

Curriculum Vitae
AUBREY F. MENDONCA

Office: 3399 Food Sciences Bldg., Iowa State University, Ames, Iowa 50010
Tel. 515 294 2950; *Fax.* 515 294 8181; *E-mail.* amendon@iastate.edu

EDUCATION

Ph.D. in Food Science & Technology; minor in **Microbiology**,
Iowa State University, 1992.
M.S. in Food Technology, Iowa State University, 1987.
B.S. in Microbiology, Iowa State University, 1985
B.S. in Food Technology & Science, Iowa State University, 1985.

ACADEMIC AND PROFESSIONAL APPOINTMENTS

July 2004 to present. Associate Professor, Department of Food Science & Human Nutrition, Iowa State University, Ames, Iowa.

June 1998 to 2004. Assistant Professor, Department of Food Science & Human Nutrition, Iowa State University, Ames, Iowa.

May 1994 to June 1998. Food Safety Scientist, Agriculture Research Program, & **Adjunct Assistant Professor**, Department of Human Environment and Family Sciences, North Carolina A&T State University, Greensboro, North Carolina.

August 1992 to April 1994. Post-doctoral Scholar, Department of Food Science, The Pennsylvania State University, State College, Pennsylvania.

AREAS OF SPECIALIZATION

Microbial food safety and quality; control of food-borne pathogens using natural antimicrobials, high pressure processing or irradiation; influence of stress-adaptation on microbial resistance to food processing methods

TEACHING ACTIVITIES

Courses Taught

- FSHN 420, Food Microbiology
- FSHN 514, Principles of Food Science - Microbiology
- FSHN 626, Advanced Food Microbiology; MICRO 604, Microbiology Seminar
- FSHN 489 Issues in Food Safety; FSHN 480 Professional Communication in FSHN
- FSHN 419 Foodborne Hazards
- FSHN 580 Orientation to Food Science & Human Nutrition

PUBLICATIONS

Svoboda A., A. Shaw, J. Dzubak, **A. Mendonca**, L. Wilson, and A. Nair. 2016. Effectiveness of broad spectrum chemical produce sanitizers against foodborne pathogens on cantaloupe and watermelon surfaces, *Journal of Food Protection* 79(4):524-530.

Lavieri, N., J. Sebranek, J. Cordray, J. Dickson, A. Horsch, S. Jung, D. Manu, **A. Mendonca** and B. Brehm-Stecher. 2015. Control of *Listeria monocytogenes* on Alternatively Cured Ready-to-Eat Ham Using Natural Antimicrobial Ingredients in Combination with Post-Lethality Interventions. *J Food Process Technol* 6: 493. doi:[10.4172/2157-7110.1000493](https://doi.org/10.4172/2157-7110.1000493)

Shaw-Laury, **A.**, Svoboda, A., Jie, B., Nonnecke, G., and **A. Mendonca**. 2015. Survival of *Escherichia coli* on strawberries grown under greenhouse conditions. *Food Microbiology* 46: 200-203

Shaw, **A.**, **A. Mendonca**, and A. Daraba. 2015. "Clickers" and HACCP: Educating a diverse food industry audience with technology. *Journal of Extension*, Vol 52(6), Article #6TOT6

Hong S., **A. F. Mendonça**, A. Daraba and A. Shaw. 2014. Radiation Resistance and Injury in Starved *Escherichia coli* O157:H7 Treated with Electron-Beam Irradiation in 0.85% Saline and in Apple Juice. *Foodborne Pathogens and Dis.* 11(11): 900-906.

Campbell, J. A., **J. S. Dickson**, J. C. Cordray, D. Olson, **A. F. Mendonca**, and K. J. Prusa. 2014. Survival of methicillin-resistant *Staphylococcus aureus* during commercial thermal processing of frankfurters, summer sausage and ham. *Foodborne Pathogens and Dis.* 11(1): 50-54.

Lavieri, N.A., J.G. Sebranek, J.C. Cordray, J.S. Dickson, S. Jung, D.K. Manu, **A.F. Mendonca**, B.F. Brehm-Stecher, J. Stock and K.J. Stalder. 2014. Evaluation of the thin layer method for the recovery of pressure-injured and heat-injured *Listeria monocytogenes*. *J. Food Protect.* 77(5):828-831.

Lavieri, N. A., J. G. Sebranek, J. C. Cordray, J. S. Dickson, A. M. Horsch, S. Jung, D. K. Manu, B. F. Brehm-Stecher and **A. F. Mendonca**. 2014. Effects of different nitrite concentrations from a vegetable source with and without high hydrostatic pressure on the recovery of *Listeria monocytogenes* on ready-to-eat restructured ham. *J. Food Protect.* 77(5):781-787.

Campbell, J. A., **J. S. Dickson**, J. C. Cordray, D. Olson, **A. F. Mendonca**, and K. J. Prusa. 2014. Survival of methicillin-resistant *Staphylococcus aureus* during commercial heat treatment of slab bacon and consumer preparation of sliced bacon. *Journal of Food Protect.* 77(1):83-86.

Lavieri, N.A., Sebranek, J. G., Brehm-Stecher, B. F., Cordray, J. C., Dickson, J. S., Horsch, A. M., Jung, S., Larson, E. M., Manu, D. K., and **Mendonça, A. F.** 2014. Investigating the control of *Listeria monocytogenes* on alternatively-cured frankfurters using natural antimicrobial ingredients or post-lethality interventions. *Meat Sci.* 97: 568-574.

Lavieri, N. A., J. G. Sebranek, B. Brehm-Stecher, J. C. Cordray, J. S. Dickson, A. M. Horsch, S. Jung, E. M. Larson, D. K. Manu, and **A. F. Mendonça.** 2014. Investigating the control of *Listeria monocytogenes* on a ready-to-eat ham product using natural antimicrobial ingredients and post-lethality interventions, *Foodborne Pathogens and Dis.*,11(6):462-467.

Daraba, A., **A. F. Mendonca,** and J. Sebranek. 2013. *Meat Science Review: Bacterial Immobilization on Cattle Hides – A novel concept for reducing bacterial contamination on beef carcasses.* The National Provisioner, June 15, 2013, Available at: <http://www.provisioneronline.com/articles/99241-meat-science-review-bacterial-immobilization-on-cattle-hides>

Kudra, L. L, J. G. Sebranek, J. S. Dickson, E. M. Larson, **A. F. Mendonca,** K. J . Prusa, J. C. Cordray, A. Jackson-Davis, and Z. Lu. 2012. Control of *Listeria monocytogenes* on frankfurters and cooked pork chops by irradiation combined with modified atmosphere packaging. *Journal of Food Protection* 75(6):1063-1070.

Kudra, L. L, J. G. Sebranek, J. S. Dickson, **A. F. Mendonca,** Q. Zhang, A. Jackson-Davis, and K. J . Prusa. 2012. Control of *Campylobacter jejuni* on chicken breast meat by irradiation combined with modified atmosphere packaging including carbon monoxide. *Journal of Food Protection* 75(10):1728-1733.

Lihono, M. A., **A. F. Mendonca,** B. Bisha, L. Bankston, and T. D. Boylston. 2011. Efficacy of selected probiotic cultures to inhibit *Enterobacter sakazakii* ATCC 12868 in model reconstituted dairy products. *Int. J. Food Safety, Nutrition and Public Health,* Vol. 4 (2/3/4): 205-213.

Kudra, L. L., J. G. Sebranek, J. S. Dickson, **A. F. Mendonca,** Q. Zhang, A. Jackson-Davis, and K. J. Prusa. 2011. Control of *Salmonella enterica* Typhimurium in chicken breast meat by irradiation combined with modified atmosphere packaging. *Journal of Food Protection* 74(11): 1833-1839.

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

Mendonca, A., A. Daraba, D. Manu, and F. Woods. 2011. Inactivation of *Salmonella enterica* On Whole Tomatoes and Serrano Peppers Immersed in Pro-San, a Biodegradable Vegetable Sanitizer, *Journal of Environmental Protection and Ecology,* ISSN 1311-5065, Book II, pp.769 – 780.

Kudra, L. L., J. G. Sebranek, J. S. Dickson, **A. F. Mendonca**, Q. E. M. Larson, A. L. Jackson-Davis, and Z. Lu. 2011. Effects of Vacuum or Modified Atmosphere Packaging in Combination with Irradiation for Control of *Escherichia coli* O157:H7 in Ground Beef Patties. *Journal of Food Protection* 74(12): 2018-2023.

Krause B. L., R. E. Rust, J. G. Sebranek, and **A. F. Mendonca**. 2011. Incubation of curing brines for the production of ready-to-eat, uncured, no-nitrite-or-nitrate-added, ground, cooked and sliced ham. *Meat Science* 89(4):507-513.

