

CURRICULUM VITAE

Dojin Ryu, Ph.D.

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EDUCATION

Ph.D. 1997 Food Science and Technology, University of Nebraska-Lincoln.
M.S. 1992 Food Science and Human Nutrition, University of Missouri-Columbia.
B.S. 1989 Food Science and Technology, Korea University, Seoul, Korea.

ADDITIONAL EDUCATION

Environmental Toxicology & Carcinogenesis Graduate Program 1995-1997
University of Nebraska Medical Center, Omaha, NE
Applied Extrusion Workshop October 10-12, 2000
Food Processing Center, University of Nebraska-Lincoln, Lincoln, NE
Implementing HACCP Plan May 8-10, 2002
Food Processing Center, University of Nebraska-Lincoln, Lincoln, NE

WORK EXPERIENCE

Associate Professor 2008 – Current
Department of Nutrition & Food Sciences, Texas Woman's University
Adjunct Professor 2004 – Current
Department of Food Science & Technology, University of Nebraska-Lincoln
Center for Environmental Health and Toxicology, University of Nebraska Medical Center
Assistant Professor 2004 – 2008
Department of Nutrition & Food Sciences, Texas Woman's University
Research Assistant Professor 2001 – 2004
Department of Food Science & Technology, University of Nebraska-Lincoln
Postdoctoral Research Associate 2000 – 2001
Department of Food Science & Technology, University of Nebraska-Lincoln
Lecturer 1998 – 1999
Department of Food & Nutrition, College of Allied Health, Korea University, Seoul, Korea
Department of Food Science & Nutrition, Duksung Women's University, Seoul, Korea
Postdoctoral Research Associate 1998 – 2000
The Institute of Biotechnology, Korea University, Seoul, Korea

HONORS AND AWARDS

Distinction in Scholarship	2009	Texas Woman's University
Post-doctoral Research Fellowship	1998	Korea Science and Engineering Foundation
ETCGP Graduate Fellowship	1995-1997	Environmental Toxicology and Carcinogenicity Graduate Program, Eppley Cancer Institute, University of Nebraska Medical Center, NE

PUBLICATIONS

1. Voss, K.A., L.B. Bullerman, A. Bianchini, M.A. Hanna, L.S. Jackson, and D Ryu. Reduced toxicity of fumonisin B₁ in corn grits by twin-screw extrusion with added glucose. *Mol. Nutr. Food Res.* Accepted.
2. Jackson, L.S., J. Jablonski, L.B. Bullerman, A. Bianchini, M.A. Hanna, K.A. Voss, and D Ryu. Effect of glucose in reduction of fumonisin B₁ in corn grits during twin-screw extrusion. *J. Food Sci.* In Review.
3. Ryu, D., A. Bianchini, L.B. Bullerman. 2008. Effects of Processing on Mycotoxins. *Stewart Postharvest Rev.* 4(6):1-7.
4. Voss, K.A., L.B. Bullerman, A. Bianchini, M.A. Hanna, and D Ryu. 2008. Reduced toxicity of fumonisin B₁ in corn grits by single-screw extrusion with added glucose. *J. Food Prot.* 71(10):2036-2041.
5. Obritsch, J.A., D. Ryu, L.E. Lampila, and L.B. Bullerman. 2008. Antibacterial effects of long-chain polyphosphates on selected spoilage and pathogenic bacteria. *J. Food Prot.* 71(7):1401-1405.
6. Bullerman, L.B., A. Bianchini, M.A. Hanna, L.S. Jackson, J. Jablonski, and D Ryu. 2008. Reduction of fumonisin B₁ in corn grits by single-screw extrusion. *J. Agric. Food Chem.* 56(7):2400-2405.
7. Kwon, J., D. Ryu, and L.K. Zottarelli. 2007. Food handling practices and operators' attitudes toward food safety at faith-based organizations in Louisiana where hurricane evacuee shelters were provided in 2005. *Food Prot. Trends*, 27(2):84-89.
8. Chung, S.H., D. Ryu, E.K. Kim, and L.B. Bullerman. 2005. Enzyme-assisted extraction of moniliformin from extruded corn grits. *J. Agric. Food Chem.* 53(13):5074-5078.
9. Ryu, D., M.A. Hanna, K.A. Eskridge, and L.B. Bullerman. 2003. Heat stability of zearalenone in an aqueous buffered model system. *J. Agric. Food Chem.* 51(6):1746-1748
10. Pineda-Valdes, G., D. Ryu, M.A. Jackson, and L.B. Bullerman. 2003. Reduction of moniliformin in corn by heat processing. *J. Food Sci.* 68(3):1031-1035.
11. Park, J.W., B.S. Song, D. Ryu, C. Lee, and Y.B. Kim. 2002. *In vitro* bactericidal and anticancer activity of new metabolite, ARK42, isolated from *Aspergillus repens* K42. *J. Microbiol. Biotechnol.* 12(6): 1017-1021.
12. Pineda-Valdes, G., D. Ryu, D.S. Jackson, L.B. Bullerman. 2002. Reduction of moniliformin during alkaline cooking of corn. *Cereal Chem.* 79(6):779-782.
13. Kim, E.K., D.H. Shon, J.Y. Yoo, D. Ryu, C. Lee, and Y.B. Kim, 2001. Natural occurrence of aflatoxins in Korean *meju*. *Food Addit. Contam.* 18(2):151-156.
14. Kim, E.K., D.H. Shon, D. Ryu, J.W. Park, H.J. Hwang, and Y.B. Kim. 2000. Occurrence of aflatoxin M₁ in Korean dairy products determined by ELISA and HPLC. *Food Addit. Contam.* 17(1):59-64.
15. Ryu, D and L.B. Bullerman. 1999. Measurement of the estrogenic activity of zearalenone by cell culture technique. *Food Sci. Biotech.* 8(4):227-231.
16. Ryu, D. and L.B. Bullerman. 1999. Effect of cycling temperatures on the production of deoxynivalenol and zearalenone by *Fusarium graminearum* NRRL 5883. *J. Food Prot.* 62(12):1451-1455.
17. Ryu, D., C. Munimbazi, and L.B. Bullerman. 1999. Fumonisin B₁ production by *Fusarium moniliforme* and *Fusarium proliferatum* as affected by cycling temperatures. *J. Food Prot.* 62(12):1456-1460.

