang, R. K. Mandal, S.C. Ricke, and **Y.M. Kwon**. 2014. Improving the efficiency of transposon mutagenesis in *Salmonella* enteritidis by overcoming host-restriction barriers. *Mol. Biotechnol.* **56**, 1004-1010.
- 58) Wideman Jr., R.F., A. Al-Rubaye, **Y.M. Kwon**, J. Blankenship, H. Lester, K.N. Mitchell, I.Y. Pevzner, T. Lohrmann, and J. Schleifer. 2015. Prophylactic administration of a combined prebiotic and probiotic, or therapeutic administration of enrofloxacin, to reduce the incidence of bacterial chondronecrosis with osteomyelitis in broilers. *Poultry Science* **94**, 25-36.
- 59) Jiang, T., R.F. Wideman Jr., A. Khatiwara, I. Pevzner, and **Y.M. Kwon**. 2015. Molecular survey of bacterial communities associated with bacterial chondronecrosis with osteomyelitis (BCO) in broilers. *PLOS one*, 10(4):e0124403.
- 60) Almasoud, A., N. Hettiarachchy, S. Rayaprolu, D. Babu, **Y.M. Kwon**, and A. Mauromoustakos. 2016. Inhibitory effects of lactic and malic organic acids on autoinducer type 2 (AI-2) quorum sensing of *E. coli* 0157:H7 and *Salmonella* Typhimurium. *LWT Food Science and Technology*. **66**, 560–564
- 61) Mandal, R.K., T. Jiang, A.A. Alrubaye, D.D. Rhoads, R.F. Wideman Jr., J. Zhao, I. Pevzner, and **Y.M. Kwon**. 2016. An investigation into blood microbiota and its potential association with bacterial chondronecrosis with osteomyelitis (BCO) in broilers. *Scientific Reports* 6:25882 | DOI: 10.1038/srep25882
- 62) Dawoud, T.M., A. Khatiwara, S. H. Park, C. A. Baker, S. C. Ricke, and **Y. M. Kwon**. 2017. Heat survival and phenotype microarray profiling of *Salmonella* Typhimurium mutants. *Current Microbiol.* **74**, 257-267
- 63) Abutheraa R, N. Hettiarachchy, G. Kumar-Phillips, R. Horax, P. Chen, R. Morawicki, and **Y.M. Kwon**. 2017. Antimicrobial activities of phenolic extracts derived from seed coats of selected soybean varieties. *J. Food Sci.* **82**, 731-737. doi: 10.1111/1750-3841.13644.
- 64) Yang, Y., S.C. Ricke, G. Tellez, and **Y.M. Kwon**. 2017. Quantitative tracking of *Salmonella* Enteritidis transmission routes using barcode-tagged isogenic strains in chickens: proof of concept study. *Frontiers in Veterinary Sciences*. **4**:15. doi: 10.3389/fvets.2017.00015.
- 65) Yang, Y., A. Wolfenden, R. Mandal, O. Faulkner, B.M. Hargis, **Y.M. Kwon**, and L. Bielke. 2017. Evaluation of recombinant *Salmonella* vaccines to provide cross-serovar and cross-serogroup protection. *Poultry Science*. **96**, 4352-4360. doi: 10.3382/ps/pex144.
- 66) Adhikari, B., and **Y.M. Kwon**. 2017. Characterization of the culturable subpopulations of *Lactobacillus* in the chicken intestinal tracts as a resource for probiotic development. *Frontiers in Microbiol.* **8**: 1389.
- 67) Mandal, R.K., T. Jiang, and **Y.M. Kwon**. 2017. Essential genome of *Campylobacter jejuni*. *BMC*

- Genomics. 18(1):616. doi: 10.1186/s12864-017-4032-8.
- 68) Mandal, R., and Y.M. Kwon. 2017. Global screening of *Salmonella enterica* serovar Typhimurium genes for desiccation survival. *Frontiers in Microbiol.* 8:1723. doi: 10.3389/fmicb.2017.01723.
- 69) Yang, Y., J. Latorre, B. Khatri, **Y.M. Kwon**, B.W. Kong, K. Teague, L. Graham, A. Wolfenden, B. Mahaffey, M. Baxter, X. Hernández-Velasco, R. Merino-Guzman, B.M. Hargis, and G. Tellez. 2017. Characterization and evaluation of lactic acid bacteria candidates for intestinal epithelial permeability reduction and *Salmonella* Typhimurium colonization in neonatal turkey poults. *Poultry Science* doi: 10.3382/ps/pex361.
- 70) Karash, S., R. Liyanage, A. Qassab, J.O. Lay, Jr., and **Y.M. Kwon**. 2017. A comprehensive assessment of the genetic determinants in *Salmonella* Typhimurium for resistance to hydrogen peroxide using proteogenomics. *Scientific Reports.* 7(1):17073. doi: 10.1038/s41598-017-17149-9.
- 71) Yang, Y., G. Tellez, J.D. Latorre, P.M. Ray, X. Hernandez, B.M. Hargis, S.C. Ricke, and **Y.M. Kwon**. 2018. *Salmonella* excludes *Salmonella* in poultry: confirming an old paradigm using conventional and barcode-tagging approaches. *Frontiers in Vet. Sciences.* doi: 10.3389/fvets.2018.00101
- 72) Kim, J.Y., **Y.M. Kwon**, I.S. Kim, J.A. Kim, D.Y. Yu, B. Adhikari, S.S. Lee, I.S. Choi, and K.K. Cho. 2018. Effects of the brown seaweed *Laminaria japonica* supplementation on serum concentrations of IgG, triglycerides, and cholesterol, and intestinal microbiota composition in rats. *Frontiers in Nutrition.* 5, 23. doi: 10.3389/fnut.2018.00023

