

*Curriculum Vitae*  
**AUBREY F. MENDONCA**

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**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.  
**Diploma in Agriculture**, Guyana School of Agriculture, 1978

**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, cold plasma, or irradiation; influence of bacterial physiological state, including 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 695** Grant Writing Experience
- **FSHN 580** Orientation to Food Science & Human Nutrition
- **FSHN 203** Contemporary Issues in Food Science & Human Nutrition

## PUBLICATIONS

Kiprotich, S., **Mendonca, A.**, Dickson, J., Shaw, A., Thomas-Popo, E., White, S., Moutiq, R., and Ibrahim, S. **2021**. Thyme oil enhances the Inactivation of *Salmonella enterica* on raw chicken breast meat during marination in lemon juice with added *Yucca schidigera* Extract. *Frontiers in Nutrition and Food Science*. <https://doi.org/10.3389/fnut.2020.619023>

Manreet Singh Bhullar, Angela Shaw, **Aubrey Mendonca**, Ana Monge, Lillian Nabwire and Emalie Thomas-Popo. **2021**. Shiga toxin producing *Escherichia coli* in the long-term-survival phase exhibit higher chlorine tolerance and less sub-lethal injury following chlorine treatment of Romaine lettuce. *Foodborne Pathogens and Disease*. 18(4):276-282. doi: [10.1089/fpd.2020.2873](https://doi.org/10.1089/fpd.2020.2873)

Moutiq, R., Pankaj, S.K., Wan, Z., **Mendonca, A.**, Keener, K, and Misra, N. N. **2020**. Atmospheric Pressure Cold Plasma as a Potential Technology to Degrade Carbamate Residues in Water. *Plasma Chemistry and Plasma Processing*. <https://doi.org/10.1007/s11090-020-10093-z>

Moutiq, R., N.N. Misra, **A. Mendonca**, and Kevin Keener. **2020**. In package decontamination of chicken breast using cold plasma technology: Microbial, quality and storage studies, *Meat Science* 159:107942; doi: 10.1016/j.meatsci.2019.107942.

**Mendonca, A.**, Daraba, A., Byelashov, O., Sebranek, J., and Cordray, J. **2020**. Combining lactic acid and sodium lauryl sulfate as a post-lethality dipping solution against *Listeria monocytogenes* on frankfurters formulated with or without sodium lactate and stored vacuum-packaged at 4 °C. *Annals. Food Science and Technology*, 21(1):95-108.

Thomas-Popo, E., **A. F. Mendonça**, N.N. Misra, A. Little, Z. Wan, R. Moutiq, S. Coleman, and K. Keener. **2019**. Inactivation of Shiga-toxin-producing *Escherichia coli*, *Salmonella enterica* and natural microflora on tempered wheat grains by atmospheric cold plasma. *Food Control* 104: 231–239.

Thomas-Popo, F. R., **A. Mendonca**, J. Dickson, A. Shaw, S. Coleman, A. Daraba, A. Jackson-Davis, F. Woods. **2019**. Isoeugenol significantly inactivates *Escherichia coli* O157:H7, *Salmonella enterica*, and *Listeria monocytogenes* in refrigerated tyndallized pineapple juice with added *Yucca schidigera* extract. *Food Control*, 106: 106727.

Ren, K., B. P. Lamsal, and **A. Mendonca**, A. **2019**. Stability of emulsions and nanoemulsions stabilized with biosurfactants, and their antimicrobial performance against *Escherichia coli* O157:H7 and *Listeria monocytogenes*, *Tenside Surfactants Detergents*, 56(5):436-446.

Wang, F., **A. Mendonça**, J. Dickson, B. Brehm-Stecher, A. DiSpirito, A. Shaw, and E. Thomas-Popo. **2018**. Long-Term Survival Phase Cells of *Salmonella* Typhimurium ATCC 14028 Have Significantly Greater Resistance to Ultraviolet Radiation in 0.85% Saline and Apple Juice. *Foodborne Pathogens and Disease*, 15(9):538-543.