Moon, S. H., K-Ah. Lee, K-K. Park, K. T. Kim, K.-S. Park, S-Y. Nah, **A. F. Mendonca**, and H. D. Paik. 2011. Antimicrobial effects of natural flavonoids and a novel flavonoid, 7-O-Butyl Naringenin, on growth of meat-borne *Staphylococcus aureus* strains. *Korean J. Food Sci. Ani. Resour.* 31(3):413-419.

Bisha, B., N. Weinschel, B. Brehm-Stecher, and **Aubrey Mendonca**. 2010. Antilisterial effects of Gravinol-S grapeseed extract at low levels in aqueous media and its potential as a produce wash. *J. Food Prot.* 73(2):266-273.

Lee, K-Ah, S. H. Moon, K. T. Kim, **A. F. Mendonca**, and H. D. Paik. 2010. Antimicrobial effects of various flavonoids on *Escherichia coli* O157:H7 cell growth and lipopolysaccharide production. *Food Sci. Biotechnol.* 91(1): 257-261.

Daraba, A., **A. F. Mendonca**, C. Vizireanu, and E. Botez. 2010. Management of critical control points in catering units, *Journal of Environmental Protection and Ecology*, ISSN 1311-5065, book 4, vol. 11, p.1516-1528

Smith, K., **A. Mendonca**, and S. Jung. 2009. Impact of high pressure processing on microbial shelf-life and protein stability of refrigerated soy milk. *Food Microbiology* 26(8):594-600.

Montoya, D., T. D. Boylston, and **A. Mendonca**. 2009. Preliminary screening of Bifidobacteria spp. and *Pediococcus acidilacticii* in a Swiss cheese curd slurry model system: Impact on microbial viability and flavor characteristics. *International Dairy Journal*, 19(10):605-611.

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 electron beam irradiation. *Poultry Science* 88:205-213

Wilford, J., **A. Mendonca**, and L. Goodridge. 2008. Water pressure effectively reduces *Salmonella* Enteritidis on the surface of raw almonds. *J. Food Prot.* 71(4):825-829.

Ko., K. Y., **A. F. Mendonca**, and D. U. Ahn. 2008. Influence of zinc, sodium bicarbonate and citric acid on the antibacterial activity of ovotransferrin against *Escherichia coli* O157:H7 and *Listeria monocytogenes* in model systems and ham. *Poultry Science* 87:2660-2670.

Zhu, M. J., **A. F. Mendonca**, H. A. Ismail, and D. U. Ahn (2008). Effects of irradiation on the survival and growth of *Listeria monocytogenes* and natural microflora in vacuum-packaged turkey ham and breast roll. *Poultry Science* 87:2140-2145.

Ko., K. Y., **A. F. Mendonca**, and D. U. Ahn. 2008. Effects of ethylenediaminetetraacetate and lysozyme on the antibacterial activity of ovotransferrin against *Listeria monocytogenes* in model systems and ham. *Poultry Science* 87:1649-1658.

Mendonca, A. F., and N. N. Potter. 2008. Food Preservation, *In AccessScience*, ©McGraw-Hill Companies. <http://accessscience.com/content/Food-preservation/267200>

Shahidi, F., **A. F. Mendonca**, and T. D. Boylston. 2007. A Perception to Survival of *Bifidobacterium* spp. in Bioyaghourt, simulated gastric juice and bile solution. *World Applied Sciences Journal*, 3(1):40-44.

Olds, D. A., **A. F. Mendonca**, J. Sneed, and B. Bisha. 2006. Influence of four retail cooling methods on the behavior of *Clostridium perfringens* ATCC 10388 in turkey roasts following heating to an internal temperature of 74 °C. *J. Food Prot.* 69:112-117.

Romero, M. G., **A. F. Mendonca**, and D. U. Ahn. 2005. Influence of dietary vitamin E on behavior of *Listeria monocytogenes* and color stability in ground turkey meat following electron beam irradiation. *J. Food Prot.* 68:1159-1164.

Lu, Z., J. G. Sebranek, J. S. Dickson, **A. F. Mendonca**, and T. B. Bailey. 2005. Application of predictive models to estimate *Listeria monocytogenes* growth on frankfurters treated with organic acids. *J. Food Prot.* 68:2316-2332.

Lu, Z., J. G. Sebranek, J. S. Dickson, **A. F. Mendonca**, and T. B. Bailey. 2005. Effects of organic acid salt solutions on sensory and other quality characteristics of frankfurters. *J. Food Sci.* 70:S123-S127.

Zhu, M. J., **A. F. Mendonca**, H. A. Ismail, M. Du, E. J. Lee, and D. U. Ahn. 2005. Impact of antimicrobial ingredients and irradiation on the survival of *Listeria monocytogenes* and the quality of ready-to-eat turkey ham. *Poultry Science* 84:613-620.

Niksic, M., S. E. Neibuhr, J. S. Dickson, **A. F. Mendonca**, J. J. Koziczkowski, and J. E. Ellingson. 2005. Survival of *Listeria monocytogenes* and *Escherichia coli* O157:H7 during sauerkraut fermentation. *J. Food Prot.* 7:1367-1374.

Mendonca, A. F., M. G Romero, M. A. Lihono, R. Nannapaneni, and M. G. Johnson. 2004. Radiation Resistance and virulence of *Listeria monocytogenes* Scott A following starvation in physiological saline. *J. Food Prot.* 67:470-474.

Chen, C.-M., J. G. Sebranek, J. S. Dickson, and **A. F. Mendonca**. 2004. Use of Pediocin (ALTA™ 2341) for control of *Listeria monocytogenes* on frankfurters. *Muscle Foods*, 15:35-36.

Zhu, M. J., **A. F. Mendonca**, and D. U. Ahn. 2004. Temperature abuse affects the quality of irradiated pork loins. *Meat Science*, 67:643-649.

Chen, C.-M., J. G. Sebranek, J. S. Dickson, and **A. F. Mendonca**. 2004. Combining Pediocin with postpackaging irradiation for control of *Listeria monocytogenes* on frankfurters. *J. Food Prot.* 67:1866-1875.

Henroid, D. H., **A. F. Mendonca**, and J. S. Sneed. 2004. Microbiological evaluation of food contact surfaces in Iowa Schools. *Food Prot. Trends* 24:682-685.

Sneed, J., C. Strohbeam, S. Gilmore, and **A. F. Mendonca**. 2004. Microbiological Evaluation of Foodservice Contact Surfaces in Iowa Assisted-Living Facilities. *J. Amer. Diet. Assoc.* 104:1722-1724.

Chen, C.-M., J. G. Sebranek, J. S. Dickson, and **A. F. Mendonca**. 2004. Combining Pediocin (ALTA 2341) with postpackaging pasteurization for control of *Listeria monocytogenes* on frankfurters. *J. Food Prot.* 67:1855-1865.

Lihono, M. A., **A. F. Mendonca**, J. S. Dickson, and P. M. Dixon. 2003. A predictive model to determine the effects of temperature, sodium pyrophosphate, and sodium chloride on thermal inactivation of starved *Listeria monocytogenes* in pork slurry. *J. Food Prot.* 66:1216-1221.

Zhu, M., I. V. Wesley, R. Nannapaneni, M. Cox, **A. F. Mendonca**, and D. U. Ahn. 2003. Dietary Vitamin E improved the immune responses and accelerated the clearance of inoculated *Listeria monocytogenes* in turkeys. *Poultry Science*, 82(10):1559-1564.

Zhu, M., E. J. Lee, **A. F. Mendonca**, and D. U. Ahn. 2003. Effect of irradiation on the quality of turkey ham during storage. *Meat Science*, 66(1):63-68.

Nam, K. C., B. R. Min, H. Yan, E. J. Lee, **A. F. Mendonca**, I. Wesley, and D. U. Ahn. 2003. Effect of dietary vitamin E and irradiation on lipid oxidation, color, and volatiles of fresh and previously frozen turkey breast patties. *Meat Science*, 65(1):513-521.

Du, M., D. U. Ahn, **A. F. Mendonca**, and I. V. Wesley. 2002. Quality characteristics of irradiated ready-to-eat breast rolls from turkeys fed conjugated linoleic acid. *Poultry Science*, 81:1378-1884.

Lihono, M. A., **A. F. Mendonca**, J. S. Dickson, and P. M. Dixon. 2001. Influence of sodium pyrophosphate on thermal inactivation of *Listeria monocytogenes* in pork slurry and ground pork. *Food Microbiology* 18:269-276.

Mendonca, A. F. 1996. New Inspection Policies for Meat. *Resource: Engineering & Technology for a Sustainable World*, ASAE, Dec. 1996: pp.9-10.

Mendonca, A. F., and S. J. Knabel. 1994. A novel strictly anaerobic recovery and enrichment system incorporating lithium for detection of heat-injured *Listeria monocytogenes* in pasteurized milk containing background microflora. *Appl. Environ. Microbiol.* 60:4001-4008.

