

DR. MARCOS X. SÁNCHEZ-PLATA

BIOQ., M.S., MBA, PH.D.

EDUCATION

Doctor of Philosophy (PhD) in Food Science & Technology. August 2004

Department of Food Science and Technology. University of Nebraska-Lincoln. Lincoln, NE, USA

Master of Business Administration (MBA), Major Agribusiness. December 2003

College of Business Administration. University of Nebraska-Lincoln. Lincoln, NE, USA

Master of Science (MS) in Food Science & Technology. Minor in Animal Science. December 2000

Departments of Food Science and Technology, Animal Science. University of Nebraska-Lincoln. Lincoln, NE, USA

Pharmaceutical Biochemist (Bioq.), Major in Food Biochemistry. December 1997

Department of Chemical Sciences. Central University of Ecuador. Quito, Ecuador

EXPERIENCE

♦ **October 2014 - Present. Associate Professor, Global Food Security**

Texas Tech University. Lubbock, TX

International Center for Food Industry Excellence. Global Food Security Cluster

Department of Animal and Food Sciences

Research focus:

In-plant validation of antimicrobial interventions and their effects on pathogen control, biofilm development, quality and product shelf-life in foods (meats, dairy and produce) by microbial challenge testing studies in a BSL2 pilot plant, conducting in-plant studies and measuring microbial indicators, pathogen surrogates and pathogen loads.

Risk assessment and performance evaluation of integrated food safety management systems from farm-to-table in the produce, meat, poultry, egg, cellular agriculture and other food processing industries and evaluation of microbial profiles (bio-mapping and microbial baselines), statistical process control parameters, cross-contamination sourcing, whole genome sequencing for bacterial tracing, microbiome analysis and antimicrobial resistance profiling.

Evaluation of the quality and safety implications of new processing technologies (equipment, packaging methods) and antimicrobial interventions (chemical, physical, biological) in poultry, meat, eggs, produce and other food commodities, as well as optimization of the water and energy footprint impact of such processes.

Assessment of the effect of selective pressures (antimicrobial interventions, processing steps, production systems, antimicrobial utilization, and others) on the selection of particular pathogen strains, and persistence in food systems.

Service, Outreach and Training Activities:

Technical assistance and capacity building initiatives for government agencies, private companies and trade associations in more than 20 countries in the Americas with **implementation and enforcement of scientifically-based food safety regulatory frameworks, risk assessment and food safety management systems**.

Development of **capacity building programs** for food-based agribusinesses and producers in the Americas and the **Caribbean region in food security, value-addition and market access**. Emphasis on the implementation, validation and monitoring of value-adding initiatives and food safety programs to maximize safety and quality of foods, improve food security efforts and facilitate export market access under regulatory compliance.

Food Safety Preventive Controls Alliance (FSPCA) Trainer of Trainers and Lead Instructor for Preventive Controls for Human Food and Foreign Supplier Verification Programs (FSVP), Person of Contact for the Technical Assistance Working Group of the International Subcommittee of FSPCA. Food Safety Preventive Controls Training, Implementation and Assessments in the U.S. and globally, more than 25 sessions conducted.

Produce Safety Alliance (PSA) Lead Trainer and International HACCP Alliance Lead Trainer.

Development and management of the **Meat School en español**, and the **Poultry School en español** International Workshops focused on farm-to-table value addition, quality and safety in the meat and poultry value-chains as professional programs for the industry to support development efforts in Latin America. This program has benefited more than 1,200 participants with partnerships with major industry suppliers, technical and academic experts.

Capacity building initiatives in Latin America and the Caribbean in partnership with the USDA-Foreign Agricultural Service (FAS), Office of Capacity Building and Development (OCBD), USAID, and the Inter-American Institute for Cooperation on Agriculture (IICA). Projects focused on developing a network of lead instructors for training food producers and processors on the requirements for compliance with the Food Safety Modernization Act (FSMA) of the FDA, including the Preventive Controls for Human Food, the Foreign Suppliers Verification Programs, the Produce Safety regulation, the Sanitary Transport Rule, the Intentional Adulteration (Food Defense) Regulations; as well as meat and poultry regulations of the USDA, Food Safety and Inspection Service, benefitting more than 5,000 participants from government institutions, industry groups, academia and consumers.

Countries assisted: USA, Argentina, Barbados, Bahamas, Belize, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

Funding partners:

USDA-Foreign Agricultural Service (FAS) Office of Capacity Building and Development (OCBD)

Inter-American Institute for Cooperation on Agriculture (IICA)

Governments in Latin America and the Caribbean countries, recipients of capacity building activities

National and International Production, Trade and Commodity Associations and Export Promoting Groups.

Private industry partners: Biomerieux, 3M, Ecolab, Hygiena, Sealed Air-Cryovac, Diversey, Meyn Inc., Marel, Cobb-Vantress, ICL Ingredients, IsoAge Inc., Merck Animal Health, Corbion Inc., others

Teaching Experience:

Instructor (Conventional and Web-based) of the following courses:

Graduate courses:

ANSC/FDSC 5307. Topics in Food Science. Introduction to Food and Nutrition Security (3 cr.) (Avg. 15 students)

ANSC/FDSC 5307. Topics in Food Science. Food and Nutrition Security Policy (3 cr.) (Avg. 15 students).

ANSC/FDSC 5100. Seminar in Agriculture. Food Safety. Case Studies in Food Safety (3 cr.) (Avg. 15 students)

ANSC/FDSC 5307. Poultry Processing and Products (4 cr.) (Avg. 6 students). Co-instructor

Undergraduate courses:

ANSC/FDSC 3309. Food Safety (3 cr.) (Avg. 25 students). Co-instructor

ANSC/FDSC 4307. Poultry Processing and Products (4 cr.) (Avg. 6 students). Co-instructor

Student Advising:

Ph.D. level: 15; M.S. level: 9; Graduate Committee Member: 17; Undergraduate advising: 13

◆ **March 2009 – September 2014. Adjunct Associate Professor, Food Science and Technology**

University of Nebraska-Lincoln. Lincoln, NE

Department of Food Science and Technology

Development, coordination and delivery of international training programs in food safety; risk assessment, HACCP and Pre-requisites, Food Safety in Food Service, USDA-FSIS Regulations, Pathogen Control in Meat and Poultry Products, FDA-FSMA Regulations and Risk-Based Preventive Controls in the Food and Produce Industry. Collaboration in food safety research projects on intervention validations and pathogen testing methods.

◆ **January 2009 – August 2014. Food Safety Specialist. Hemispheric**

Inter-American Institute for Cooperation on Agriculture (IICA), Miami, FL and Washington DC.