Al-Hijazeen, M., **A. Mendonca**, E. Joo Lee, and D. U. Ahn. **2018**. Effect of oregano oil and tannic acid combinations on the quality and sensory characteristics of cooked chicken meat. *Poultry Science* 97(2):676-683.

Vorst, K., N. Shivalingaiah, A. Lorena Monge Brenes, S. Coleman, **A. Mendonça**, J. Wyatt Brown, and A. Shaw. **2018**. Effect of display case cooling technologies on shelf-life of beef and chicken, *Food Control*, 94:56-64.

Manu, D., **A. Mendonca**, A. Daraba, J. Dickson, J. Sebranek, A. Shaw, F. Wang, and S. White. **2017**. Antimicrobial efficacy of cinnamaldehyde against *Escherichia coli* O157:H7 and *Salmonella enterica* in carrot juice and a mixed berry juice held at 4 °C and 12 °C. *Foodborne Pathogens and Disease* 14(5):302-307.

Sanchez, R. A., D. K. Johnson, M. C. Terzi, M. Izuka, E. D. Allen, M. O'Donnoghue, **A. F. Mendonca**, K. Yachera, and L. J. Detolla. **2017**. Sanitized corncob bedding: destruction of murine parvovirus. *Lab Animal* 46(4):95-96. doi:10.1038/lab.an.1226

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.

Al-Hijazeen, M., E. Joo Lee, **A. Mendonca**, and D. U. Ahn. 2016. Effect of oregano essential oil (*Origanum vulgare* subsp. *hirtum*) on the storage stability and quality parameters of ground chicken breast meat. *Antioxidants*, 5(18), doi:10.3390/antiox5020018

Al-Hijazeen, M., E. Joo Lee, **A. Mendonca**, and D. U. Ahn. 2016. Effects of Tannic Acid on Lipid and Protein Oxidation, Color, and Volatiles of Raw and Cooked Chicken Breast Meat during Storage. *Antioxidants* 5(19), doi:10.3390/antiox5020019

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

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 s 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. Weinsattel, 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. 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

**Mendonca, A.**, E. Thomas-Popo, and A. Gordon. **2020**. Microbiological Considerations in Food Safety and Quality Systems Implementation, Chapter 5. *In*, Gordon, A. (Ed), Food Safety and Quality Systems in Developing Countries, Volume III: Technical and Market Considerations (pp.185-250): Elsevier Ltd., Academic Press. DOI:[10.1016/b978-0-12-814272-1.00005-x](https://doi.org/10.1016/b978-0-12-814272-1.00005-x)

**Mendonca, A.**, A. Jackson-Davis, R. Moutiq, and E. Thomas-Popo. **2018**. Use of Natural Antimicrobials of Plant Origin to Improve the Microbiological Safety of Foods, Chapter 14. *In*, Ricke, Steven C. In G. G. Atungulu, C. E. Rainwater, and S. H. Park (Eds.), *Food and Feed Safety Systems and Analysis* (pp. 249-272): Elsevier, Ltd., Academic Press.

Jackson-Davis, A., **A. Mendonca**, S. Hale, J. Jackson, A. King, and J. Jackson. **2018**. Microbiological Safety of Unpasteurized Fruit and Vegetable Juices Sold in Juice Bars and Small Retail Outlets, Chapter 12. *In*, Ricke, Steven C. In G. G. Atungulu, C. E. Rainwater, and S. H. Park (Eds.), *Food and Feed Safety Systems and Analysis* (pp. 213-225): Elsevier Ltd., Academic Press.

Ahn, D. U., Lee, E. J., and **Mendonca, A.** **2017**. Meat decontamination by irradiation. In, Leo Nollet and Fidel Toldra (Eds.), *Advanced Technologies for Meat Processing*, **2<sup>nd</sup> Edition**, pp. 198-225, CRC Press, Taylor and Francis Group, (*Chapter substantially revised and updated from 2006 version in the 1<sup>st</sup> edition of the book*)

Ahn, D. U., **Mendonca, A.**, and Feng, X. **2017**. The storage and preservation of meat: II Non-thermal technologies,. In, F. Toldra (Ed), *Lawrie's Meat Science*, 8th Edition, pp. 231-263, Elsevier Ltd., Academic Press.