Mendonca, A. F., T. Amoroso, and S. J. Knabel. 1994. Destruction of Gram-negative food-borne pathogens by high pH involves disruption of the cytoplasmic membrane. *Appl. Environ. Microbiol.* 60:4009-4014.

Knabel, S. J., H. W. Walker, P. A. Hartman, and **A. F. Mendonca**. 1990. Effects of growth temperature and strictly anaerobic recovery on the survival of *Listeria monocytogenes* during pasteurization. *Appl. Environ. Microbiol.* 56:370-376.

Mendonca, A. F., R. A. Molins, A. A. Kraft, and H. W. Walker. 1988. Microbiological, chemical, and physical changes in fresh vacuum-packaged pork treated with organic acids and salts. *J. Food Sci.* 54(1):18-21.

Mendonca, A. F., R. A. Molins, A. A. Kraft, and H. W. Walker. 1988. Effects of potassium sorbate, sodium acetate, phosphates, and sodium chloride alone or in combination on shelf-life of vacuum-packaged pork chops. *J. Food Sci.* 54(2):302-306.

Book Chapters

Mendonça, A.F., and A. Daraba. 2014. Non-Thermal Processing: Irradiation. In: Batt, C.A., Tortorello, M.L. (Eds.), *Encyclopedia of Food Microbiology*, vol 2. Elsevier Ltd, Academic Press, pp. 954–961.

Mendonça, A.F., V. K. Juneja, and A. Daraba, A., 2014. Total Viable Counts: Metabolic Activity Tests. In: Batt, C.A., Tortorello, M.L. (Eds.), *Encyclopedia of Food Microbiology*, vol 3. Elsevier Ltd, Academic Press, pp. 610–617.

Mendonca, A. F. 2009. Microbiology of cooked meats. *In*, *Thermal Processing of Ready-to-eat Meats*, Lynn Knipe and Robert Rust, (eds). Wiley-Blackwell, Ames, IA.

Ahn, D. U., E. J. Lee and **A. Mendonca**. 2006. Meat decontamination by irradiation. *In* *Advanced Technologies for Meat Processing*. Leo Nollet and Fidel Toldra, (eds.), Marcel Dekker, Inc., New York

Mendonca, A. F. 2005. Bacterial Infiltration and Internalization in Fruits and Vegetables. *In* O. Lamikanra, S. Iman, and D. Ukuku (eds.), *Produce Degradation: Pathways and Prevention*, CRC Press, Boca Raton, FL.

Mendonca, A. F. 2002. Inactivation by Irradiation. *In* V. K. Juneja and J. N. Sofos (eds.), *Inactivation of Foodborne Microorganisms*, pp. 75-103. Marcel Dekker, Inc., New York.

Extension Publications

Shaw, A., C. Strohbehn, J. Meyer, H. Snyder, L. Wilson, B. Brehm-Stecher, and **A. Mendonca**. 2013. Guide to Using Liquid Sanitizer Washes with Fruits and Vegetables. Iowa State University Extension Publication. PM 1974d.

Strohbehn C, **A. Mendonca**, L Wilson, P. Domoto, M Smith, B. Brehm-Stecher, and A Shaw. 2013. On-Farm Food Safety: Cleaning and Sanitizing Guide. Iowa State University Extension Publication. PM 1974

Published Abstracts

David Manu, **Aubrey Mendonca**, Fei Wang, Aura Daraba and Angela Shaw. *Antibacterial effectiveness of cinnamaldehyde against Escherichia coli O157:H7 and Salmonella enterica in carrot and blackberry juice blends held at 4 °C*. International Association for Food Protection Annual Meeting, July 28-30, **2015**, Portland, Oregon.

Aura Daraba, James Drummer, **Aubrey Mendonca**, and Angela Shaw. *Effectiveness of PRO-SAN, a Biodegradable Antimicrobial, for Killing Salmonella enterica and Escherichia coli O157:H7 on Parsley and Green Onions Used as Fresh Garnishes*. International Association for Food Protection Annual Meeting, July 28-30, **2015**, Portland, Oregon.

Fei Wang, **Aubrey Mendonca**, Aura Daraba, and David Manu. *Ultraviolet Radiation Resistance and Injury of Long-term-survival Phase Cells of Salmonella Typhimurium ATCC 14028 in 0.85% Saline and Apple Juice*. International Association for Food Protection Annual Meeting, July 28-30, **2015**, Portland, Oregon.

Sujin Paik, **Aubrey Mendonça**, Aura Daraba, and Angela Shaw. *Effect of starvation on resistance of Escherichia coli O157:H7 to ultraviolet radiation in 0.85% saline and in apple juice*. Institute of Food Technologists Annual Meeting, June 11-14, **2014**, New Orleans, LA

Aura Daraba, **Aubrey Mendonca**, Angela Shaw, David Manu. *Viability of Salmonella enterica and Escherichia coli O157:H7 on Romaine Lettuce Following Repeated Immersion in Sanitizers With or Without Added Exudate*. Institute of Food Technologists Annual Meeting, June 11-14, **2014**, New Orleans, LA

Aura Daraba, Zenia Adiwijaya, Angela M. Shaw, and **Aubrey F. Mendonça**. *Effectiveness of PROSAN, a Biodegradable Vegetable Wash, for killing Salmonella enterica and Escherichia coli O157:H7 on the Surface of Whole Cucumbers*. United Fresh Produce Association, S-294 Science Symposium, June 11, **2014**, Chicago IL

David K. Manu, **Aubrey F. Mendonca**, Joseph Sebranek, Aura Daraba, Byron Brehm-Stecher, and Angela Shaw. *Efficacy of phenyllactic acid, phosvitin and their combination on the viability of Listeria monocytogenes, Salmonella enterica and Staphylococcus aureus in cream of chicken soup stored at 12 °C or 35 °C*. Institute of Food Technologists Annual Meeting, Chicago, IL, July 13-16, 2013.

Oleksandr Byelashov, **Aubrey Mendonca**, Aura Daraba, James Dickson, Joseph Sebranek, and Joseph Cordray. 2013. *Antimicrobial activity of lactic acid combined with sodium lauryl sulfate against Listeria monocytogenes in vacuum packaged frankfurters formulated with or without sodium lactate and stored at 4 °C*. Institute of Food Technologists Annual Meeting, Chicago, IL, July 13-16, 2013.

Amanda Svoboda, **Aubrey F. Mendonca**, and Angela Shaw. 2013. Effectiveness of Chemical Intervention Treatments against *Escherichia coli* O157:H7, Non-O157 STEC, *Listeria monocytogenes*, and *Salmonella*. International Association for Food Protection Annual Meeting, Charlotte, NC, July 30, 2013

David Manu, **Aubrey F. Mendonca**, Joseph Sebranek, and Aura Daraba: *Antimicrobial Efficacy of DL-3-Phenyllactic acid against selected species of Aspergillus and Penicillium molds at 25°C*, IFT Annual Meeting, Las Vegas, Nevada, June 25–28, 2012

David Manu, **Aubrey F. Mendonca**, Joseph Sebranek, Aura Daraba, and Byron Brehm-Stecher: *Antimicrobial Effectiveness of Phenyllactic acid against Gram-positive and Gram-negative foodborne pathogens at pH 6.0 and 7.2*, IAFP Annual Meeting, Providence, Rhode Island, , July 22-25, 2012

Aubrey F. Mendonca and Aura Daraba, *Application of Chemical and Irradiation Treatments to Destroy Listeria monocytogenes and Salmonella enterica on the Outer Rind Surface of Cantaloupe*, IFT Annual Meeting, Las Vegas, Nevada, , June 25–28, 2012

Aubrey F. Mendonca, Aura Daraba, John A. Lopes and Mark Queenan: *Effectiveness of various sanitizers against the natural bacterial flora, Listeria monocytogenes and Salmonella enterica on the outer skin surface of tuna fish*, 4th Trans-Atlantic Fisheries Technology Conference, Clearwater Beach, Florida, October 30 - November 2, 2012

Devin K. Dutilly, Byron Brehm-Stecher, James S. Dickson, and **Aubrey F. Mendonca**. Response of *Listeria monocytogenes* to high hydrostatic pressure or freeze-thaw cycles following exposure to selected environmental stress. American Society for Microbiology General Meeting, San Francisco, CA, June 16-19, 2012.

White, S. B., **Mendonca, A. F.**, Daraba, A., and Ahn, D. U. Control of *Salmonella enterica* and *Staphylococcus aureus* in a Laboratory Medium and a Commercial-type Soup Using Phosvitin, Carvacrol or Combinations. P-10, in Book of Abstracts of International Association for Food Protection Annual Meeting, July 2011, Milwaukee, WI.