Program for Agribusiness and Commercialization and Program for Agricultural Health and Food Safety*

(*Previously: Inter-American Program for the Promotion of Trade, Agribusiness and Food Safety)

Technical cooperation and capacity building to assist government agencies, private companies and trade associations of the 34 Organization of American States member countries in the implementation and enforcement of scientifically-based food safety regulatory frameworks, risk assessment and food safety management systems.

Development of capacity building programs to assist food-based agribusinesses and producers in the Americas and the Caribbean region in food security, value-addition and market access. Emphasis on the implementation, validation and monitoring of value-adding initiatives and food safety programs to maximize safety and quality of foods, improve food security efforts and facilitate export market access under regulatory compliance.

Development of food safety assessments of national food control systems in several countries in the Hemisphere to determine capacity building needs, public health protection objectives, market access requirements for exports and public policy and investment priority needs to assist government in modernization efforts.

Participation in **Codex Alimentarius** meetings facilitating discussion between country delegations and providing technical assistance to countries in the region on standard-setting activities, trade and public health protection.

Invited participation as member of the Joint Food and Agriculture Organization (FAO)/ World Health Organization (WHO) Expert Meetings on Microbiological Risk Assessment (JEMRA).

Training and capacity building of food safety inspectors in Latin America and the Caribbean for risk-based inspection activities, USDA export requirements for equivalency, and FDA requirements for systems recognition.

International Teaching/ Training Activities:

Capacity building programs developed: food safety and pre-requisite programs, good manufacturing practices, good agricultural practices, introductory and advanced HACCP programs, HACCP Train-the-Trainers, cleaning and disinfection in food processing operations, FSMA Regulations and risk-based preventive controls in the food industry, integrated food safety and quality programs in meat and poultry processing, USDA regulatory issues, inspection and equivalency, value-adding in food products, control of pathogens in food processing operations (*Salmonella*, *Campylobacter*, *Clostridium* spp., *Listeria*, etc.), allergen control, Poultry School *en español* and in Portuguese, risk analysis (risk assessment, risk management and risk communications) among others.

Countries assisted: USA, Argentina, Barbados, Bahamas, Belize, Brazil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Mexico, Nicaragua, Panama, Peru, Uruguay and Venezuela.

Collaborating institutions: Collaborative work with academic institutions in the US and the hemisphere.

Departments of Food Sci. & Tech. Animal Sci. and Biological Systems Eng., University of Nebraska-Lincoln

Department of Animal and Food Sciences, and ICFIE, Texas Tech University

Department of Food Science, Purdue University

Departments of Animal Science and Poultry Science, Texas A&M University

Departments of Food Science and Poultry Science, University of Georgia

Departments of Food Science and Veterinary Sciences, University of Minnesota

Joint Institute of Food Safety and Applied Nutrition (JIFSAN), University of Maryland

Funding partners:

IICA, WTO, World Trade Organization- Standards and Trade Development Facility program, USDA-FAS-OCBD, Foreign Agricultural Service, Office of Capacity Building and Development, USAID, WHO-PAHO, World Health organization-Pan-American Health Organization, FAO, Food and Agriculture Organization of the United Nations, Governments in Latin America and the Caribbean countries, recipients of capacity building activities.

◆ **July 2004 – December 2008. Assistant Professor, Poultry Processing, Products and Food Safety**

Texas A&M University, College Station, TX

Department of Poultry Science. Food Science and Technology Intercollegiate Program

Establishment of the **Microbial Challenge Pilot Plant**, a BSL2 facility with food processing equipment that allows the use of pathogens and other microorganisms for microbial contamination of foods and surfaces and the evaluation and validation of antimicrobial interventions and practices in semi-commercial settings.

Development of the internationally known **Poultry School *en español* series of workshops**, that have reached most countries in Latin America, with continuous success since 2007, ongoing editions annually in partnership with the International Production and Processing Expo in Atlanta and the University of Georgia in the US, and sister editions in Brazil in partnership with SENAI (National Training Service) and Colombia, Venezuela and Uruguay.

Research focus:

Integration of food safety programs from farm-to-table in the meat, poultry and egg processing industry and evaluation of quality and safety implications of new processing technologies (equipment, packaging methods) and antimicrobial interventions (chemical, physical, biological) in poultry, meat, eggs and other food commodities.

Commercial validation of antimicrobial interventions and their effects on pathogen control, quality and product shelf-life in foods (meats, poultry, eggs, seafood, fruits and produce) by microbial challenge testing studies

Evaluation of dietary modifications in animal diets to enrich poultry and egg products with unsaturated lipids (omega-3 fatty acids, conjugated linoleic acid and antioxidants) and their effects **on meat quality** and development of new poultry-based products with value-added functionality and enhanced nutritional characteristics.

Teaching Experience:

Instructor (Conventional and Web-based) of the following courses:

Graduate courses:

POSC/FSTC 611. Poultry Processing and Distribution Technology (3 cr.). Spring 05, 07. (Avg. 5 students)
POSC/FSTC 698. Integrated Food Safety Programs in Poultry Processing (1 cr.). Spring 06, 08. (Avg. 5 students)
POSC/FSTC 606. Advanced Poultry Meat Processing (3 cr.). Fall 2004, 05, 06, 07, 08. (Avg. 3 students)
POSC/FSTC 616. Further Processing in Poultry and Eggs (3 cr.). Spring 08. (Avg. 10 students)
POSC 689 (Web). Poultry Processing and Products (3 cr.). Fall 2004, 05, 06, 07, 08. (Avg. 3 students)

Undergraduate courses:

POSC/FSTC 406. Poultry Processing and Products. Lab (4 cr.). Fall 2004, 05, 06, 07, 08. (Avg. 45 students)
W Course Writing Intensive
POSC/FSTC 416. Further Processing in Poultry and Eggs (3 cr.). Spring 08. (Avg. 10 students)

Student Advising:

Ph.D. level: 4; M.S. level: 3; Graduate Committee Member: 9; Undergraduate advising: 3

Extension/ Outreach Activities:

On-campus Industry Workshops: Poultry Processing and Products, Poultry Processing *en español*, HACCP implementation certified by the International HACCP Alliance, HACCP Validation and Advanced HACCP, HACCP Audits and Food Microbiology, Integration of Food Safety Programs from Farm-to-table (Safe-Poultry®), Cleaning and Disinfection, Bioterrorism, Risk Assessment, Food Safety Audits, Food Service Safety (ServSafe®).

International Workshops: HACCP and Implementation of Integrated Food Safety Programs, HACCP Audits and Food Microbiology, pathogen Control in the Food Industry from Farm-to-Table, USDA and FDA Regulations for exporters, Food Allergens and Control, Cleaning and Disinfection in the Food Industry.

Countries assisted: USA, Ecuador, Colombia, Mexico, Guatemala, Panama and Nicaragua.