18. Ryu, D., M. A. Hanna and L. B. Bullerman. 1999. Stability of zearalenone during extrusion of corn grits. *J. Food Prot.* 62(12):1482-1484.
19. Ryu, D and L.B. Bullerman. 1998. Incidence of *Fusarium* and other molds in Korean field crops. *J. Food Sci. Nutr.* 3(1):44-48.
20. Choi, W. J., D. Ryu, J. W. Lee, M.H. So, and Y.B. Kim. 1998. Production of *Streptomyces albus* KSM-35 amylase from *Bacillus subtilis* LKS88 harboring the recombinant plasmid pASA240. *Korean J. Food Nutr.* 11(4):381-387.
21. Kim, E.K., D. Ryu, D.H. Shon, S.H. Chung and Y.B. Kim. 1998. Natural occurrence of fumonisin B₁ in Korean polished rice and its processed foods by enzyme-linked immunosorbent assay. *Food Sci. Biotechnol.* 7(3):221-224.
22. Ryu, D., S. K. Katta, L. B. Bullerman, M. A. Hanna, and A. Gennadios. 1996. Viability in methyl soyate of microbial contaminants from farm fuel storage tanks. *Trans. ASAE.* 39(6):1200-1203.
23. Ryu, D. and D.L. Holt. 1993. Growth inhibition of *Penicillium expansum* by several commonly used food ingredients. *J. Food Prot.* 56(10):862-867.

Chapters in Books

- Ryu, D. and L.B. Bullerman. 2009. Mycotoxins of concern in imported grains. In: *Intentional and Unintentional Contaminants in Food and Feed*, F. Al-TaHER, L. Jackson, and J.W. DeVries (Eds). pp 79-90. American Chemical Society, Washington, DC.
- Bullerman, L.B., M. Giesova, Y. Hassan, D. Deibert and D. Ryu. 2006. Antifungal activity of sourdough bread cultures. In: *Advances in Food Mycology*, A.D. Hocking, J.I. Pitt, R.A. Samson, and U. Thrane (Eds.). pp 307-316. *Advances in Experimental Medicine and Biology*. Volume 571. Springer Science+Business Media, New York, NY.
- Ryu, D., L.S. Jackson, and L.B. Bullerman. 2002. Effects of processing on zearalenone. In: L.S. Jackson, M. Trucksess, and J.W. DeVries (Eds.), *Mycotoxins and Food Safety*, pp. 205–216. Plenum Publishing Corp., New York, NY.
- Bullerman, L.B., D. Ryu, and L.S. Jackson. 2002. Stability of fumonisins in food processing. In: L.S. Jackson, M. Trucksess, and J.W. DeVries (Eds.), *Mycotoxins and Food Safety*, pp. 195–204. Plenum Publishing Corp., New York NY.