White, S. B., **Mendonca, A. F.**, Daraba, A., and Ahn, D. U. Antimicrobial efficacy of phosvitin, nisin, and combinations against *Salmonella enterica* in a laboratory medium and a commercial-type soup. , In Book of Abstracts of The Institute of Food Technologists Annual Meeting, June 2011, New Orleans, LA.

Mendonca, A., S-H. Moon, A. Daraba, S. B. White, H-D. Paik, and D.U. Ahn. Influence of Nisin or Selective Meat Additives on the Antimicrobial Effectiveness of Ovotransferrin against *Listeria monocytogenes*, Abstract P1-07 In, abstracts of International Association for Food Protection Annual Meeting, 1-4 August, 2010, Anaheim, CA, USA

White, S.B., **A. F. Mendonca**, A. Daraba and D. U. Ahn. Antimicrobial Efficacy of Phosvitin Alone or Combined with Nisin against *Listeria monocytogenes* in a Laboratory Broth Medium at 35°C. Abstract P1-06 in abstracts of International Association for Food Protection Annual Meeting, 1-4 August, 2010, Anaheim, CA, USA.

Mendonca, A. Daraba, D. Duttily. Microbiological Quality of Commercial Brands of Animal Contact Corncob Bedding: Potential of Sanitized Corncob Particles for Reducing Sterilization Costs. In abstracts of 60th American Association for Laboratory Animal Science (AALAS) Meeting, 8-12 November, 2009, Denver, CO, USA

Duttily, D. K., D. Manu, S. Jung, B. Brehm-Stecher and **A. Mendonca**. 2008. Viability of *Listeria monocytogenes* in artificially inoculated turkey breast roll treated with lauric arginate and high hydrostatic pressure and stored at 4 °C. Abstract P2-51, in Abstracts of the Annual Meeting of the International Association for Food Protection, Columbus, Ohio Aug3-6, 2008.

Mendonca, A. F., C. Viaji, S. Volk, U. Madden, and M. Copeland. 2007. Viability of *Salmonella*, *Escherichia coli* O157:H7, *Listeria monocytogenes*, and *Staphylococcus aureus* in Jamaican Jerk Seasoning Paste at 25 °C. Abstract P2-38, in Abstracts of the Annual Meeting of the International Association for Food Protection, Orlando, Florida, June 8-11, 2007.

Mendonca, A. F. S. Jung and J. Sebranek. 2007. Combined Efficacy of Lactic Acid, Lauric Arginate and High Hydrostatic Pressure for Inactivating *Listeria monocytogenes* in Vacuum-packaged Cooked Ham. Abstract P2-37, in Abstracts of the Annual meeting of the International Association for Food Protection, Orlando, Florida, June 8-11, 2007.

Kudra, L., J. Sebranek, J. Dickson, **A. Mendonca**, K. Prusa, E. Larson, and J. Cordray. 2007. Control of *Listeria monocytogenes* on pre-cooked pork chops by irradiation combined with modified atmosphere packaging. Abstract 49, in Proceedings of the 60th Annual Reciprocal Meat Conference, Brookings, South Dakota, June 17-20, 2007.

Johnson, C. L., and **A. Mendonca**. 2006. Bactericidal activity of methanobactin combined with various surfactants against *Listeria monocytogenes* Scott A. Abstract P5-34, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Mendonca, A., O. Byelashov, L. Goodridge, and J. Lopes. 2006. Combined effectiveness of lactic acid and sodium lauryl sulfate in destroying *Salmonella* Enteritidis, *Escherichia coli* O157:H7 and *Listeria monocytogenes* on whole raw almonds. Abstract P5-35, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Byelashov, O., **A. Mendonca**, and J. Sebranek. 2006. Efficacy of lactic acid alone or combined with sodium lauryl sulfate for control of *Listeria monocytogenes* in vacuum-packaged frankfurters made with or without sodium lactate. Abstract P5-27, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Weinsetel, N., and **A. Mendonca**. 2006. Antimicrobial efficacy of cranberry or grape seed extract alone or combined with sodium lauryl sulfate against *Listeria monocytogenes* in vacuum-packaged frankfurters at 4 °C. Abstract P5-31, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Lihono, M., and **A. Mendonca**. 2006. Antimicrobial effectiveness of sodium phytate against *Listeria monocytogenes* in laboratory media. Abstract P5-32, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Wilford, J., **A. Mendonca**, and L. Goodridge. 2006. Water pressure effectively reduces *Salmonella* Enteritidis, on the surface of raw almonds. Abstract T7-03, in Abstracts of the Annual Meeting of the International Association for Food Protection, Calgary, Alberta, Canada, Aug 13-16, 2006.

Johnson, C. L., and **A. F. Mendonca**. 2005. Antimicrobial efficacy of Methanobactin against *Listeria monocytogenes* Scott A in Laboratory Medium. Abstract P2-47, in Abstracts of the Annual Meeting of the International Association for Food Protection, Baltimore, Md., Aug 14-17, 2005.

Weinsetel, N., and **A. F. Mendonca**. 2005. Inhibition of *Listeria monocytogenes* by natural plant extracts in Brain heart infusion broth at 4 °C and 10 °C. Abstract P2-42, in Abstracts of the Annual Meeting of the International Association for Food Protection, Baltimore, Md, Aug 14-17, 2005.

Olds, D., **A. F. Mendonca**, J. Sneed, and B. Bisha. 2005. Influence of four retail food service cooling methods on behavior of *Clostridium perfringens* ATCC 13088 in turkey roasts following heating to an internal temperature of 74 °C. Abstract P5-43, in Abstracts of the Annual Meeting of the International Association for Food Protection, Baltimore, Md, Aug 14-17, 2005.

Orozaliev, A., and **A. F. Mendonca**. 2005. Inactivation of *Salmonella* spp and *Escherichia coli* O157:H7 on cantaloupe skin using citric acid, hydrogen peroxide and a food-grade surfactant. Abstract P2-42, in Abstracts of the Annual Meeting of the International Association for Food Protection, Baltimore, Md., Aug14-17, 2005.

Romero, M. G., A. Orozaliev, and A. F. Mendonca. 2004. Altered resistance of acid-adapted *Escherichia coli* O157:H7 and *Listeria monocytogenes* to hydrogen peroxide and PRO-SAN. Abstract P162, in Abstracts of the Annual Meeting of the International Association for Food Protection, Phoenix, AZ, Aug 8-11, 2004.

Weinsetel, N., and A. F. Mendonca. 2004. Influence of acid adaptation on survival and injury of *Escherichia coli* O157:H7 in physiological saline following exposure to ultraviolet radiation. Abstract P163, in Abstracts of the Annual Meeting of the International Association for Food Protection, Phoenix, AZ, Aug 8-11, 2004.

Bisha, B., A. F. Mendonca, M. A. Lihono, and T. Boylston. 2004. Effectiveness of *Enterococcus faecium* M-74 for controlling *Listeria monocytogenes* in re-hydrated dried milk during temperature abuse. Abstract P202, in Abstracts of the Annual Meeting of the International Association for Food Protection, Phoenix, AZ, Aug 8-11, 2004.

Romero, M. G., A. F. Mendonca, and D. U. Ahn. 2003. Influence of dietary vitamin E on behavior of *Listeria monocytogenes* and color stability in ground turkey meat following electron beam irradiation. Abstract P124, in Abstracts of the Annual Meeting of the International Association for Food Protection, New Orleans, LA, Aug 10 –13, 2003.

Johnson, C., A. Mendonca, J. Dickson, and A. DiSpirito. 2003. Impact of selected environmental stresses on resistance of *Listeria monocytogenes* Scott A to electron beam irradiation. Abstract P033, in Abstracts of the Annual Meeting of the International Association for Food Protection, New Orleans, LA, Aug 10 – 13, 2003.

Zhu, M., A. Mendonca, H. Ismail, and D. Ahn. 2003. Effects of irradiation on survival and growth of *Listeria monocytogenes* and natural microflora in vacuum-packaged turkey ham. Abstract P053, in Abstracts of the Annual Meeting of the International Association for Food Protection, New Orleans, LA, Aug 10 – 13, 2003.

Lihono, M., A. Mendonca, C. Johnson, and A. Orozaliev. 2003. Thermal resistance of *Listeria monocytogenes* Scott A during starvation in phosphate buffer, 0.85% sodium chloride, or phosphate buffered saline. Abstract P050, in Abstracts of the Annual Meeting of the International Association for Food Protection, New Orleans, LA, Aug 10 – 13, 2003.

Bisha, B., A. Mendonca, J. Sebranek, and J. Dickson. 2003. Efficacy of sodium lactate and sodium diacetate alone or combined with Pediocin for controlling *Listeria monocytogenes* in ready-to-eat turkey roll at 4 °C and 10 °C. Abstract P165, in Abstracts of the Annual Meeting of the International Association for Food Protection, New Orleans, LA, Aug 10 – 13, 2003.