Academic Activities

Secretary, S1027 The Poultry Food System. A Farm to Table Model Research Regional Project, 2006-2008

Host Faculty, Cochram USDA Fellows from Latin America, 2005-2008

Host Faculty, Borlaug Institute for International Agriculture Fellows (Africa, China) 2007-2008

Co-chair Food Science and Technology Intercollegiate Program, 2007-2008

Faculty Search Committee member, 4 positions

Fellow Mexican American and Latino Research Center, MALRC, 2005-2008

Faculty Advisor Food Science Club, 2007

Host Faculty Visiting Scholars, Escuela Agricola Panamericana Zamorano, 2004-2008 (5 students)

◆ **January 2001 – August 2004. Graduate Research Assistant (PhD)**

University of Nebraska-Lincoln. Lincoln, NE

Department of Food Science and Technology

PhD Dissertation Title: *“Germination and Outgrowth of Clostridium perfringens spores during chilling of thermally processed ready-to-eat meat products.”*

Research focus:

Development of predictive modeling programs to estimate pathogen growth in cooked meat and poultry processed products during cooling schedules and cooling deviations.

Development of microbial profiles for the outgrowth of *Clostridium perfringens* spores artificially inoculated in processed beef, turkey and pork as affected by dynamic cooling simulations.

Evaluation of the efficacy of antimicrobial ingredients, including citrates, lactates and diacetates, to inhibit the outgrowth of *C. perfringens* and *Listeria monocytogenes* in cooked meat and poultry processed products.

Microbial validation of critical control points and antimicrobial interventions to support HACCP plans for fresh meat slaughtering operations, poultry slaughtering, egg products and ready-to-eat meats.

Microbial validation of commercial and home-cooking methods for the inactivation of *Listeria monocytogenes* in artificially inoculated hot-dogs stored at refrigeration temperatures.

Study of the effects of vegetarian diets formulated with soy oil on the quality characteristics of commercial broilers.

Adaptation of microbiological techniques for detection/ enumeration of *Salmonella* spp. and *Campylobacter* spp.

Evaluation of the effects of electron beam irradiation on the microbiological quality and sensory profiles of vacuum and non-vacuum packaged chicken products.

Evaluation of critical control points to reduce pathogen contamination of broilers from farm-to-table.

Assessment of environmental parameters and farm practices to control the incidence of pathogens in broilers at the farm and their effects on pathogenic loads during processing.

Assistance to broiler processors in the implementation, monitoring and reassessment of HACCP programs.

Teaching Experience

Teaching Assistant for Food Microbiology: preparation of lectures, presentations and online teaching platforms.

Teaching Assistant for Bioprocessing of Foods courses: preparation of lectures, presentations and laboratory practices.

Guest Lecturer Science of Food course (300 freshman students) at the Lincoln and Omaha campuses.

Organized and co-conducted industry training workshops in Food Safety and HACCP in Latin America.

Lecturer Food Microbiology Workshop for Extension Specialists.

MBA Graduate Student

“Wild card” finalist 15th San Diego State University International Student Business Plan Competition, 2003.

Second Place, Alice Dittman All-College Business Plan Competition, 2003. *“The Food Consortium”*

Development of a business plan for a bilingual distance education program in food science and technology.

Developed marketing plans for a poultry slaughtering facility and an industrial equipment supplier.

Marketing internship at the Food Marketing Institute Exposition, Chicago, 2002.

Organizing Committee Member of United Nations/ FAO “World Food Day” Conference in Nebraska, 2002.

◆ **August 1998 - December 2000. Graduate Research Assistant (MS)**

University of Nebraska-Lincoln, Lincoln, NE

Department of Food Science and Technology

MS Thesis Title: *“Microbial Comparison of Air-Chilling and Immersion-Chilling in Poultry Processing.”*

Research focus:

Evaluated the impact of the chilling process (air vs. immersion) in the microbiological quality and antibiotic resistance profile of pathogens in poultry.

Validated washing processing variables for poultry processing operation to fulfill USDA inspection requirements.

Teaching Experience

Teaching Assistant Eggs and Egg Products course: organized laboratory practices and graded reports.

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

JEMRA, Joint FAO-WHO Expert Meetings on Microbiological Risk Assessment, 2009-2011

Institute of Food Technologists IFT, since 1998. Professional Member since 2010.

Poultry Science Association PSA

International Association for Food Protection IAFP

Society for Applied Microbiology

Ecuadorian Society of Food Chemists

Biochemists Professional Society, Quito, Ecuador

Institute of Food Technologists Student Association IFTSA

Student Professional Development Group, SPDG, IAFP

Phi Beta Delta, Honor Society for International Scholars

Phi Tau Sigma, Food Science Honor Society

Food Science Club, Department of Food Science and Technology, University of Nebraska-Lincoln,

Student Chapter University of Nebraska, International Association for Food Protection

PUBLICATIONS

Peer-Reviewed publications:

Cuellar, D., Brooks, J. C., Miller, M., Sanchez, M., Brashears, M., Echeverry, A. 2019. Evaluation of STEC on Beef Intended for Non-intact Use After Treatment with Microwaves and Low Temperature Storage. *Food Protection Trends*, [39\(4\): 296-304](#).

Sandoval, L. A., C. Carpio, **M. Sanchez-Plata**. 2019. *The effect of 'Traffic-Light' nutritional labelling in carbonated soft drink purchases in Ecuador*. *PLoS One*. [2019; 14\(10\)](#).

Ramirez-Hernandez, A., M. Bugarel, S. Kumar, H. Thippareddi, M. M. Brashears, and **M. X. Sanchez-Plata**, 2019. *Phenotypic and Genotypic Characterization of Antimicrobial Resistance in Salmonella Strains Isolated from Chicken Carcasses and Parts Collected at Different Stages During Processing*. *Journal of Food Protection*. [82\(10\):1793-1801](#).

Gonzalez, R., F. Sampedro, J. Feirtag, **M. Sanchez-Plata**, and C. Hedberg, 2019. *Prioritization of Chicken Meat Processing Interventions Based on Reducing the Salmonella Residual Relative Risk*. *Journal of Food Protection*. [82\(9\):1575-1582](#).

Penaherrera, V., C. Carpio, L. Sandoval, **M. Sanchez**, T. Cabrera, P. Guerrero, and I. Borja, 2018. *Effect of traffic-light labeling on nutritional content and on consumption of carbonated beverages in Ecuador*. *Rev Panam Salud Publica*. [2018;42:e177](#).
<https://doi.org/10.26633/RPSP.2018.177>.

Ramirez-Hernandez A, B. Inestroza, A. Parks, M. Brashears, **M. X. Sánchez-Plata** and Alejandro Echeverry, 2017. *Thermal Inactivation of Salmonella spp. In High-Fat Rendering Meat Products*. *Journal of Food Protection*. [81 \(1\): 54-58](#).

