

Rolf D. Joerger

Education

Ph.D. in Microbiology, North Carolina State University, 1987

Diplom, Universität Hohenheim, Stuttgart, Germany, 1983

Professional Positions

July 2002 – Present: Associate Professor, University of Delaware

September 1996 – June 2002: Assistant Professor, University of Delaware

October 1993 – August 1996: Visiting Scientist, DuPont, Wilmington, DE

April 1991 – September 1993: Research Microbiologist, USDA-ARS-ERRC, Philadelphia, PA

June 1987 – November 1989: Research Microbiologist, USDA-ARS, Raleigh, NC

Teaching Responsibilities

FOSC 390: Honors Colloquium: Food, glorious food – challenges for the 21st century (3 credits)

FOSC 411: Food Science Capstone (4 credits)

FOSC 449/649: Food Biotechnology (4 credits)

Professional Activities

Member of Institute of Food Technologists

Member American Society of Microbiologists

Grants Received During the Past Five Years

Hong Li, R. Joerger, E. Benson. Frequent Application of Litter Amendments in Broiler Houses during Grow-out on Animal Health, Production, and Environment. US Poultry & Egg Association.

E. Benson, R. Joerger, B. Alphin, J. Briscoe, D. Style. Evaluations of Containerized Foam Depopulation of Layer Hens and Mass Emergency Depopulation Foam as a Disinfectant. USDA.

Joerger, R.D. Avian Biotechnology Center, U. of Delaware. Genome-wide analysis of changes in gene expression by *Salmonella enterica* serovars Enteritidis and Kentucky upon exposure to hydrochloric and acetic acid-induced low pH. \$17,000

Chen, H., Joerger, R.D. Avian Biocenter, University of Delaware. Effect of prior growth temperature on pressure resistance of *Listeria monocytogenes* in ready-to-eat meats. \$10,000

Joerger, R.D., Kniel, K.E. Avian Biocenter, University of Delaware. Virulence gene prevalence and its connection to cell invasion potential of *Salmonella enterica* isolated from poultry production environments. \$6,950

Joerger, R.D. College of Agricultural and Natural Resources/DuPont. 2004. Effect of packaging material coated with an antimicrobial compound on microorganisms that impact food safety and quality. \$61,489

Joerger, R.D. Hatch Project. 1998-2011. Food pathogen reduction programs. \$3,800 annually.

Publications in Refereed Journals (since 2007)

- Yingjian Lu, Rolf Joerger, Changqing Wu. Similar reduction of *Salmonella enterica* Typhimurium on grape tomatoes and in wash water by a mixture of natural antimicrobials and by chlorine treatment. Submitted to International Journal of Food Microbiology.
- M. C. Santos, C. Golt, R. D. Joerger, G. D. Mechor, L. Kung, Jr. Identification and characterization of yeasts from high moisture corn and corn silages in the USA. In preparation.
- Joerger, R.D., C. Sartori, J. Frye, J.B. Turpin, C. Schmidt, M. McClelland, and S. Porwollik. 2012. Gene expression analysis of *Salmonella enterica* Enteritidis Nal^R and *Salmonella enterica* Kentucky 3795 exposed to HCl and acetic acid in rich medium. *Foodborne Pathogens and Disease*. 9:331-337.
- Massouda, D., Visioli, D., Green, D. A., and R. D. Joerger. 2011. Extruded Blends of Chitosan and Ethylene Copolymers for Antimicrobial Packaging. *Packag. Technol. Sci.* 25:321-327.
- Lu, Y., Joerger, R. and C. Wu. 2011. Study of the Chemical Composition and Antimicrobial Activities of Ethanolic Extracts from Roots of *Scutellaria baicalensis* Georgi. *J. Agric. Food Chem.* 59:10934-10942.
- Liu, Y., Ream, A., Joerger, R.D., Liu, J., and Y. Wang. 2011. Gene expression profiling of a pressure-tolerant *Listeria monocytogenes* Scott A *ctsR* deletion mutant. *J. Ind. Microbiol. Biotechnol.* 38:1523-2533
- Joerger, R.D., I.B. Hanning, and S.C. Ricke. 2010. Presence of arsenic resistance in *Salmonella enterica* serovar Kentucky and other serovars isolated from poultry. *Avian Disease*. 54:1178-1182.
- Joerger, R.D., C.A. Sartori, and K.E. Kniel. 2009. Comparison of genetic and physiological properties of *Salmonella enterica* isolates from chickens reveals one major difference between serovar Kentucky and other serovars: Response to acid. *Foodborne Pathogens and Disease*. 6:503-512.
- Chen, H., H. Neetoo, M. Ye, and R.D. Joerger. 2009. Differences in pressure tolerance of *Listeria monocytogenes* strains are not correlated with other stress tolerances and are not based on differences in CtsR. *Food Microbiology*. *Food Microbiology*. 26:404-408.
- Joerger, R.D., S. Sabesan, D. Visioli, D. Urian, M.C. Joerger. 2009. Antimicrobial Activity of Chitosan Attached to Ethylene Copolymer Films. *Packaging Technology and Science*. 22:125-138.
- Neetoo, H., M. Ye, H. Chen, R.D. Joerger, D.T. Hicks, D.G. Hoover. 2008. Use of nisin-coated plastic films to control *Listeria monocytogenes* on vacuum-packaged cold-smoked salmon. *International Journal of Food Microbiology*. 122:8-15
- Joerger, R. D. 2007. Antimicrobial films for food applications: an analysis of quantitative results. *Packaging Science and Technology*. 20:231-273. DOI: 10.1002/pts.774
- Higgins, J., C. Hohn, S. Hornor, M. Frana, M. Denver, and R. Joerger, 2007. Genotyping of *Escherichia coli* from environmental and animal samples. *Journal of Microbiological Methods*. 70:227-235. Doi:10.1016/j.mimet.2007.04.009