Mendonca, A. F. 2002. Irradiation treatment to control pathogens in muscle foods. Abstract # 4-4, in Abstracts of the Annual Meeting of the Institute of Food Technologists, Anaheim, CA., June 15-19, 2002.

Mendonca, A. F., M. G. Romero, and M. A. Lihono. 2002. Starvation-induced cross protection of *Listeria monocytogenes* Scott A against electron beam irradiation in 0.85% saline and in ground pork. Abstract P-25, in Abstracts of the 102nd General Meeting of the American Society for Microbiology, Salt Lake City, Utah, May 19-23, 2002.

Mendonca, A. F., M. G. Romero, A. Orozalieva, and F. Woods. 2002. Survival and growth of *Salmonella* spp. on fresh-cut cantaloupe cubes and rind following electron beam irradiation. Abstract P102, in Abstracts of the Annual Meeting of the International Association for Food Protection, San Diego, CA, June 30 – July 3, 2002.

Mendonca, A. F., M. G. Romero, and M. A. Lihono. 2002. Impact of starvation on the resistance of *Salmonella* Typhimurium to electron beam irradiation in 0.85% saline and in ground pork. Abstract P130, in Abstracts of the Annual Meeting of the International Association for Food Protection, San Diego, CA, June 30 – July 3, 2002.

Mendonca, A. F., T. D. Boylston, and F. M. Woods. 2002. Survival and growth of *Salmonella* Stanley on fresh-cut cantaloupe following electron beam irradiation. Abstract #18, in Abstracts of the 2nd Annual International Fresh Produce Association and S-294 Science & Technology Symposium, Los Angeles, CA, April 11-14, 2002.

Traynham, T. A., A. F. Mendonca, and B. A. Glatz. 2002. Inactivation of *Escherichia coli* O157:H7 on whole apples by sequential application of a high pH sodium bicarbonate buffer and hydrogen peroxide. Abstract #17, in Abstracts of the 2nd Annual International Fresh Produce Association and S-294 Science & Technology Symposium, Los Angeles, CA, April 11-14, 2002.

Mendonca, A. F., and M. A. Lihono. 2001. Inactivation of *Salmonella* Stanley on cantaloupe skin using high pH chemical treatments. Abstract #16, in Abstracts of 1st Annual International Fresh Produce Association and S-294 Science & Technology Symposium, Phoenix, AZ. April 5-7, 2001.

Lihono, M. A., A. F. Mendonca, and E. E. Fetzer. 2001. The effect of osmotic stress adaptation on heat resistance of *Listeria monocytogenes* Scott A in pork slurry. Abstract - P134, in Abstracts of the Annual Meeting of the International Association for Food Protection, Minneapolis, MN., Aug. 5-8, 2001.

Stotland, E. I., and A. F. Mendonca. 2000. Influence of stress-adaptation on irradiation resistance of *Escherichia coli* O157:H7 and *Listeria monocytogenes*. Abstract P-45, in Abstracts of the 100th General Meeting of American Society for Microbiology, Los Angeles, CA, May 21-25, 2000.

Fetzer, E. E., and A. F. Mendonca. 2000. Efficacy of various non-selective resuscitation media for increased detection of heat-injured *Escherichia coli* O157:H7. Abstract - P115, in Abstracts of the Annual Meeting of the International Association for Food Protection, Atlanta, GA., Aug. 6-9, 2000.

Lihono, M. A., A. F. Mendonca, and J. S. Dickson. 2000. Influence of sodium pyrophosphate on thermal inactivation of *Listeria monocytogenes* in pork slurry and ground pork. Abstract - P033, in Abstracts of the Annual Meeting of the International Association for Food Protection, Atlanta, GA., Aug. 6-9, 2000.

Stotland, E. I., A. F. Mendonca, J. S. Dickson, and D. G. Olson. 2000. Effect of growth temperature or starvation on the radiation resistance of *Escherichia coli* O157:H7 in a model system and ground beef. Abstract - P039, in Abstracts of the Annual Meeting of the International Association for Food Protection, Atlanta, GA., Aug. 6-9, 2000.

Mendonca, A. F., and E. I. Stotland. 1999. Influence of stress-adaptation on the irradiation resistance of *Listeria monocytogenes* and *Escherichia coli* O157:H7. Abstract #114, in Abstracts of the First Annual Meeting of the National Alliance of Food Safety, Washington, DC., Oct. 12-13, 1999.

Atughonu, A., L. R. Dave, and A. F. Mendonca. 1998. Effectiveness of trisodium phosphate for inactivation of *Escherichia coli* O157:H7 on apples. p. 34. In Abstracts of the Annual Meeting of the International Association of Milk, Food and Environmental Sanitarians, Nashville, TN., Aug. 16-19, 1998.

Published Abstracts cont'd.

Dave, L. R., A. Atughonu, and A. F. Mendonca. 1998. Efficacy of sodium hydroxide (NaOH) in chill water for inactivating *Salmonella typhimurium* and extending the shelf-life of broiler drumsticks. In Abstracts of the Annual Meeting of the Institute of Food Technologists, Atlanta, GA, June 20-24, 1998.

Green, C. G., and A. Mendonca. 1998. Model for implementing HACCP in school food services: What will really work? In Abstracts of the First National Sanitation Foundation International Conference on Food Safety, Albuquerque, New Mexico, Nov. 16-18, 1998.

Mendonca, A. F., and D. G. Fultz. 1997. Efficacy of trisodium phosphate for destruction of *Salmonella* on cantaloupe. p.43. In Abstracts of the Annual Meeting of the International Association of Milk, Food and Environmental Sanitarians, Orlando, FL., 1997.

Mendonca, A. F., and M. J. Hinds. 1997. Death of *Salmonella typhimurium* and *E. coli* O157:H7 by trisodium phosphate involves damage to the cytoplasmic membrane due to high pH. p. 129. In Abstracts of the Annual Meeting of the Institute of Food Technologists, Orlando, FL., June 14-18, 1997.

Mendonca, A. F., and S. E. Lynch. 1996. Effect of temperature and contact time of acetic acid solutions on destruction of *E. coli O157:H7* and *Salmonella* on cantaloupe, Abstract C-8. In Abstracts of the Annual Meeting of the Southern Regional Sections of the Institute of Food Technologists, Greensboro, NC., Feb. 4-6, 1996.

Hinds, M. J., A. F. Mendonca, and N. S. Spencer. 1996. Survival of *Listeria monocytogenes* in cole-slaw containing acetic acid and monolaurin. Abstract C-5. In Abstracts of the Annual Meeting of the Southern Regional Sections of the Institute of Food Technologists, Greensboro, NC., Feb. 4-6, 1996.

Mendonca, A. F., and C. J. Bethea. 1996. Sanitizing effect of temperature and contact time of sodium hydroxide solutions on *E. coli O157:H7* and *Salmonella* attached to cantaloupe, Abstract C-6. In Abstracts of the Annual Meeting of the Southern Regional Sections of the Institute of Food Technologists, Greensboro, NC., Feb. 4-6, 1996.

Mendonca, A. F., and J. N. Njoroge. 1995. Effect of high pH on the survival of *Salmonella typhimurium*, *Salmonella newport*, and *Campylobacter jejuni* in poultry scald water at 55 °C. p. 54. In Abstracts of the Annual Meeting of the International Association of Milk, Food and Environmental Sanitarians, Pittsburg, PA., Jul. 30- Aug. 2, 1995.

Knabel, S. J., C. R. Catalano, A. F. Mendonca, Y. L. Teo, T. Raynor, and K. R. Ellajosyula. 1995. Rapid destruction of Gram-negative foodborne pathogens in poultry and eggs by a combination of high pH and high temperature involves a hyper-synergistic disruption of the cytoplasmic membrane, pp.133-142. In, Proceedings of XII European Symp. on the Quality of Eggs and Egg Products, Zaragoza, Spain, Sept. 25-29, 1995.

GRANTS FUNDED

External Grants:

Brehm-Stecher, B.,(Proj. Director and PI) and **A. F. Mendonca** (Co-PI). 2013. *Practical Impact of Food Environment Exposure on Capture, Separation, Concentration and Detection of Salmonella in Complex Foods*, USDA/NIFA Agriculture and Food Research Initiative (AFRI) Competitive Grants, Food Safety Program: (\$298,692)

Lihono, M. (PI), X. Koo, A., Usman, **A. Mendonca**, and D. Ahn (Co-PIs). *Shelf-life extension and Quality Enhancement of Chevon: Evaluation of Plant-derived sources of natural preservatives and low dose irradiation*. USDA Capacity Building Grant Program.; 9/2011-8/2014 (extended); \$150,000; ISU portion: (\$50,000).