Ramirez-Hernandez A, M. M. Brashears, and **M. X. Sanchez-Plata**, 2017. *Efficacy of Lactic Acid, Lactic Acid-Citric-Acid Blends, and Peracetic Acid to Reduce Salmonella on Chicken Parts Under Simulated Commercial Processing Conditions*. *Journal of Food Protection*. [81\(1\):17-24](#).

Ramirez-Hernandez A, A. Varon-Garcia, and **M. X. Sanchez-Plata**, 2017. *Microbiological Profile of Three Commercial Poultry Processing Plants in Colombia*. *Journal of Food Protection*. [80\(12\): 1980-1986](#).

Wideman N, Bailey M, Bilgili S, Thippareddi H, Wang L, Bratcher C, **Sanchez-Plata M**, Singh M. 2015. *Evaluating best practices for Campylobacter and Salmonella reduction in poultry processing plants*. *Poultry Science*. [95\(2\): 306-15](#).

Hakan Benli, **Marcos X. Sanchez-Plata**, Osman Irfan Ilhak, Maryuri T. Núñez De González, and Jimmy T. Keeton. 2015. *Evaluation of Antimicrobial Activities of Sequential Spray Applications of Decontamination Treatments on Chicken Carcasses*. *Asian-Australas J Anim Sci*. [28\(3\): 405-410](#).

Shin, D. K., Kakani G, Molina V.A., Regenstein J.M., Choe H.S. and **M. X. Sánchez-Plata**. 2012. *Effect of kosher salt application on microbial profiles of poultry carcasses*. *Poultry Science*, [91\(12\): 3247-3252](#).

Shin D, Choi S.H., Go G, Park J.H., Narciso-Gaytán C, Morgan C.A., Smith S.B., **Sánchez-Plata M.X.**, and Ruiz-Feria C.A. 2012. *Effects of dietary combination of n-3 and n-9 fatty acids on the deposition of linoleic and arachidonic acid in broiler chicken meats*. *Poultry Science*, [91\(4\): 1009-1017](#).

Shin, D. K., C. Narciso-Gaytan, J. Regenstein and **M.X. Sánchez-Plata**. 2012. *Effect of Various Refrigeration Temperatures on Quality of Shell Eggs*. *Journal of the Science in Food and Agriculture*, [92\(7\):1341-1345](#).

Shin, D. K., Han-Sul Yang, Byoung-Rok Min, C. Narciso-Gaytán, **M. X. Sánchez-Plata** and C. A. Ruiz-Feria. 2011. *Evaluation of Antioxidant Effects of Vitamins C and E Alone and in Combination with Sorghum Bran in a Cooked and Stored Chicken Sausage*. *Korean J. Food Sci. Ani. Resour*, [31: 693-700](#).

Shin D, Narciso-Gaytán C, Park J.H., Smith S.B., **Sánchez-Plata MX**, Ruiz-Feria C.A. 2011. *Dietary combination effects of conjugated linoleic acid and flaxseed or fish oil on the concentration of linoleic and arachidonic acid in poultry meat*. *Poultry Science*. [90\(6\):1340-1347](#).

Shin, D. K., B. Martin, B., and **M.X. Sánchez-Plata**. 2011. *Pulse Electric Field Effects to Reduce the Level of Campylobacter spp. In Scalding and Chiller Water during Broiler Chicken Processing*. *Asian-Australian Journal of Animal Science*, [24: 1314-1317](#).

Benli, Hakan, **Marcos X. Sanchez-Plata** and Jimmy T. Keeton. 2011. *Efficacy of ϵ -polylysine, lauric arginate or acidic calcium sulfate applied sequentially for Salmonella reduction on membrane filters and chicken carcasses*. *Journal of Food Protection*. [74\(5\): 743-750](#).

Narciso-Gaytán, C., D. Shin, A. R. Sams, J. T. Keeton, R. K. Miller, S. B. Smith and **M. X. Sánchez-Plata**. 2011. *Lipid oxidation stability of omega-3- and conjugated linoleic acid-enriched sous vide chicken meat*. *Poultry Science*, [90\(2\): 473-480](#).

Dunn-Horrocks, S., Pichardo-Fuchs, M., Lee, J., Ruiz-Feria, C., Creger, C., Hyatt, D., Stringfellow, K., **Sanchez, M.**, and Farnell, M. 2011. *Effect of Omega-3 Enriched Layer Rations on Egg Quality*. *International Journal of Poultry Science*, [10 \(1\): 8-11](#).

Meneses, Y., J. Stratton, M. Hardin, **M. Sanchez-Plata**, and R. Van-Santen. *Evaluation and Performance of the PremiTTest Salmonella Serotyping System on Pork and Poultry Isolates from Commercial Sources*, 2010. *Journal of Food Protection*, [73 Supplement A: 138](#).

Narciso-Gaytán, C., D. Shin, A. R. Sams, J. T. Keeton, R. K. Miller, S. B. Smith and **M. X. Sánchez-Plata**. 2010. *Dietary lipid source and vitamin E effect on lipid oxidation stability of refrigerated fresh and cooked chicken meat*. Poultry Science. [89\(12\): 2726-2734](#).

Narciso-Gaytán, C., D. Shin, A. R. Sams, C. A. Bailey, R. K. Miller, S. B. Smith, O. R. Leyva-Ovalle, and **M. X. Sánchez-Plata**. 2010. *Soybean, palm kernel, and animal-vegetable oils and vitamin E supplementation effect on lipid oxidation stability of sous vide chicken meat*. Poultry Science. [89\(4\): 721- 728](#).

Sánchez, M.X., Amezquita, A., Blankenship, E., Burson, D. Juneja, V. and Thipparedi, H. 2005. *Development of a Predictive Model for Growth of Clostridium perfringens in Roast Beef During Cooling and Inhibition of Spore Germination and Outgrowth by Salts of Organic Acids*. Journal of Food Protection. [68\(12\): 2594-2605](#).

Fluckey W., **Sánchez M.X.**, McKee S.R., Smith D., Pendleton E. and Brashears M.M., 2003. *Establishment of a microbiological profile for an air-chilling poultry operation in the United States*. Journal of Food Protection [66\(2\): 272-279](#).

Sánchez M.X., Fluckey W. M., Brashears M.M., McKee S.R. 2002. *Microbial profile and antibiotic susceptibility of Campylobacter spp and Salmonella spp in broilers processed in air-chill and immersion-chill environments*. Journal of Food Protection [65\(6\): 948-956](#).