**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, pp. 954–961, Elsevier Ltd, Academic Press.

**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, pp. 610–617, Elsevier Ltd, Academic Press

**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* Leo Nollet and Fidel Toldra, (eds.), *Advanced Technologies for Meat Processing*. CRC Press, Taylor and Francis Group, Boca Raton, FL.

**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**

Thomas-Popo, E., **A. Mendonca**, J. Aguilar, A. El-Sadiq and S. Coleman. P3-52: *Isoeugenol prevents yeast spoilage of refrigerated raw pineapple juice containing an extract of Quillaja saponaria or Yucca schidigera*. International Association for Food Protection Annual Meeting (virtual), October 26-28, **2020**.

Bhullar, M., A. Shaw, **A. Mendonca**, A. Monge, L. Nabwire, and E. Thomas-Popo. T16-02: *Chlorine resistance and sub-lethal injury of long-term survival phase Escherichia coli in in-vitro planktonic cells and cells attached to Romaine lettuce*. International Association for Food Protection Annual Meeting (virtual), October 26-28, **2020**.

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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 corncob 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:**

*Microbial Shelf-life of Self-rising Ready-to-Bake Pizza Dough With or Without Added Pizza Sauce and Held in a Refrigerated Retail Display Case.* Center for Industrial Research and Service (CIRAS); **Mendonca, A.** (PI), S. Coleman, and K. Vorst. (Co-Investigators). **2019**; \$14,193.

*Microbial Shelf-life Evaluation of Fresh-cut Cantaloupe Melon Held Under Simulated Retail Storage Conditions.* Center for Industrial Research and Service (CIRAS); **Mendonca, A.** (PI), S. Coleman, and K. Vorst (CoPIs). **2018**; \$17,657.

*Evaluation of the microbiological shelf-life of cake roll held under simulated retail conditions.* Center for Industrial Research and Service (CIRAS); **Coleman, S. and A. F. Mendonca** (CoPIs). **2016 – 2017**; \$19,988

*Microbial Shelf-life and Quality of Fresh Beef Steaks held Refrigerated in Two Different Meat Display Cases.* Center for Industrial Research and Service (CIRAS); **Vorst, K., S. Coleman A. F. Mendonca** (CoPIs). **2016 – 2017**; \$19,959

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***

Moutiq, R., **A. Mendonca** and K. Keener. *High Voltage Atmospheric Cold Plasma Enhances Germination of Carrot and Lettuce Seeds*. Oral presentation (presenter: Kevin Keener), delivered at ASABE Annual Meeting at Detroit MI, on Jul 29 – Aug 1, **2018**

Brehm-Stecher, B., and **A. Mendonça**. *Applications of Natural Antimicrobials in Foods: Challenges and Potential Opportunities*. Oral presentation (presenter: B. Brehm-Stecher) delivered at IAFP European Symposium on Food Safety, April 25-27, **2018**, Stockholm, Sweden.

**Mendonca, A. F.** *Raw Juice Characteristics: Influence on Pathogen Survival*. Oral presentation at the Annual Meeting of the International Association for Food Protection, Tampa, FL., July 9-12, 2017.

**Mendonca, A. F.** *Use of plant-based antimicrobials for enhanced pressure destruction of pathogens in juice*. Oral presentation at the American Chemical Society Annual Meeting, Philadelphia, PA., Aug. 21, 2016

**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 17<sup>th</sup> 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.** *Application of Natural Antimicrobials for Control of Mold Spoilage in Shredded Cheddar Cheese.* Webinar Presentation at the Midwest Dairy Food Research Center Webinars. September 21, 2020.

**Mendonca, A. F.** *Global Food Safety Issues in the 21st Century: A Microbiological Perspective.* Presented at the Biosciences Agriculture and Food Technologies Seminar Series -ECIAF Campus, University of Trinidad and Tobago, West Indies, July 11, 2019.