INVITED LECTURES

- Ryu, D. Mycotoxin Issues Associated with Nuts. International Association for Food Protection Annual Meeting, Anaheim, CA, August 2010.
- Ryu, D., L.B. Bullerman, A. Bianchini, M.A. Hanna, L.S. Jackson, J. Jablonski, and Voss, K.A. Chemical and Toxicological Fate of Fumonisin B₁ during Extrusion Processing. International Commission on Food Mycology, Freising, Germany, June 2010.
- Ryu, D. Molds and Mycotoxins in Foods, Texas Environmental Health Association, Plano, TX, May 6, 2010.
- Ryu, D. Molds and Mycotoxins in Food, Feed, and the Environment Workshop, University of Nebraska-Lincoln, Lincoln, NE, March 17-19, 2009.
- Ryu, D. Mycotoxins of concern in imported grains. Symposium on Intentional and Unintentional Contaminants in Food and Feed, American Chemical Society 235th National Meeting & Exposition, New Orleans, LA, April 6-10, 2008.
- Ryu, D. Molds and Mycotoxins in Food, Feed, and the Environment Workshop, Hilton Hotel and Convention Center, Omaha, NE, February 21-23, 2008.

- Ryu, D., L.S. Jackson, K.A. Voss, M.A. Hanna, and L.B. Bullerman. Effects of extrusion processing on reduction of fumonisins in corn. International Commission on Food Mycology, Key West, FL, June 4-6, 2007.
- Ryu, D., L.S. Jackson, K.A. Voss, M.A. Hanna, and L.B. Bullerman. Fate of fumonisins in corn during extrusion processing. The 48th Annual Corn Dry Milling Conference. Peoria, IL, May 31 – June 1, 2007.
- Ryu, D. Molds and Mycotoxins Workshop, University of Nebraska-Lincoln, Lincoln, NE, March 13-15, 2007.
- Ryu, D. Molds and Mycotoxins Workshop, University of Nebraska-Lincoln, Lincoln, NE, May 16-18, 2006.
- Ryu, D. Effects of extrusion processing on reduction of fumonisins, deoxynivalenol and zearalenone in corn grits. Annual Midwest AOAC Meeting, Kansas City, MO, May 23-26, 2005.
- Ryu, D. Mycotoxins in Food – Mycotoxins associated with human diseases. Workshop for Triggers and Environmental Determinants of Diabetes in the Young (TEDDY), NIH. Reston, VA, August 11, 2003.
- Ryu, D. Mold Growth and Bakery Foods – Origin, effects and prevention. Short Course: Extending Shelf Life of Bakery Foods, American Institute of Baking. Manhattan, KS, May 21-22, 2001.
- Ryu, D., L. S. Jackson, and L. B. Bullerman. Effects of processing on zearalenone. American Chemical Society Symposium - Mycotoxins in Foods. Washington, DC, August 20-24, 2000.

Other Invited Lectures and Presentations [Last five years]

- Zottarelli, L.K., J. Kwon, D. Ryu, E. Rider, A. Deane. Shelter in the Storm: A Sociopolitical Ecology Analysis of Faith-Based Organizations Providing Food and Shelter during Large Scale Evacuations of the United States Gulf Coast. International Sociological Association World Congress, Gothenburg, Sweden, July 11-17, 2010.
- Ryu, D., L.B. Bullerman, A. Bianchini, M.A. Hanna, L.S. Jackson, J. Jablonski, and Voss, K.A. Chemical and toxicological fate of fumonisin B₁ during extrusion processing. International Commission on Food Mycology, Freising, Germany, June 2010.
- Voss, K.A., L.S. Jackson, J. Jablonski, A. Bianchini, M.A. Hanna, L.B. Bullerman, D. Ryu. Concentrations and toxicity of fumonisin B₁ in fermented corn grits are reduced by extrusion cooking with glucose supplementation. Joint Panel on Toxic Microorganisms, US Japan Cooperative Program on Development and Utilization of Natural Resources Annual Scientific Sessions, Tokyo, Japan, November, 2009.
- Kwon, J., D. Ryu, L. Zottarelli, L., S. Kwon. Food safety training needs for evacuation shelters operated by faith-based organizations. American Dietetic Association Food and Nutrition Conference and Expo, Denver, CO, October 17-20, 2009. (poster)
- Zottarelli, L.K., J. Kwon, D. Ryu, E. Rider. Heeding the Call: Faith-Based Organization Volunteers' Experiences Providing Evacuation Shelter and Support. Association for Applied and Clinical Sociology San Antonio Texas October 8-10, 2009.
- Kwon, J., D. Ryu, L. Zottarelli, S. Kwon. Food safety training priorities for evacuation shelters operated by faith-based organizations: An expert survey using discrete selections. International Association for Food Protection, Grapevine, TX, July 12-15, 2009. (poster)
- Voss, K.A., T.D. Burns, D. Ryu, L.S. Jackson, L.B. Bullerman, R.T. Riley, J.B. Gelineau-van Waes. A bioassay approach for determining the effect of cooking on fumonisin toxicity. German Society for Mycotoxin Research Annual Workshop, Muenster, Germany, June, 2009.