Brashears, M. M., Burson, D. E., Dormedy, E. S., Vavak, L., McKee, S. R., Fluckey, W. and **Sánchez, M.X.** 2001. *HACCP Implementation and Validation in Small and Very Small Meat and poultry Processing Plants in Nebraska*. Dairy, Food and Environmental Sanitation 21(1): 20-28.

Articles under submission to Peer-Reviewed publications:

Orange, A., Brashears, M., Sanchez, M., Echeverry, A. Reduction of Salmonella in post-harvest hot pork carcass and chilled pork head meat using multiple USDA-FSIS approved interventions. Meat and Muscle Biology. In review.

Munoz, S., and **M. X. Sanchez-Plata**, 2020. *Fate of Clostridium perfringens During Processing of Reduced Moisture Meat and Poultry Products*. Journal of Food Protection. To be submitted for publication.

Arteaga-Arredondo, G., A. Calle, I. Arvelo, and **M. X. Sanchez-Plata**, 2019. *Development and Application of a Semi-Quantitative Diagnostics Tool to Evaluate the Level of Readiness for Compliance with the Produce Safety Regulation in the U.S.* Journal of Food Protection. To be submitted for publication.

Arvelo, I. and **M. X. Sanchez-Plata**, 2019. *Reduction of Salmonella spp. and Listeria monocytogenes on Copper-Based Alloy Surfaces*. Journal of Food Protection. To be submitted for publication.

Books, Book Chapters:

Arias Segura, J.; Blanco Murillo, M.; Febres, M.; García Winder, M.; Herrera, D.; Lucio Paredes Fontaine, A.; Núñez Rojas, M.; Pancorbo, G.; Pavez Lizarraga, I.; Peña Marín, Y.; Lam, F.; Lizarazo, L.; Riveros, H.; Rodríguez Sáenz, D.; Ruiz Torres, C.A.; Rivera Velazco, J.E.; Reid, R.; **Sánchez Plata, M.X.**; Vélez León, S. 2010. *Desarrollo de los agronegocios y la agroindustria rural en América Latina y el Caribe: conceptos, instrumentos y casos de cooperación técnica*. IICA, San José (Costa Rica) (Es) ISBN: 978-92-9248-193-3.

Cervantes, E. and M.X. Sanchez-Plata. 2009. *Procesamiento de Pollos. Aspectos que Afectan la Calidad, Inocuidad y el Rendimiento*. Ediciones Científicas BETA.

Thipparedi, H., J. Subbiah, N. Rao Korasapati1, and **M. X. Sanchez-Plata**. 2009. *Predictive Modeling of Pathogen Growth in Cooked Meats*. In *Safety of Meat and Processed Meat*. Edited by Fidel Toldrá. Springer Science+Business Media, LLC. ISBN 0387890254, 9780387890258.

Sánchez, M.X., Thipparedi, H. 2005. *Thermal Processing of Meat Products*. In *Thermal Food Processing: New Technologies and Quality Issues*. Edited by Da-Wen Sun. ISBN/SKU: 1574446282

Other publications/ Proceedings:

Sánchez M.X., 2010. *Antimicrobial intervention alternatives for turkey processing*. Zootecnica International. April 2010.

Sánchez M.X., G. Kakani, J. Regenstein and J. A. Byrd. *The Effects of Kosher Salt as an Antimicrobial Intervention in Poultry Processing*. XXIII World's Poultry Congress. July, 2008. Brisbane, Australia.

Sánchez M.X. *Carcass Chilling Types and Antimicrobial Chilling Interventions to Improve Product Safety and Extend Shelf-Life in Poultry Processing*. 2008 Midwest Poultry Federation Convention. March, 2008. St. Paul, MN.

Sánchez M.X. *Antimicrobial Interventions in Poultry Processing*. XX Latin American Poultry Congress. September, 2007. Porto Alegre, Brasil.

Sánchez M.X. *Validation of Chlorine Dioxide Solutions Applied Pre- and Post- Chilling to Reduce Bacterial Levels in Broilers*. World's Poultry Science Journal, XII European Poultry Conference. September, 2006. Verona, Italy.

Sánchez M.X. *Germination and Outgrowth of Clostridium perfringens spores during chilling of thermally processed ready-to-eat meat products*. 2004. Dissertation. University of Nebraska-Lincoln. Dept. of Food Science and Technology.

Sánchez M.X. *Microbial Comparison of Air-Chilling and Immersion-Chilling in Poultry Processing*. 2000. Master Degree Thesis. University of Nebraska-Lincoln. Dept. of Food Science and Technology.

M. X. Sánchez, W. Fluckey, M. Brashears, E. Wallner-Pendleton, S. McKee. 2000. *Microbial Characteristics of Immersion-Chilled Broilers and Air-Chilled Broilers*. Extension Pub. University of Nebraska-Lincoln Poultry Journal, September 2000. Lincoln, NE.

CONSULTANCY WORK

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Food Safety Assessments to Support Technical Assistance and Compliance with FSMA Regulations. Conducted in **Colombia, Ecuador and Peru**, 08/2020-07/2023.

Exporta Calidad, IESC, International Executive Service Corp. USDA-FAS. Food for Progress. Technical Assistance for Regulatory Compliance with the FDA's FSMA Regulations by Exporting Produce Facilities. Conducted in the **Dominican Republic**, 05-08/ 2020.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Enhancing the Colombian Food Imports Inspection System. Capacity Building towards Modernization, Scientific Support and Risk-Based Approaches.. Conducted in **Colombia**, 10/ 2018- 09/2019.

PROGANA, Bourlaug Institute for Agriculture, USDA-FAS. Food for Progress. Technical Assistance for Equivalency of Inspection of Inspection Systems and Slaughter Plants. Conducted in the **Dominican Republic**, 03-12/ 2018

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Food Safety Assessments to Support Technical Assistance and Compliance with FSMA Regulations. Conducted in **Honduras, Guatemala, El Salvador and the Dominican Republic**, 10/ 2017- 06/2019.

Inter-American Institute for Cooperation on Agriculture (IICA) Office in The Bahamas. Consultancy for Legislative Drafting of Regulations Food Safety and Quality Bill. Conducted in **The Bahamas**, 03-04/2017.