**Mendonca, A. F.** *Applications of Microbiology in Agriculture Science*. Presented at University of Guyana, Turkeyen Campus, Greater Georgetown, Guyana, South America. March 29, **2019**.

**Mendonca, A. F.** *Reduction of Salmonella and Campylobacter on Raw Poultry by Improving the Killing Effect of Surface Decontaminating Solutions*. Presented at the Midwest Poultry Federation Convention, Minneapolis Convention Center, Minneapolis, MN. March 15, **2019**.

**Mendonca, A. F.** *Fostering Interdisciplinary Research at the Center of Excellence in Post-Harvest Technologies (CEPHT)*. Keynote address presented at the CEPHT Open House, Kanapolis, NC, October 13, **2017**.

**Mendonca, A. F.** *Dynamic Characteristics of Food Processing Technologies: Challenges in meeting consumer expectations for food safety and quality*. Keynote address presented at the 10<sup>th</sup> Global Summit on Food Processing and Technology, San Antonio, TX, December 5 – 7, 2016.

**Mendonca, A. F.** *Improving the microbial safety of juices: Challenges of using high pressure processing*. Presented at the 10th Global Summit on Food Processing and Technology, San Antonio, TX, December 5 – 7, 2016.

**Mendonca, A. F.** *Use of natural antimicrobials for food safety: Benefits and Challenges*. Presented at the Department of Food and Animal Sciences, Alabama A&M University, Normal, AL, March 4, 2016.

**Mendonca, A. F.** *USDA New Poultry Inspection System: What are the major issues?* Presented at the Midwest Poultry Federation Convention, St Paul River Center, St Paul, MN, March 15, 2016

**Mendonca, A. F.** *New USDA Regulations for Safe Meat: Implications for Small- and Medium-Size Processors*. Presented at the 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 6<sup>th</sup> 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.

## **SCIENTIFIC SYMPOSIA**

Co-organized scientific symposium entitled “*Natural Antimicrobial Preservatives in Foods: Where are We in Terms of Application and Commercialization?*”; Armitra Jackson-Davis and **Aubrey Mendonca** (Co-organizers). IAFP European Symposium on Food Safety, Stockholm, Sweden, April 25-27, **2018**

Co-organized scientific symposium entitled Microbiological Safety of “*Unpasteurized Fruit and Vegetable Juices Sold in Juice Bars and Small Retail Outlets*” (Session S70). Armitra Jackson-Davis and **Aubrey Mendonca** (Co-organizers). IAFP Annual Meeting, Tampa Florida, July 9 -12, **2017**.

### ***Invited Presentations: International Audience***

**July 25, 2019.** *Production of Corned Beef.* Presented at Agro-processing Seminar for Central Mahaicony-Perth Village Farmers’ Association. Sponsored by Inter-American Institute for Cooperation on Agriculture (IICA), Guyana, South America.

**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/Outreach-based Presentations**

#### ***Audience: Food Industry Personnel***

**Mendonca, A. F.** *Meat Microbiology: Summary of some basic principles and applications.* Presented at Basic Sausage Short Course at the ISU Meats Laboratory, November 14, **2019.** *Organizers:* Matt Wenger and Dr. Joe Cordray.

**Mendonca, A. F.** *Meat Microbiology: Summary of some basic principles and applications.* Presented at Basic Sausage Short Course at the ISU Meats Laboratory, November 15, **2018.** *Organizers:* Matt Wenger and Dr. Joe Cordray.