Sastry, S., A. (PI), Yousef, G. Kaletunc, J. Smilanick, B. Chamberlin, L. Wilson, **A. Mendonca**, B. Brehm-Stecher, B. Lamsal; (Co-PIs); *Pathogen inactivation in fresh produce by incorporation of sanitizers into existing operations within the produce-chain*. . USDA National Integrated Food Safety Initiative. \$999,999. (10/2009-9/2013).

Sebranek, J., (PI), **Mendonca, A.**, Brehm-Stecher, B.F., Jung, S (Co-PIs). *Reducing or Preventing Recovery of Injured Listeria monocytogenes on Ready-to-Eat Natural and Organic “Uncured” Processed Meat*. American Meat Institute Foundation, \$91,073. (2010-2011)

Wilson, L., (PI) B. Brehm-Stecher, and **A. Mendonca** (Co-PIs). *Tuning and upgrading the food safety education curricula for BSc*. EU-US Atlantis Grant, U.S. Department of Education; (2010-2012).

Mendonca, A. F.,(PI), T. Boylston, and S. Beattie (Co-PIs). *Mold control in cheese using metabolites from lactic acid bacteria*. Midwest Dairy Association. \$44,000, (2010-2011).

Mendonca, A. F., and A. Pometto (Co-PI). *Antibacterial efficacy of a novel skin cleanser against food-borne enteria pathogend on a model skin surface*. Northern Filter Media and Institute for Physical Research and Technology (\$22,065)

Sebranek, J. G. (PI), **A. F. Mendonca**, and J.S. Dickson (Co-PIs). *Improving the safety of pork products processed to simulate traditionally cured pork without addition of nitrite or nitrate*. National Pork Board; (\$47,729)

Sebranek, J. (PI), J. S. Dickson, and **A. F. Mendonca**, and J. Cordray (Co-PIs). *“Control of Listeria monocytogenes on Ready-to-eat meats manufactures without direct addition of nitrate or nitrite”*, USDA National Research Initiative Competitive Grants Program; (\$539,726).

Mendonca, A. F., and P. Murphy (PDs); B. Brehm-Stecher, S. Beattie, T. Boylston, S. Jung, and P. J. White (Co-PIs). *USDA National Needs Fellowship in Food Safety and Quality*, USDA National Needs Fellowship Grants Program, (9/2005 – 8/2010); \$138,000.

Mendonca, A. F., (PI) and T. Boylston (Co-PI). *“Evaluation of hydrogen peroxide/heat treatments for achieving sterility and improving quality characteristics of corncob grits”*. Green Products Company and Institute for Physical Research and Technology (IPRT), (8/2005 to 12/2005); \$12,032.

Boylston, T. D. (PI), **A. F. Mendonca**, and S. Beattie (Co-PIs). *“Food package testing: Polylactic acid (PLA) bottling”*, Value Chain Partnerships for a Sustainable Agriculture (W.K. Kellogg Foundation) and ISU IPRT; \$10,475.

Mendonca, A. F. (PI), D. Beitz, and T. Boylston (Co-PIs). *Stability of Eubacterium coprostanoligenes for use as a Cholesterol-lowering Dietary Adjunct in dairy products”*, Midwest Dairy Association; \$5,000.

Mendonca, A. F., (PI) and C. Reitmeier (Co-PI). “Impact of a carbon dioxide-generating system on microbiological quality and shelf-life of fresh fish and lettuce during refrigerated storage”, CO2 Technologies, Inc. and Institute for Physical Research and Technology (IPRT), (05/2004 to 08/2004); \$12,360.

Mendonca, A. F., (PI) and L. Wilson (Co-PI). “ Effectiveness of lactic acid or hydrogen peroxide alone or in combination for improving the microbiological quality of ground corn cob products during drying”, Green Products Company and Institute for Physical Research and Technology (IPRT), (11/2004 to 03/2005); \$10,648.

Mendonca, A. F., (PI), and T. D. Boylston (Co-PI). “Enhancing the microbial safety of fresh and fresh-cut melon”, University of California-Davis (USDA); 2004 – 2005; \$36,834.

Sebranek, J. (PI), J. S. Dickson, A. F. Mendonca, H. Jensen, D. Henroid, and R. Martin (Co-PIs). “Post-packaging irradiation with modified atmosphere packaging for control of pathogens on meat products”, USDA, NIFSI; \$500,000.

A. Mendonca (PI) and J. Sebranek (Co-PI), “Control of foodborne pathogens in processed foods: A combination of physical, chemical and biological interventions”; Illinois Institute of Technology (USDA); (2002 – 2005); \$107,896.

D. Ahn (PI), A. Mendonca (Co-PI), and J. Cordray, “Effect of dietary and irradiation interventions on pathogen reduction and quality of turkey meat”; USDA National Integrated Food Safety Initiative; (2002 – 2005); \$530,608.

A. Mendonca (PI) and C. Reitmeier (Co-PI), “Microbial safety & quality characteristics of apples, tomatoes and lettuce treated with chemical sanitizers” Microcide, Inc.; \$3,000.

A. Mendonca (PI) and D. Ahn (Co-PI), “Impact of electron beam irradiation on survival of *Listeria monocytogenes* and quality of ready-to-eat turkey products during refrigerated storage”; Midwest Poultry Consortium; (2002 – 2003); \$35,482.

T. Boylston (PI) and A. Mendonca (Co-PI), “The use of probiotic bacteria to improve the nutritive value and quality of Swiss cheese”; MAFMA and Swiss Valley Farms, Inc.; (2002 – 2003); \$42,107.

A. Mendonca (PI), D. Ahn, and I. Wesley, “Irradiation and packaging treatments for controlling *L. monocytogenes* and improving sensory acceptability of ready-to-eat turkey breast roll”; USDA National Alliance for Food Safety; (2001 - 2003); \$139,000.

C. Reitmeier (PI), B. A. Glatz (Co-PI), T. Boylston, A. Mendonca, L. Wilson, H. Jensen, J. Briggs, and M. Gleason (Co-Investigators). "Safety, quality, and sustainability of small-farm production of apples and cider"; USDA Initiative for Future Agricultural and Food Systems; (2000 – 2003); \$512,061.

A. Mendonca (PI), D. Ahn, and I. Wesley, "Effect of Vitamin E on the colonization of live turkeys with *L. monocytogenes* and Microbial Safety and Storage stability of Turkey Breast Meat"; USDA National Alliance for Food Safety; (2000 - 2002); \$121,951.

A. Mendonca (PI), A. DiSpirito, and L. Halverson, "Influence of Multiple Food barriers on Heat Destruction of Bacterial Pathogens in Pork"; Food Safety Consortium; (1999 – 2000); \$38,750.

C. Reitmeier (PI) and A. Mendonca (Co-PI), "Shelf-life extension of fresh produce by ethylene removal from refrigerators"; CATD and Amana Refrigeration, Inc.; (2001 - 2002); \$7,650.

C. Reitmeier (PI) and A. Mendonca (Co-PI), "Efficacy of Wasabi for shelf-life extension of refrigerated fresh produce"; CATD and Amana Refrigeration, Inc.; (2000 - 2001); \$3,225.

P. Murphy (PI), B. Glatz, D. Birt, S. Hendrich, and A. Mendonca, "USDA National Needs Graduate Fellowship Grant"; USDA (1999); \$276,000.

D. Olson (PI), D. Birt, A. Mendonca, T. Pometto, C. Reitmeier, M. Holtz-Clause and Sev Johnson. "Food Technology Commercial Space Center"; (1999 – 2004); National Aeronautics and Space Administration; \$400,000.

Internal Grants:

Mendonca, A. F. Enhanced destruction of *Salmonella enterica* on pork skin, lean, and adipose tissue by acid/surfactant solutions. Food Safety Consortium (USDA Special Grant); (\$32,000).

Mendonca, A. F., D. Beitz, and T. Boylston. Potential probiotic characteristics of *Eubacterium coprostanoligenes*, a cholesterol reducing microorganism, Midwest Dairy Association, (\$33,500)

Mendonca, A., and B. Brehm-Stecher. Purchase of a tri-gas incubator for culturing *Campylobacter*. Food Safety Consortium (USDA Special Grant); (\$1,986.70)

Mendonca, A. F. (PI). *Aqua Lab Water Activity Meter*. Affiliate Faculty Equipment Request Program, ISU Institute for Food Safety & Security, \$4,100.

Mendonca, A. F (PI). "*Tri-gas Incubator*", Affiliate Faculty Equipment Request Program, ISU Institute for Food Safety & Security, \$1,968.70

Mendonca, A. F (PI). "*Purchase of a Tri-gas Incubator for Culturing Campylobacter*", Food Safety Consortium, \$1,968.70

Boylston, T. D. (PI) and A. F. Mendonca (Co-PI). “Improved nutritional benefits of milk products through the addition of probiotic bacteria”. Center for designing Foods to Improve Nutrition (USDA Special Grant); 2004 – 2005; (\$28,967).