REVIEW PAPERS AND BOOK CHAPTERS

- 1) Kuo, F.-L., **Y.M. Kwon**, J.B. Carey, and S.C. Ricke. 2000. Current concepts in antibacterial compounds for sanitizing hatching eggs-A review. *Recent Res. Devel. Microbiology.* 4, 371-385.
- 2) Ricke, S.C., C.L. Woodward, **Y.M. Kwon**, L.F. Kubena, and D.J. Nisbet. 2004. Limiting avian gastrointestinal tract *Salmonella* colonization by cecal anaerobic bacteria and a potential role for methanogens. pp. 141-150. *In: Pre-harvest and Post-harvest Food Safety: Contemporary issues and future directions.* Ed. Beier, R., R. Ziprin, S. Pillai, and T. Phillips. Iowa State Press, Ames, IA.
- 3) Calhoun, L. N., and **Y. M. Kwon**. 2006. Minireview: *Salmonella*-based plague vaccines for bioterrorism. *Journal of Microbiology, Immunology and Infection.* 39, 92-97.
- 4) **Kwon, Y. M.**, L. N. Calhoun, and M. M. Cox. 2007. *Salmonella*-based vaccine for infectious diseases. *Expert Review of Vaccine.* 6, 147-152.
- 5) **Kwon, Y.M.**, D. Bhattacharya, and S. C. Ricke. 2009. Genomic approaches to bacterial pathogens using transposon mutagenesis: food safety applications. *In: Perspectives on Food Safety Issues of Animal Derived Foods.* Ed. S. C. Ricke and F. T. Jones., University of Arkansas Press
- 6) Sirsat, S.A., A. Muthaiyan, S.E. Dowd, **Y.M. Kwon**, and Steven C. Ricke. 2009. The potential for application of foodborne *Salmonella* gene profile expression assays in post harvest poultry processing. *In: Perspectives on Food Safety Issues of Animal Derived Foods.* Ed. S. C. Ricke and F. T. Jones., University of Arkansas Press
- 7) Herrera, P., **Y.M. Kwon**, and S.C. Ricke. 2009. Ecology and pathogenicity of gastrointestinal *Streptococcus bovis*. *Anaerobe* 15, 44-54.
- 8) Calhoun, L. N., and **Y. M. Kwon**. 2011. Structure, function, and regulation of the DNA-binding protein Dps and its role in stress resistance in *Salmonella enterica* serovar Typhimurium: A review. *J. Appl. Microbiol.* 110, 375-386.
- 9) Ricke, S. C., A., Khatiwara, and **Y. M. Kwon**. 2013. Application of microarray analysis of foodborne *Salmonella* in poultry production: a review. *Poultry Science* 92, 2243-2250.
- 10) Ricke, S.C., T.M. Dawoud, and **Y.M. Kwon**. 2015. Chapter 4. Application of molecular methods for traceability of foodborne pathogens in food safety systems. *In: S.C. Ricke, J.R. Donalson, and C.A. Phillips (Eds.) Food Safety: Emerging Issues, Technologies and Systems.* Elsevier, Oxford, UK.
- 11) Handley, J.A., S.H. Park, Z. Shi, T.M. Dawoud, **Y.M. Kwon**, and S.C. Ricke. 2015. Chapter 6. *Salmonella* and the potential role for microbial process indicators on chicken carcasses. *In: S.C. Ricke,*

- J.R. Donalson, and C.A. Phillips (Eds.) Food Safety: Emerging Issues, Technologies and Systems. Elsevier, Oxford, UK.
- 12) **Kwon, Y.M.**, S.C. Ricke, and R.K. Mandal. 2016. Transposon sequencing: methods and expanding applications. *Applied Microbiology and Biotechnology*. 100, 31-43 (invited review)
 - 13) Roto, S., **Y.M. Kwon**, and S.C. Ricke. 2016. Potential Applications of *In Ovo* Technique for the Optimal Development of the Gastrointestinal Tract and Establishment of its Microbiome in Poultry. *Frontiers in Veterinary Science* 3:63.
 - 14) Jarvis, N.A., C.A. O'Bryan, Dawoud, T.M., S.H. Park, **Y.M. Kwon**, P.G. Crandall, and S.C. Ricke. 2016. An overview of *Salmonella* thermal destruction during food processing and preparation. *Food Control* 68: 280-290.
 - 15) Dawoud, T.M., M.L. Davis, S.H. Park, S.A. Kim, **Y.M. Kwon**, N. Jarvis, C.A. O'Bryan, Z. Shi, P.G., Crandall, and S.C. Ricke. 2017. The potential link between thermal resistance and virulence in *Salmonella*: a review. *Frontiers in Veterinary Science* 4:93
 - 16) Ricke, S.C., T.M. Dawoud, Z. Shi, P. Kaldhone, and **Y.M. Kwon**. 2017. Chapter 10. Foodborne *Salmonella* in Laying Hens and Egg Production. In: S.C. Ricke, G.G. Atungulu, S.H. Park, and C.E. Rainwater (Eds.) *Food and Feed Safety Systems and Analysis*. Elsevier Inc., San Diego, CA
 - 17) Adhikari, B., Y.M. Kwon, B.M. Hargis, and G. Tellez. 2018. How trillions of microbes residing on gastrointestinal tract maintain homeostasis with host cells? *Food & Nutrition Journal*. FDNJ-170. DOI: 10.29011/2575-7091. 100070