- Voss, K.A., T.D. Burns, D. Ryu, L.S. Jackson, R.T. Riley, L.B. Bullerman. Mycotoxin research at TMRU: processing, cooking, and toxicity. University of Muenster, Muenster, Germany, June, 2009.
- Voss, K.A., D. Ryu, A. Bianchini, L.B. Bullerman, L. Wu, M.E. Snook, J. Barach. Effects of processing and cooking on mycotoxins: lessons from studies on fumonisin B₁ and deoxynivalenol. American Chemical Society Division of Agricultural and Food Chemistry, April, 2008.
- Voss, K.A., D. Ryu, T. Burns, R.T. Riley, L.S. Jackson, A. Bianchini, L.B. Bullerman. A bioassay approach for determining the effect of cooking on fumonisin toxicity. American Chemical Society Division of Agricultural and Food Chemistry, April, 2008.
- Voss, K.A., L.S. Jackson, J. Jablonski, A. Bianchini, L.B. Bullerman, M. A. Hanna, and D. Ryu. The effect of extrusion on the fumonisin content and toxicity of corn grits. Gordon Research Conference, Waterville, ME, June 17-21, 2007. (poster)
- Bianchini, A., D. Ryu, L.S. Jackson, K.A. Voss, M.A. Hanna, and L.B. Bullerman. Toxicity of fumonisin degradation products produced by extrusion. Fourth Annual Nebraska Food Research Symposium, Lincoln, NE, April 14, 2007.
- Voss, K.A., L.S. Jackson, A. Bianchini, L.B. Bullerman, M.A. Hanna, D. Ryu. Chemical and toxicological evaluation of fumonisin B₁ in extruded corn grits. Toxicol. Sci. (Suppl. The Toxicologist) 96:149. Abstr. 725. Society of Toxicology Meeting, Charlotte, NC, March 25-29, 2007. (poster)
- Voss, K.A., L.S. Jackson, J. Jablonski, A. Bianchini, L.B. Bullerman, M.A. Hanna, D. Ryu. Effect of extrusion cooking, with and without glucose, on fumonisin B₁ in corn grits. Proceedings of the annual meeting of the Center for Food Safety, University of Georgia, Atlanta, GA, February, 2007.
- Voss, K.A., L.S. Jackson, J. Jablonski, A. Bianchini, L.B. Bullerman, M. A. Hanna and D. Ryu. The effect of extrusion on the fumonisin content and toxicity of corn grits. The 10th International Symposium on Toxic Microorganisms. College Park, MD, November 7-9, 2006.
- Bianchini, A., D. Ryu, L.S. Jackson and L.B. Bullerman. Fate of fumonisin B₁ during extrusion cooking of corn grits with and without glucose. Third Annual Nebraska Food Research Symposium, Lincoln, NE, March 25, 2006.
- Ryu, D. Chemical and toxicological evaluation of fumonisin B₁ in extruded corn grits, USDA-CSEERS Project Director's meeting, Washington, DC, October 10, 2006.

GRANTSMANSHIP

- Ryu, D., J.C. Cappozzo, L.S. Jackson, J.D. Palumbo, J.E. Stratton, A. Bianchini, C. Wolf-Hall, F. Wu. [2/1/11 – 1/31/16] \$1,499,608. Risk assessment and intervention strategies for the emerging food safety threat of ochratoxin in the United States. Agriculture and Food Research Initiative, National Institute of Food and Agriculture, USDA.
- Ryu, D., C.M. Bednar, L.K. Zottarelli, and J.L. Baumert. [10/1/10 – 9/30/13] \$600,000. Integrated strategies to reduce foodborne illness and food allergic reactions associated with independently operated restaurants. National Integrated Food Safety Initiative, National Institute of Food and Agriculture, USDA.
- Kwon, J., D. Ryu, K. Sauer, and E. Todd. [10/1/10 – 9/30/13] \$600,000. Assessment and reduction of produce food safety risks in the school foodservice system. National Integrated Food Safety Initiative, National Institute of Food and Agriculture, USDA.