A. Mendonca (PI) and I. Wesley (Co-PI), “Detection of heat-injured but viable *Listeria monocytogenes* in ready-to-eat turkey roll by a Reverse Transcriptase Real Time PCR (RT-PCR) Assay”; Food Safety Consortium; (2003 – 2004); \$40,000.

A. Mendonca (PI), “Purchase of a Bactron Anaerobic Chamber”; Food Safety Consortium; (2003); \$6,355.

D. Ahn (PI), A. Mendonca (Co-PI), and K. Nam, “Effects of double packaging and antioxidant treatments on pinking, off odor, lipid oxidation, and pathogen survival in irradiated pork products”; Food Safety Consortium; (2003 – 2004); \$37,585.

T. Boylston (PI) and A. Mendonca (Co-PI), “The effect of probiotic bacteria on the flavor of Swiss cheese as evaluated in model systems”; University Research Grant (Spring 2002); \$17,944.

A. Mendonca (PI) and D. Ahn (Co-PI), “Effects of temperature fluctuation on microbiological safety and storage stability of irradiated vacuum-packaged fresh pork”; Food Safety Consortium; (2002 – 2003); \$40,000.

A. Mendonca (PI) and I. Wesley (Co-PI), “Rapid Detection of Injured *Listeria monocytogenes* in Heated Pork or Turkey Meat by Combining a Simple Resuscitation System with a Novel 5’ Nuclease PCR Assay”; Food Safety Consortium; (2000 – 2001); \$36,500.

A. Mendonca (PI), “Development of a Strictly Anaerobic Recovery/Enrichment System for Improved Detection of Heat-, Acid-, or Freeze- injured *Escherichia coli* O157:H7”; University Research Grant (Spring 1999); \$18,000.

Invited Presentations (Peer-reviewed): National

Mendonca, A. F. *Stress-induced Resistance of Pathogens to Various Food Processes*. Oral presentation at the Annual Meeting of the Institute of Food Technologists, Chicago, IL July 16-19, 2015.

Aubrey F. Mendonca, Aura Daraba, John A. Lopes and Mark Queenan: *Effectiveness of various sanitizers against the natural bacterial flora, Listeria monocytogenes and Salmonella enterica on the outer skin surface of tuna fish*, 4th Trans-Atlantic Fisheries Technology Conference, Clearwater Beach, Florida, October 30 - November 2, 2012

Mendonca, A. F. *Irradiation-based strategies for improving microbial safety and maintaining sensory quality of foods.* Oral presentation at the symposium on “Non-thermal Processing: Food Quality and Chemistry”, American Chemical Society (ACS) Annual Meeting, Atlanta, GA, March 29-30, 2006.

Mendonca, A. F. *Update on Antimicrobial Agents for processed Meats.* Oral presentation at the American Meat Science Association/National Meat Association Western Meat Science Conference, San Antonio, TX, Feb 11, 2004.

Mendonca, A. F. *Enhancing the Microbial Safety of Fresh and Fresh-cut Melons.* Oral presentation at the 17th Annual International Fresh-cut Produce Association Conference and Exhibition, and S-294 Science Symposium, Reno, Nevada, April 22-24, 2004.

Mendonca, A. F. *Control of Food Safety and Quality in Caribbean Countries: Implications for International Trade.* Oral presentation at the Annual Meeting of the Institute of Food Technologists, Las Vegas Nevada, June 2004.

Mendonca, A. F. *Irradiation-based Hurdles Combined with Selected Food Preservatives.* Oral presentation at the Annual Meeting of the Institute of Food Technologists, Las Vegas Nevada, June 2004.

Mendonca, A. F. *Impact of Selected Environmental Stresses on Resistance of Listeria monocytogenes and Salmonella Typhimurium to Electron Beam Irradiation.* Oral presentation at the Joint Meeting of the Food Safety Consortium and the North Central Avian disease Conference, Ames, IA, Oct. 3-5, 2004.

Mendonca, A. F. *Radiation inactivation of foodborne pathogens as affected by the physiological state of the microorganisms and MAP.* Oral presentation at the Annual Meeting of the International Association for Food Protection, New Orleans, LA., Aug 10 -13, 2003.

Mendonca, A. F. *Inactivation of foodborne bacteria by electron-beam technology.* Oral presentation at the Annual Meeting of the Institute of Food Technologists, Chicago, IL., July 12-16, 2003.

Mendonca, A. F. *Irradiation treatment to control pathogens in muscle foods.* Oral presentation at the Annual Meeting of the Institute of Food Technologists, Anaheim, CA., June 15-19, 2002.

Invited Presentations (non Peer-reviewed): Professional Audience

Mendonca, A. F. *Stress-induced Resistance of Pathogens.* Oral presentation at the Department of Food Science Seminar Series, Pennsylvania State University, State College, PA, March 5, 2015.

Mendonca, A. F. *New USDA Regulations for Safe Meat: Implications for Small- and Medium-Size Processors.* Presented at the 2013 Midwest Poultry Federation Convention, St Paul River Center, St Paul, MN, March 13-14, 2013

Mendonça, A., D. Manu, A. Daraba, and B. Brehm-Stecher. 2010. Fate of *Salmonella enterica* and *Escherichia coli* O157:H7 on Romaine lettuce following immersion in PRO-SAN – a biodegradable foodgrade sanitizer. S-294 Regional Project Science Symposium and Fresh Tech Annual Meeting, Las Vegas, Nevada, April 2010.

Mendonca, A. 2010. *Food Safety and Handling Guidelines for Meat.* Presented at the International Association of Research Warehouses (IARW) Heartland Chapter Meeting, St. Louis, MO, August 26, 2010.

Mendonca, A. F. 2009. Control of contamination for improved microbial quality and safety of raw and Ready-to-eat turkey meat products. Midwest Poultry Federation Convention, St Paul River Center, St Paul, MN, March 18, 2009.

Woods, F. M., and **A. F. Mendonca.** 2008. Influence of Electron Beam Irradiation on Quality and Microbial Safety of Fresh-cut Cantaloupe Stored at 5 °C. S-294 Regional Project Symposium on Postharvest Quality and Safety of Fresh-cut Vegetables and Fruits, May 3 – 6, 2008, Las Vegas, NV.

Mendonca, A. F. 2007. Processing, Quality and Microbial Safety of Turkey Meat from Free Range, Organic, or Heritage Birds. Midwest Poultry Federation Convention, St Paul River Center, St Paul, MN, March 14-15, 2007.

Mendonca, A. F. 2007. Irradiation: Potential for Improving Microbial Safety of Fresh and Fresh-cut Produce. Science Symposium at the United Fresh Tech Conference, Palm Springs, CA, April 26-28, 2007.

Mendonca, A. F., and A. Orozalieva. 2007. Sequential application of chemical and irradiation treatments to destroy *Salmonella* spp and *Escherichia coli* O157:H7 on the outer rind surface of cantaloupe. *In* Abstracts of the S-294 Regional Project and United Fresh Tech Meeting, Palm Springs, CA, April 27-29, 2007.

Mendonca, A. F. 2007. Methods for control of foodborne human enteric pathogens. NATO-sponsored Conference on Food Safety and Security: Global Holistic Approaches for the Future and Environmental Impacts, Galati, Romania, September 4-6, 2007.

Mendonca, A. F. 2007. Actions for Improving the Microbial Safety of Fresh and Fresh-cut Vegetables and Fruits. NATO-sponsored Conference on Food Safety and Security: Global Holistic Approaches for the Future and Environmental Impacts, Galati, Romania, September 4-6, 2007.

Mendonca, A. F. 2007. Unsafe Practices in Food Preparation and Service in Foodservice Operations. Workshop on Food Safety Education and Training for Future Professionals in Hospitality and Tourism Industries, University “Dunarea de Jos” Galati, Romania, November 20-21, 2007.

Mendonca, A. F. 2007. Actions for Improving Food Security at Retail and Foodservice Facilities. Workshop on Food Safety Education and Training for Future Professionals in Hospitality and Tourism Industries, University “Dunarea de Jos” Galati, Romania, November 20-21, 2007.

Mendonca, A. F., and A. Orozalieva. Combined effectiveness of hydrogen peroxide and a food-grade surfactant for destroying *Salmonella* spp and *Escherichia coli* O157:H7 on whole cantaloupe. Abstract 016-06, in Abstracts of the Annual Conference S-294 and of the International Association for Food Protection, Baltimore, Md., April 26-29, 2006.

Mendonca, A. F., R. Morrow and L. Tuominen. 2006. Control of Human Enteric Pathogens for Safe Crop Production in the Deployable Vegetable Production System (VEGGIE). Abstract HLS 144 in Abstracts of Habitation 2006 - Conference on Habitation Research and Technology, Orlando, FL, February 5 – 8, 2006.

