

CURRICULUM VITAE

DONG UK AHN

Professor
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Education

Doctor of Philosophy, University of Wisconsin-Madison: 1988
Master of Science, Seoul National University: 1983
Bachelor of Science, Seoul National University: 1978

Awards

2013: Award in Meat Research, American Society of Animal Science
2011: The Evonic Degussa Award for the achievement in Poultry Science, Poultry Science Association
2004: Award for Achievement by an Organizational Team (ISU Extension)
2004: ISU Animal Industry Report Award, Iowa State University
2000: American Egg Board Research Award (Poultry Science Association)

Instruction

Dr. Ahn teaches poultry products technology.

Research

Dr. Ahn's area of research is in basic and applied research related to poultry products such as mechanisms and prevention of lipid and protein oxidation in meat and poultry, characterization of flavor and taste compounds in irradiated cooked meat products, separation and utilization of value-added components from egg, and development of functional bioactive peptides from egg proteins.

Instruction

[Poultry Products and Processing Technology Lab website](#)

Selected Publications

Zhang W.G, S. Xiao and D.U. Ahn (2013). Protein oxidation: basic principles and implications for meat quality. Critical Reviews in Food Science and Nutrition, DOI:10.1080/10408398.2011.577540.

Hur, S.J., B.R. Min, K.C. Nam, E.J. Lee, and D.U. Ahn, (2013). Effect of Dietary Cholesterol and Cholesterol Oxides on Blood Cholesterol, Lipids, and the Development of Atherosclerosis in Rabbits. Lipids in Health and Disease. Int. J. Mol. Sci. 14(6): 12593-12606

Abeyrathne, E.D.N.S., H.Y. Lee, J.S. Ham and D. U. Ahn, (2013). Separation of ovotransferrin from chicken egg white without using solvents. Poultry Sci. 92(4):1091-1097.

Ahn, D.U., I.S. Kim, and E.J. Lee, (2013). Irradiation and additive combinations on the

pathogen reduction and quality of poultry meat. *Poultry Sci.* 92:534-545.

Moon, S. H., Lee, J. H., Lee, Y. J., Chang, K. H., Paik, J. Y., Ahn, D. U., and Paik, H.D. (2013). Screening for cytotoxic activity of ovotransferrin and its enzyme hydrolysates. *Poultry Sci.* 92:424-434.

Jung, S., Kim, D. H., Son, J. H., Nam, K., Ahn, D. U., and Jo, C. (2012). The functional property of egg yolk phosvitin as a melanogenesis inhibitor. *Food Chem.* 135 (2012) 993–998.

Sun, H., M. Persia, H. S. Ragheb, E.J. Lee, and D.U. Ahn, (2012). Effects of increasing concentrations of corn distiller's dried grains with solubles (DDGS) on the egg production and internal quality of eggs. *Poultry Sci.* 91:3236-3246.

Volk, S. P., D.U. Ahn, M. Zeece and S. Jung (2012). Effects of high-pressure processing and enzymatic dephosphorylation on phosvitin properties. *J. Sci. Food Agric.* 92(15) 3095–3098.

Min, B. R., K. C. Nam, C. Jo, and D. U. Ahn, (2012). Irradiation of shell egg on the physicochemical and functional properties of liquid egg white. *Poultry Sci.* 91:2649-57.

Kwon, J.H., K. Akram, K.C. Nam, B.R. Min, E.J. Lee, and D.U. Ahn (2012). Potential Chemical Markers for the Identification of Irradiated Sausages *J. Food Sci.* 77(9): C1000-1004.

Wang, J., Jin, G., Zhang, W. Ahn, D.U., and Zhang, J. (2012). Effect of curing salt content on lipid oxidation and volatile flavour compounds of dry-cured turkey ham. *LWT - Food Sci. Technol.* 48:102-106.

Ahn, Doug U. and Eun Joo Lee, (2012). Chapter 12. Mechanisms and Prevention of Quality Changes in Meat by Irradiation. In *Food Irradiation Research and Technology*, 2nd ed. Xueting Fan and Christopher H. Sommers ed. Wiley-Blackwell, IFT Press. P207-224.

Min, B.R. and D. U. Ahn, (2012). Sensory properties of packaged and processed poultry meat. In "Advances in meat, poultry and seafood packaging". Joe Kerry (Ed). Woodhead Publishing. p112-153.

Kwon, J.H., Y.J. Kwon, T. Kausar, K.C. Nam, B.R. Min, E.J. Lee, and D.U. Ahn (2012). Effect of cooking on radiation-induced chemical markers in beef and pork during storage. *J. Food Sci.* 77(2):C211-215.

Fan, X., Lee, E.J. and D. U. Ahn (2011). Chapter 12. Volatile sulfur compounds in foods as a result of ionizing radiation. In "Volatile Sulfur Compounds in Food". ACS Symposium Series 1068; American Chemical Society: Washington, DC, 2011. ACS Symposium Series p243-258.