Government of Panama, Ministry of Commerce and Industries. Consultancy on Inspectors Training for Cattle and Dairy Processing. Conducted in Panama, 10/2016-07/2017

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building and Inter-American Institute for Cooperation on Agriculture (IICA). Capacity Building for Food Exporters on the Food Safety Modernization Act Framework and Requirements. Conducted in **Honduras, Guatemala, El Salvador, Dominican Republic and Panama**, 10/ 2014- 06/2015.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Haiti Food Safety Assessment, in cooperation with the Ministry of Public Health, Ministry of Commerce and Industries, and the Ministry of Agriculture, Natural Resources and Rural Development of **Haiti**, 03/ 2014.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. USDA-FSIS Meat and Poultry Inspection Equivalence and HACCP for Exports, Food Safety Audits, in cooperation with the Ministry of Health and the Ministry of Agricultural Development of **Panama**, 09/ 2013.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. USDA-FSIS Meat and Poultry Inspection Equivalence and HACCP for Exports, Food Safety Audits, Ministry of Health and the DIGEGA of the Ministry of Agriculture, **the Dominican Republic**, 09/ 2013.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. USDA-FSIS Meat and Poultry Inspection Equivalence and HACCP for Exports, Food Safety Audits, in cooperation with the Animal General Division (DGG) of Ministry of Agriculture of **El Salvador** (MAG), 05/ 2011.

Joint FAO/WHO (Food and Agriculture Organization/ World Health Organization) Secretariat on Risk Assessment of Microbiological Hazards in Foods (**JEMRA**). *Salmonella* and *Campylobacter* in chicken meat Risk Assessment Tool Evaluation, Rome, 05/ 2010; 02/ 2011.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. USDA-FSIS Meat and Poultry Inspection Equivalence and HACCP for Exports, Food Safety Audits, in cooperation with the Meat Inspection Service (SENASA), Ministry of Agriculture of **Honduras** (MAG), 02/ 2011.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. USDA-FSIS Meat and Poultry Inspection Equivalence for Exports, HACCP Implementation, in cooperation with the Official Meat Inspection Service (SOIC) of the Ministry of Agriculture of **Guatemala** (MAGA), 10/ 2010.

Joint FAO/WHO (Food and Agriculture Organization/ World Health Organization) Secretariat on Risk Assessment of Microbiological Hazards in Foods (**JEMRA**). Microbial Sampling Risk Assessment Tool Evaluation, Rome, 05/ 2010.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Meat and Poultry Inspection Equivalence with USDA-FSIS for Exports and HACCP Program Implementation, in cooperation with the Ministry of Agriculture of the **Dominican Republic** (DIGEGA), 05/ 2010.

Joint FAO/WHO (Food and Agriculture Organization/ World Health Organization) Secretariat on Risk Assessment of Microbiological Hazards in Foods (**JEMRA**). *Salmonella* and *Campylobacter* in chicken meat experts meeting, Rome, 05/ 2009.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Meat and Poultry Inspection Equivalence with USDA-FSIS for Exports and HACCP Program Implementation, in cooperation with the **El Salvador** Ministry of Agriculture (MAG), Food Safety Division, 02/2009.

Poultry Processors Association (APA) and Pork Processors Association (ASPROCER) of **Chile**. Programs and Interventions to Control *Listeria monocytogenes* in Meat and Poultry Products, 01/ 2009.

Panamanian Ministry of Agricultural Development (MIDA), and the Norman Bourlaug Institute for International Agriculture at Texas A&M University. Inspection equivalence with USDA-FSIS, Food Safety Programs implementation, and HACCP Training for meat and poultry processors in **Panama**, 04/ 2008, 11/ 2008.

Guatemala USDA-Food for Progress Project with the Norman Bourlaug Institute for International Agriculture at Texas A&M University. Development of value-added products and Good Manufacturing Practices training for farmers with the IJATZ Cooperative in **Guatemala**, 02/ 2008.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Meat and Poultry Inspection Equivalence with USDA-FSIS for Exports, HACCP Program Implementation and HACCP Training, in cooperation with the Ministry of Agriculture of **Guatemala** (MAGA), 01/2008.

U.S. Department of Agriculture, Foreign Agriculture Services (FAS) Office of Trade and Capacity Building. Poultry Inspection Equivalence with USDA-FSIS for Exports, HACCP Program Implementation and HACCP Training, in cooperation with the **Nicaragua** Ministry of Agriculture and Forestry (MAGFOR) and meat and poultry processors, 03/ 2006, 03/ 2007 and 09/ 2007.

Cooperation assistance with food processing trade associations: CONAVE and AMEVEA, Ecuador; FENAVI, INTAL, Colombia; UNA, ANECA, AMEVEA, COMECARNE, Mexico; APA-ASPROCER, Chile, ANAVIP, Panama, and several private meat and poultry processing operations in North, Central and South America.

SPECIALIZED TRAINING

Food Safety Preventive Controls Alliance (FSPCA) Trainer of Trainers/Lead Instructor for Preventive Controls for Human Food
Food Safety Preventive Controls Alliance Trainer of Trainers/Lead Instructor for Foreign Supplier Verification Programs

Produce Safety Alliance (PSA) Lead Trainer for the Produce Safety FSMA Regulation

World Trade Organization, Sanitary and Phytosanitary Measures. WTO Institute for Training and Technical Cooperation.

Certificate with Distinction

International HACCP Alliance's Train the Trainer Course

Official *Salmonella* Isolation, Identification, National Poultry Improvement Plan, Georgia Poultry Laboratory, USDA
Implementing your Company's HACCP Plan, Meat and Poultry HACCP, University of Nebraska

Certificate of HACCP Course Completion, Seafood HACCP Alliance—Association of Food and Drug Officials

Getting Started as a Successful Grant Writer and Academician Workshop, UNL Office of Research & Graduate Studies.

FDA/ NSTA Science and Our Food Supply Workshop

Building Air Quality Course, U.S. Environmental Protection Agency

Total Quality, Total Quality Management, Saber Global Learning Co

Good Manufacturing Practices, Pan-American Health Organization

Mycotoxicogenic Molds: Identification and Control, Universidad Agraria del Ecuador.

Software: Microsoft Office Applications, Publisher, Front Page, Adobe Photoshop, Freehand

Training Courses: TQM, ISO 9000, ISO 14000, Microsoft Access

GRANTS RECEIVED

USDA-FAS-OCBD, Technical Assistance to Support Implementation of Food Safety Programs for FSMA Compliance in Colombia, Ecuador and Peru Value Chains. Value Chain Technical Assistance, \$185,000, 07/2020-06/2023.

New Harvest, Quality and Safety of Cell-Cultured Meat Products, \$156,000, 09/2020-08/2023.

USDA-FAS-OCBD, Technical Assistance to Support Risk-Based Inspections at Colombia Ports of Entry and Facilitate Entry of US Goods, \$285,999.47, 09/2018-09/2019.

National Cattlemen's Beef Association, NCBA. Effect of L28 as a Direct Fed Microbial on Pathogen Shedding and Antimicrobial Resistance of *Salmonella* and *E. coli*, \$86,500. 06/2019-07/2020.

USDA-FAS-OCBD, Technical Assistance to Support Implementation of Food Safety Programs for FSMA Compliance in Central American and Dominican Republic Value Chains. Value Chain Technical Assistance, \$87,605.35, 06/2018-06/2019.