**Mendonca, A. F.** *Observation and counting of colonies of bacteria, mold and yeast isolated from various whole grains, food ingredients and processing environment*, General Mills Avon Plant Safety Day, Ankeny IA, March 20, 2017; (Served as facilitator for 4 “hands-on” training sessions for employees)

**Mendonca, A. F.** *Meat Microbiology: Summary of some basic principles and applications*. Presented at Basic Sausage Short Course at the ISU Meats Laboratory, November 16, **2017**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

**Mendonca, A. F.** *Microbiology and Food Safety Module: Review*. Presented at the ISU/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, October 3-4, **2017**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

**Mendonca, A. F.** *Microbiology: Level 2*, Presented at ISU/Smithfield Foods Meat and Poultry Training Program, ISU Meats Laboratory, September, **2017**. *Organizers*: Matt Wenger and Dr. Joe Cordray

**Mendonca, A. F.** *Meat Microbiology: Summary of some basic principles and applications*. Presented at the Basic Sausage Short Course, ISU Meats Laboratory, November, **2016**. *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, **2016**. *Organizers*: Matt Wenger and Dr. Joe Cordray

**Mendonca, A. F.** *Meat Microbiology*. Presented at the Sausage and Processed Meats Short Course, ISU Meats Laboratory, July 18-22, **2016**. *Organizers*: Matt Wenger and Dr. Joe Cordray.

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

**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, 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.

**Mendonca, A. F.** *Microbiology,* Presented at the Iowa State University/Smithfield Foods Meat and Poultry Brown Belt Training Program, ISU Meats Laboratory, Sept. 10-14, **2012**. *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 Brown Belt Training Program, ISU Meats Laboratory, Sept. 24 – 28, **2012**. *Organizers:* Matt Wenger and Dr. Joe Cordray.

### **Increasing International visibility of ISU Dept. of Food Science & Human Nutrition**

- **Training for livestock producers in Guyana.** Training of the Central Mahaicony-Perth Village farmers in production of corned beef and salted pork. Sponsored by Inter-American Institute for Cooperation on Agriculture (IICA); July 25, 2019. (Invited)

- **External Reviewer** for Curriculum in Food Science & Technology program being developed at the University of Guyana, South America, 2016; (Invited)
- **Organizing Committee Member** for “Global Food Safety 2016” Conference, San Antonio, Texas, 2016. Keynote Speaker for Food Safety Plenary Session (Invited).
- **HACCP training for Haitian Food Processors.** Developing and Implementing Hazard Analysis and Critical Control Points (HACCP). Trained Haitian Food Processors in Port-au-Prince and Cap Haitien, Haiti, September 20-28, 2014. Sponsors and organizers: USAID, Florida Association for Volunteer Action in the Caribbean (FAVACA), and Pan American Development Foundation (PADF). Number of Food Processors trained: 36
- **Training for Guyanese Pork Producers.** Development of Value-Added pork products: Training of Guyanese pork producers in manufacture of sausages and ham; Georgetown, Guyana, South America, October 27 -29, 2014. Sponsors and Organizers: Guyana Ministry of Agriculture READ Project.

**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, AWARDS AND PROFESSIONAL MEMBERSHIPS**

### **Honors/Awards**

- Institute of Food Technologists (Iowa Section) “Outstanding Leadership Award” (2008).
- Institute of Food Technologists “Food Microbiology Division Honors as Chair” (2011)
- Gamma Sigma Delta Honor Society of Agriculture: International Mission Award (2012)
- College of Agriculture and Life Sciences (CALS) Diversity Award (2012)



- ISU Science Bound Advancing Diversity in STEM Pathway Champion Award (2016)

### **Professional Memberships**

- Gamma Sigma Delta Honor Society of Agriculture
- American Society for Microbiology
- American Chemical Society
- Institute of Food Technologists
- Institute of Food Technologists Committee on Higher Education
- International Association for Food Protection
- International Fresh Produce Association

### **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 Foodborne Pathogens and Disease, Food Control, Journal of Food Science, and 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)

### **Professional Services (International)**

- External Reviewer for Curriculum in Food Science & Technology program being developed at the University of Guyana, South America, 2016; (Invited)
- Organizing Committee Member for “Global Food Safety 2016” conference, San Antonio, Texas, 2016. Keynote Speaker for Food Safety Plenary Session (Invited).
- External Reviewer for two PhD students in the Department of Biology at University of Addis Ababa, Ethiopia, 2007; (Invited)