Moon, S.H., H.D. Paik, D.U. Ahn, S. White, A. Daraba, and A.F. Mendonca, (2011). Influence of nisin and selected meat additives on the antimicrobial effectiveness of ovotransferrin against *Listeria monocytogenes*. *Poultry Sci.* 90: 2584-2591.

Kwon, J.H., K. Akram, K.C. Nam, E.J. Lee, and D.U. Ahn, (2011). Evaluation of radiation-induced compounds in irradiated raw or cooked chicken meat during storage. *Poultry Sci.* 90:2578-2583.

Samaraweera, H., W. Zhang, E.J. Lee, and D.U. Ahn, (2011). Egg Yolk Phosvitin and Functional Phosphopeptides—Review. *J. Food Sci.* Vol. 76 (7): R143-150.

Min, B.R. J. C. Cordray and D. U. Ahn, (2011). Antioxidant effect of fractions from chicken breast and beef loin homogenates in phospholipids liposome systems. *Food Chem.* 128(2):299-307

Xiao, S., W. Zhang, E.J. Lee, C. Ma and D.U. Ahn (2011). Effects of diet, packaging and irradiation on protein oxidation, lipid oxidation and color of raw broiler thigh meat during

refrigerated storage. Poultry Sci. 90:1348-1357

Xiao, S. W. G. Zhang, E. J. Lee, C. W. Ma, and D. U. Ahn (2011). Lipid and protein oxidation of chicken breast rolls as affected by dietary oxidation levels and packaging. J. Food Sci. 76(4):C612-C617.

Yang, H. S., E. J. Lee, S. H. Moon, H. D. Paik and D. U. Ahn (2011). Effect of garlic, onion, and their combination on the quality and sensory characteristics of irradiated raw ground beef. Meat Sci. 89:202-208.

Ko, K. Y., K.C. Nam, C. Jo, E.J. Lee, and D. U. Ahn, (2011). A simple and efficient method for separating phosvitin from egg yolk using ethanol and sodium chloride. Poultry Sci. 90: 1096-1104.

Nam, K. C., K. S. Seo, C. Jo, and D. U. Ahn (2011). Electrostatic spraying of antioxidants on the oxidative quality of ground beef. J. Animal Sci. 89: 826-832.

Yang, H. S., E. J. Lee, S. H. Moon, H. D. Paik and D. U. Ahn, (2011). Addition of garlic or onion before irradiation on lipid oxidation, volatiles and sensory characteristics of cooked ground beef. Meat Sci. 88:286-291.

Zhang, W., S. Xiao, E.J. Lee and D.U. Ahn (2011). Consumption of oxidized oil increases oxidative stress and affects the quality of broiler breast meat. J. Agric. Food Chem. 59 (3): 969–974

Zhang, W., S. Xiao, H. Samaraweera, E.J. Lee and D. U. Ahn (2010). Improving functional value of meat products. Meat Sci. 86:15-31.

Min, B.R, K.C. Nam, and D. U. Ahn, (2010). Catalytic mechanisms of metmyoglobin on the oxidation of lipids in phospholipid liposome model system. Food Chem. 123:231-236.

Xiao, S., Y. Yang, X. Rui, H. Zhan, C. Ma, X. Li, X. Yu, and D.U. Ahn, (2010). Hormone sensitive lipase (HSL) and Adipose tissue triglyceride lipase (ATGL) changes in subcutaneous adipose tissue throughout the ripening process of Xuanwei ham. Food Chem. 121:191-195.

Min, B.R, J.C. Cordray, and D. U. Ahn, (2010). Effect of NaCl, myoglobin, Fe(II), and Fe(III) on lipid oxidation of raw and cooked chicken breast and beef loin. J. Agric. Food Chem. 58 (1):600–605

Ahn, D. U., K. C. Nam, and E. J. Lee, (2009). Lipid oxidation and flavor. In "Applied Muscle Biology and Meat Science". Min Du and Richard McCormick (Ed). CRC Press. p227-246.

Ko, K. Y., A. Mendonca and D. U. Ahn, (2009). EDTA and lysozyme improves antimicrobial activities of ovotransferrin against *Escherichia coli* O157:H7. Poultry Sci. 88: 406-414.

Min, B. R. and D. U. Ahn, (2009). Factors in various fractions of meat homogenate that affect oxidative stability of raw chicken breast and beef loin. J. Food Sci. 74(1/2):C41-48.

Ismail, H.A., E.J. Lee, K.Y. Ko, H. D. Paik and D.U. Ahn, (2009). Effect of antioxidant application methods on the color, lipid oxidation and volatiles of irradiated ground beef. J. Food Sci. 74(1/2):C25-32.

Zhu, M. J., A. Mendonca, H. A. Ismail, and D. U. Ahn (2009). Fate of *Listeria monocytogenes* in ready-to-eat turkey breast rolls formulated with antimicrobials following e-beam irradiation. Poultry Sci. 88: 205-213.

Other Links

[Dr. Ahn's Research Webpage](#)