USDA-FAS-OCBD, Technical Assistance for FSMA Implementation in Latin America, \$90,000, 02/2018-02/2019.

USDA-FAS-OCBD, Monitoring and Evaluation of the FAST Project, \$65,744.80, 01/2018-09/2018.

IICA-Technical Cooperation Grant. FAST, Capacity Building in FSMA Training for Lead Instructors in Latin America. ~44500. January 2017-August 2017.

USDA-FAS-OCBD, Technical Assistance for FSMA Implementation in Central America, \$174,000, 11/ 2016- 03/ 2018.

IICA-Technical Cooperation Grant. FAST, Capacity Building in FSMA Training for Lead Instructors in the Caribbean Countries. ~48,500. September 2016-November, 2016.

USDA-FAS-OCBD, Good Documentation Practices for Food Safety Management Systems to support HACCP and Food Safety Modernization Act Requirements, Phase II, \$64,000, 11/ 2015- 03/ 2016.

USDA-FAS-OCBD, Good Documentation Practices for Food Safety Management Systems to support HACCP and Food Safety Modernization Act Requirements, Phase I, \$70,000, 11/ 2015- 03/ 2016.

USDA-OCBD-FAS, and IICA, Capacity Building for Food Exporters on the Food Safety Modernization Act Framework and Requirements, \$220,000, 10/ 2014- 06/2015.

USAID-USDA-FAS, Training and Evaluation of FSMA Requirements Readiness in Central America. \$110,000. April, 2014.

IICA-Technical Cooperation Grant. Development of a Tool to Evaluate the Preparedness to Fulfill Export Requirements to the US Market, including FSMA Requirements. ~26,600. July, 2011.

AMIF , Evaluation and Performance of the Premi-test® Salmonella Serotyping System on Pork and Poultry Isolates from Commercial Sources. February, 2009.

USDA, CSREES. NIFSI. An Integrated Systems Approach to Reduce *Salmonella* in Organic and All Natural Poultry. ~\$590,000. July, 2008. Responsible for ~60,000.

US Poultry and Egg. *Validation and Feasibility Assessment of a Pulse Electric Field Scalding Tank to Inactivate Pathogens and Accelerate Rigor Mortis Completion.* \$32,247.00. September, 2007

TAMU-CONACYT. Improving the Fatty Acid Composition and Shelf-Life Stability in Eggs and Poultry Meat from Poultry Fed with Dietary Levels of Omega-3 Fatty Acids and Conjugated Linoleic Acid. ~24,000. August, 2006. Responsible for 14,000.

USDA, CSREES. NIFSI. Improving Safety of Shell Eggs and Egg Products by Addressing Critical Research Needs for *Salmonella Enteritidis* and *Salmonella* spp. ~\$580,000. July, 2006. Responsible for ~60,000.

MALRC. *Evaluation of Quality Protein Maize in Poultry Nutrition and its Effects on the Functional Properties of Poultry Meat.* \$10,000. September, 2005. Responsible for 5,000.

MALRC. *Approaches to Enhance the Dietary Functionality of Eggs and Poultry Meat Products by Evaluating Product Applications and Preservation Strategies to Minimize Deterioration of Functional Components.* \$12,000. September, 2005.

US Poultry and Egg. *Effects of Low Refrigeration Temperature Storage on Quality Characteristics Shell Eggs.* \$33,279.63. September, 2005

PROFESSIONAL SERVICES AND EXTRA-CURRICULAR ACTIVITIES

FSPCA, Person of Contact for the Technical Assistance Working Group, International Subcommittee

IFT, The Power of Three: Food, Water and energy, 2013

IFT, Strategic Advisory Panel Member, 2010-Present

IFT Public Policy, Food Laws & Regulations Subpanel and Content Team Member, 2011

IFT Ad-Hoc Committee on Certified Food Scientists, 2010-2011

IFT Global Strategy Advisory Panel, 2008-2009

IFT Worldwide Interests Committee Member, 2007-2008

Secretary, S1027 Poultry Research Regional Project, 2006-2009

IFTSA Global Relations Committee Student Chair, 2002-2003

Moderator and Organizer IFT-IAFP Joint Symposium, Food Protection Meeting, 2002

Internship at the Food Marketing Institute Supermarket Industry Convention, Chicago, 2002

Treasurer Agribusiness MBA Club, 2002-2003

IFTSA Strategic Planning Committee Representative, 2002

Annual Meeting Committee Student Chair of IFT, 2001-2002

IFTSA Task Force Member. Student-Exhibitor Interactions and IFT Fun Run Task Forces, 2002

Panelist, Latin America Graduate Students Panel, Institute of Agriculture and Natural Resources, 2002

Operations Chair of IFT Student Association, 2001-2002

Coordinator, Food Science & Technology Department. Five Year Comprehensive Review Lunch, 2001

Executive Committee Member of the IFT Student Association. North Central Area Rep., 2000-2001

Co-Founder & Executive Committee Member of the Latin-American Student Organization of UNL, 2000

Co-founder of UNL International Association for Food Protection (IAFP) Student Organization, 2001

President of the Food Science Club, Department of Food Science and Technology at UNL, 2001

Nebraska Chapter Chair of IFT Student Association, 2001

HONORS AND AWARDS

FSPCA Recognition for Service for International Outreach and Capacity Building, 2017
IFT Board Member Candidate Runner Up, 2011
IFT Community Leader Recognition, 2010
General Mills Inc, James Ford Bell Graduate Fellowship, IFT, 2003
Richard H. Larson Fellowship, University of Nebraska-Lincoln, 2003
Food Science Club Recognition Award, 2003
Inez & Frank Mussehl, Research in Poultry Fellowship, Nebraska Poultry Industries, 2002
Widaman Trust Distinguished Graduate Assistant Award, Agricultural Research Division, IANR 2002
General Mills Inc, James Ford Bell Graduate Fellowship, IFT, 2002
Bukey Memorial Fellowship, University of Nebraska-Lincoln, 2002
Maude-Hammond-Fling Combined Major Fellowship, University of Nebraska-Lincoln, 2001
Twila Herman Claybaugh Human Resources & Family Sciences Fellowship, 2001
Institute of Food Technologists Major Graduate Fellowship, 2001
Victor W. Henningsen Sr. Graduate Student Fellowship in Food Sciences, 2000
Ruth Keller Memorial Graduate Student in Poultry Research Scholarship, Nebraska Poultry Industries, 2000
Phi Beta Delta, Alpha Phi Chapter, Honor Society for International Scholars, 2000, 2002
Phi Tau Sigma, Honor Society of Food Scientists, 2000
FUNDACYT / LASPAU Inter-American Development Bank Fund Scholarship, 1998
NOVARTIS Prize to the Best Graduate. Class of 1997
Award Medal to the Best Graduate of the Central University of Ecuador. Class of 1997
Departmental Award to the Best Student of the College of Biochemistry and Pharmacy. Class of 1997
Highest Grades Award, Major in Food Biochemistry. Class of 1997

WORKSHOPS/ TRAININGS/ MISSIONS ORGANIZED

Sánchez M.X., *School of Inspectors, Training for Inspectors of Poultry Processing Facilities*. IICA and Agrocalidad, Ecuador, February, 2020, Quito, Ecuador.