Mendonca, A. F. *Microbiology of cooked meats.* Oral presentation at the Thermal Processing of RTE Meat Products, A Short Course for the Meat Industry. The Ohio State University, Columbus, Ohio, March 28-30, 2006.

Mendonca, A. F. *Properties of Listeria monocytogenes.* Oral presentation at the Des Moines District Food Safety Summit, Iowa State University, Ames, IA, April 18, 2006.

Mendonca, A. F. *Microbial Safety of Fruits and Vegetables: Minimizing Risks of Foodborne Illness.* Oral presentation at the 6th Annual Illinois Food Safety Symposium (sponsored by the Illinois Department of Public Health and the Illinois Department of Agriculture), Peoria, IL, Sept. 28-29, 2005.

Mendonca, A. F. “*Pathogen Risk Management for Ensuring Microbial Food Safety*”. Oral presentation at the Conference on Food Safety and Risk Management II: Secure the food chain from farm to fork, Marcus Evans Conference, Chicago IL, Sept. 20-21, 2005.

Mendonca, A. F. *Microbiology of cooked meats.* Oral presentation at the Thermal Processing of RTE Meat Products, A Short Course for the Meat Industry. The Ohio State University, Columbus, Ohio, March 1-3, 2005.

Mendonca, A. F. “*Application of acid anionic technology for destruction of Listeria monocytogenes in vacuum packaged frankfurters formulated with or without sodium lactate*”. Oral presentation at the annual Meeting of the Food Safety Consortium Manhattan, KS, Oct 3-5, 2005.

Mendonca, A. F. *Microbiology of cooked meats.* Oral presentation at the Thermal Processing of RTE Meat Products, A Short Course for the Meat Industry. The Ohio State University, Columbus, Ohio, March 2-4, 2004.

Mendonca, A. F. *Meat-borne pathogens and safety interventions.* Oral presentation at the Ohio Association of Meat Processors Annual Meeting in Dayton, Ohio, March 19-20, 2004.

Mendonca, A. F. *Control of Listeria monocytogenes in ready-to-eat turkey meat products.* Oral presentation at the Midwest Poultry Federation Annual Convention, St. Paul, MN., March 18-20, 2003.

Mendonca, A. F. *Heat resistance of Listeria monocytogenes Scott A in ground pork following starvation in phosphate buffer, sodium chloride (0.85%) or phosphate buffered saline.* Oral presentation at The Food Safety Consortium Annual Meeting, Manhattan, KS., Oct 13-15, 2002.

Mendonca, A. F. *Microbial safety and quality of fresh fruits and vegetables.* Oral presentation at the Iowa Association for Food Protection Annual Meeting, Ames, IA., Oct 11, 2001.

Mendonca, A. F. *Influence of osmotic stress adaptation on heat resistance of Listeria monocytogenes in pork slurry.* Oral presentation at The Food Safety Consortium Annual Meeting, Fayetteville, AR., Sept. 17-19, 2000.

Mendonca, A. F. *Influence of stress-adaptation on the irradiation resistance of Listeria monocytogenes and Escherichia coli O157:H7.* Oral presentation at the First Annual Meeting of the National Alliance of Food Safety, Washington, DC., Oct. 12-13, 1999.

Invited Presentations: International Audience

September 20-28, 2014. *Developing and Implementing Hazard Analysis and Critical Control Points (HACCP).* Training of Haitian Food Processors in Port-au-Prince and Cap Haitien, **Haiti.** Sponsors and organizers: USAID, Florida Association for Volunteer Action in the Caribbean (FAVACA), and Pan American Development Foundation (PADF).

October 27 -29, 2014. *Development of Value-Added pork products.* Training of Guyanese pork producers in manufacture of fresh sausages and ham; Georgetown, Guyana, South America. Sponsors and Organizers: Guyana Ministry of Agriculture *READ* Project.

Extension-based Presentations at ISU

Audience: Food Industry Personnel

Mendonca, A. F. *Listeria monocytogenes*. Presented at the Food Microbiology Industry Short Course, Department of Food Science & Human Nutrition, March 26, **2015**; *Organizer*: Dr. Angela Shaw

Mendonca, A. F. *Chemical and Physical Hazards*. Presented at the Food Microbiology Industry Short Course, Department of Food Science & Human Nutrition, March 27, **2015**; *Organizer*: Dr. Angela Shaw

Mendonca, A. F. *Food Microbiology: Summary of some basic principles and applications*. Presented at the Iowa State University/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, August 31, **2015**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

Mendonca, A. F. *Food Microbiology: Summary of some basic principles and applications*. Presented at the Iowa State University/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, November 12, **2015**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

Mendonca, A. F. *Microbiology: Level 2* Presented at Iowa State University/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, September 8, **2014**. *Organizers*: Matt Wenger and Dr. Joe Cordray

Mendonca, A. F. *Spoilage and Pathogenic Microorganisms*. Presented at the Food Microbiology Industry Short Course, Department of Food Science & Human Nutrition, August 29, **2013**. *Organizer*: Dr. Angela Shaw

Mendonca, A. F. *Listeria monocytogenes*. Presented at the Food Microbiology Industry Short Course, Department of Food Science & Human Nutrition, August 30, **2013**. *Organizer*: Dr. Angela Shaw

Mendonca, A. F. *Chemical and Physical Hazards*. Presented at the food industry workshop on “Developing and Implementing HACCP in Food Manufacturing” June 20-21, **2013**. *Organizer*: Dr. Angela Shaw

Mendonca, A. F. *Food Microbiology: Summary of some basic principles and applications*. Presented at the Iowa State University/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, September 16, **2013**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

Mendonca, A. F. *Microbiology: Level 2*. Presented to Smithfield Foods Maintenance and Engineering Group at Iowa State University/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, September 23, **2013**. *Organizers*: Matt Wenger and Dr. Joe Cordray

Presentations at Webinar Workshops

Information presented to fill curricular gaps in food science at University “Dunarea de Jos” of Galati, Romania; Audience: Senior-level students and faculty

Mendonca, A.F. *Post-harvest actions to maintain safety and quality of fresh fruits and vegetables.* Lecture presented at Webinar on “Pre- and Post-harvest Interventions for Quality Enhancement of Fresh Fruits and Vegetables”. Web-based delivery of lecture from Department of Food Science & Human Nutrition, ISU, to Department of Food Science, Food Engineering and Applied Biotechnology, University “Dunarea de Jos” of Galati, Romania on December 12, 2013. **Organizers:** Dr. Aura Daraba and Dr. Angela Shaw.

<http://www.sia.ugal.ro/index.php/contact/anunturi/845-pre-and-post-harvest-practices-for-quality-enhancement-of-fresh-fruits-and-vegetables>

Mendonca, A.F. *Basic Principles in Sanitation for Food Service Operations.* Lecture presented at Webinar on “Assuring food safety in Food Service Systems: A Managerial Approach”. Web-based delivery of lecture from Department of Food Science & Human Nutrition, ISU, to Department of Food Science, Food Engineering and Applied Biotechnology, University “Dunarea de Jos” of Galati, Romania on May 18, 2012.

Organizers: Dr. Aura Daraba and Dr. Angela Shaw.

<http://www.extension.iastate.edu/HRIM/News/technology.htm>

HONORS AND PROFESSIONAL MEMBERSHIPS

Gamma Sigma Delta Honor Society of Agriculture
American Society for Microbiology
Institute of Food Technologists
Institute of Food Technologists Committee on Higher Education
International Association for Food Protection
International Fresh Produce Association
Balkan Environmental Association (BENA)

Leadership Roles in Professional Societies

- Chair, Institute of Food Technologists Food Microbiology Division (2010-2011)
- Chair, Research Group of S-294 Regional Project on “Safety and Quality of Fresh and Fresh-cut Fruits and Vegetables”; (2008)
- Vice Chair, Research Group of S-294 Regional Project on “Safety and Quality of Fresh and Fresh-cut Fruits and Vegetables”; (2007)
- Secretary, Research Group of S-294 Regional Project on “Safety and Quality of Fresh and Fresh-cut Fruits and Vegetables”; (2006)
- Chair, Iowa Section of the Institute of Food Technologists (IFT); (2006 - 2007)

Other Professional Services

- Ad Hoc Reviewer for Food Control
- Ad Hoc Reviewer for Journal of Food Science
- Ad-Hoc Reviewer for Poultry Science
- Reviewer for Applied and Environmental Microbiology
- Member of the Editorial Board for Journal of Food Processing and Technology (2010- present)
- Member of the Editorial Board for Applied and Environmental Microbiology, (January 2013 to present)
- Member of the IFT Committee on Higher Education; reviewed Food Science programs of selected universities for adherence to new IFT Educational Standards. (2004 – 2007)