- Kwon, J., D. Ryu, and L.K. Zottarelli. [9/1/07 – 8/30/10] \$456,606. Food safety risk assessment and development of education program for evacuation shelters operated by faith-based organizations. Integrated Research, Education, and Extension Competitive Grants Program – National Integrated Food Safety Initiative, USDA.
- Ryu, D., Bullerman, L.B., Hanna, M.A., and Voss, K.A. [9/1/05 – 8/31/08] \$260,000. Chemical and toxicological evaluation of fumonisin B₁ in extruded corn grits. National Research Initiative Competitive Grant Program, USDA.
- Ryu, D. [9/1/07 – 8/31/08] \$4,500. Promotion of food safety by using probiotics. Chancellor's Research Fellows Program, TWU.
- Ryu, D. [1/1/07 – 8/31/07] \$6,000. Effect of hydroxy fatty acids on the growth and aflatoxin B₁ production of *Aspergillus flavus*. Research Enhancement Award. Texas Woman's University.
- Ryu, D. [1/1/2006 – 8/31/2006] \$6,000. Determination of matrix-bound fumonisins in food products. Research Enhancement Award. Texas Woman's University.
- Ryu, D. [1/1/2006 – 8/31/2006] \$3,000. Effect of selected food ingredients on the stability of moniliformin. Human Nutrition Research Funds.
- Ryu, D. [9/1/05 – 8/31/06] \$4,000. Fate of *Fusarium* toxins in grains and processed grain-based foods. Chancellor's Research Fellows Program, TWU.
- Ryu, D. [1/1/2005 – 8/31/2005] \$6,000. Heat stability of moniliformin in an aqueous buffered model system. Human Nutrition Research Funds.
- Ryu, D. [1/1/2005 – 8/31/2005] \$6,000. Heat stability of moniliformin in an aqueous buffered model system. Research Enhancement Award. Texas Woman's University.
- Ryu, D. [7/1/2004 – 6/30/2005] \$10,000. Reduction of neural tube defect risk from corn by extrusion processing. Layman Award, University of Nebraska-Lincoln.
- Bullerman, Lloyd B. and Ryu, D. [1/1/2004-12/31/2005] \$40,000. Biological evaluation of reduction of fumonisin B₁ toxicity by extrusion processing. The Anderson Research Grant Program (NC-213).
- Bullerman, Lloyd B. and Ryu, D. [9/1/2003-8/31/2004] \$25,000. Naturally occurring antifungal agents from lactic acid bacteria. Midwest Advanced Food Manufacturing Alliance.
- Bullerman, Lloyd B. and Ryu, D. [5/1/2003-4/31/2004] \$5,000. Inhibition of *Fusarium graminearum* and Fusarium Head Blight by *Bacillus pumilus*. U.S. Wheat and Barley Scab Initiative, USDA.

PROFESSIONAL AFFILIATIONS

AOAC International; Institute of Food Technologists; International Association for Food Protection; International Commission on Food Mycology (Commissioner); International Society for Mycotoxicology; Society for Mycotoxin Research; Society of the Phi Tau Sigma.

SERVICE

Chair, Toxicology and Safety Evaluation Division, Institute of Food Technologists.

Founder and President, TWU Chapter, Society of the Phi Tau Sigma.

Voting member, Mycotoxin Community, AOAC International.

Editorial Board, Journal of Food Protection (2010-13).

Editorial Board, Journal of Food Science and Nutrition.

Reviewer for the International Journal of Food Microbiology, Journal of Food Science, Journal of Food Protection, Journal of Agricultural and Food Chemistry.

Panel Reviewer for the National Needs Fellowship (NNF) Grants Program, USDA (2008, 2009)

UNDERGRADUATE LEVEL TEACHING

Courses Taught Previously – Food Safety, General Chemistry Lab

Courses Taught at TWU – Food Microbiology, Food Science, Food Product Development.

GRADUATE LEVEL TEACHING

Courses Taught Previously – Instrumental Analysis, Advanced Food Toxicology

Courses Taught at TWU – Food Toxicology, Cereal Science & Technology, Food Laws & Regulations, HACCP in Food Industry, Grant Development.