Sánchez M.X., *School of Inspectors, Training for Inspectors of Cattle Processing Facilities*. IICA and Agrocalidad, Ecuador, October, 2019. Quito and Manta, Ecuador.

Sánchez M.X., *School of Inspectors, Training for Inspectors of Poultry Processing Facilities*. IICA and Agrocalidad, Ecuador, April, 2019. Santo Domingo and Cuenca, Ecuador.

Sánchez M.X., J. Sarturi, N. Huerta. *Mini-Meat School*. SEDRAE, April, 2019. Aguascalientes, Aguascalientes, Mexico.

Sánchez M.X., *Poultry School, en español 2019 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, February, 2019, Athens, Charlotte and Atlanta.

Sánchez M.X., *FSMA Rules Adoption and Implementation in Central America*. USAID, USDA-FAS-OCBD, November 28-30, 2018, Punta Cana, Dominican Republic.

Sánchez M.X. *School of Inspectors. Meat and Poultry Inspection, Pre-Requisites, HACCP, Pathogen Reduction and Performance Standards*. DIGEMAPS, Ministry of Health, November, 2018, Santo Domingo, Dominican Republic.

Sánchez M.X., Food Safety Preventive Controls for Human Food Workshop, SEDRAE and State of Aguascalientes, October 2018, Aguascalientes, Mexico.

Sánchez M.X., *Meat School, en español 2018 Latest Developments in Quality, Safety and Value Adding in the Meat Value Chain*, Texas Tech University, July 2018, Lubbock, TX.

Sánchez M.X., *FSMA Rules Adoption and Implementation in the Caribbean*. USAID, USDA-FAS-OCBD, May 30-June 1st, 2018, Montego Bay, Jamaica.

Sánchez M.X. *School of Inspectors. Meat and Poultry Inspection, Pre-Requisites, HACCP, Pathogen Reduction and Performance Standards*. DIGEMAPS, Ministry of Health, May, 2018, Santo Domingo, Dominican Republic.

Sánchez M.X., Produce Safety Alliance Curriculum, PSA. March, 2018, Quito, Ecuador.

Sánchez M.X., HACCP and Advanced HACCP for the Food Industry, SEDRAE and State of Aguascalientes, March, 2018, Aguascalientes, Mexico.

Sánchez M.X., *Poultry School, en español 2018 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2018, Athens, Charlotte and Atlanta.

Sánchez M.X., L. Thompson, A. Calle *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. ICFIE-Texas Tech University. December 2017, Lubbock, Texas.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, October, 2017, Managua, Nicaragua.

Sánchez M.X., M. Felix, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, September, 2017, Asuncion, Paraguay.

Sánchez M.X. *School of Inspectors. Meat and Poultry Inspection, Pre-Requisites, HACCP, Pathogen Reduction and Performance Standards*. MINSAL-MIDA, August, 2017, Santo Domingo, Ecuador.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, August, 2017, Santo Domingo, Santiago, Dominican Republic.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, July, 2017, Panama, Panama.

Sánchez M.X., *Meat School, en español 2017 Latest Developments in Quality, Safety and Value Adding in Meat Processing*. Texas Tech University-ICFIE, July, 2017, Lubbock, Texas.

Sánchez M.X., *Advanced HACCP Implementation for the Poultry Industry*. Ministry of Livestock and Agriculture, IICA, June, 2016, Montevideo, Uruguay.

Sánchez M.X., J. Silva, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, May, 2017, Lima, Peru.

Sánchez M.X., J. Silva, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, April, 2017, Bogota, Colombia.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, April, 2017, Guatemala, Guatemala.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, April, 2017, Tegucigalpa, Honduras.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, March, 2017, San Jose, Costa Rica.

Sánchez M.X., A. Camacho, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, March, 2017, Santo Domingo, Dominican Republic.

Sánchez M.X., A. Calle, *FSMA Complementary Rules: Foreign Supplier Verification Programs (FSVP-FSPCA Curriculum), Sanitary Transport and Mitigation of Intentional Adulteration*. USAID, USDA-FAS-OCBD, February, 2017, San Salvador, El Salvador.

Sánchez M.X., M. Felix, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, February, 2017, Guatemala, Guatemala.

Sánchez M.X., *Poultry School, en español 2017 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2017, Athens, Atlanta, Georgia.

Sánchez M.X., M. Felix, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, January, 2017, San Salvador, El Salvador.

Sánchez M.X., A. Calle *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. ICFIE-Texas Tech University. December 2016, Lubbock, Texas.

Sánchez M.X., E. Willis, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. FSPCA, IFPTI, November, 2016, Austin, Texas.

Sánchez M.X., P.C. Vasavada, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, October 2016, Bridgetown, Barbados.

Sánchez M.X., M. Bottos, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, October 2016, Pt. Spain, Trinidad and Tobago.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. September, 2016. San Jose, Costa Rica.

Sánchez M.X., M. Bottos, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. Project FAST: USAID, USDA-FAS-OCBD, IICA, September 2016, Kingston, Jamaica.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. August, 2016. Santo Domingo, Santiago, Dominican Republic.

Sánchez M.X. *School of Inspectors. Meat and Poultry Inspection, Pre-Requisites, HACCP, Pathogen Reduction and Performance Standards*. MINSAL-MIDA, August, 2016, Panama, Panama.

Sánchez M.X., J. Scott, R. Bracket, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. FSPCA, IFPTI, July 2016, St. Louis, Missouri.

Sánchez M.X., *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. Universidad Autonoma de Aguascalientes, ICFIE-Texas Tech University. July 2016, Aguascalientes, Mexico.

Sánchez M.X., *Meat School, en español 2016 Latest Developments in Quality, Safety and Value Adding in Meat Processing*. Texas Tech University-ICFIE, June, 2016, Lubbock, Texas.

Sánchez M.X., *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. ICFIE-Texas Tech University. June 2016, Lubbock, Texas.

Sánchez M.X., *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. Zamorano University. May 2016, Zamorano Campus, Honduras.

Sánchez M.X., K. Gombas, *Food Safety Preventive Controls for Human Food, Trainer of Trainers Session FSPCA Curriculum for Lead Instructors Certification*. IFPTI, April 2016, Battle Creek, Michigan.

Sánchez M.X., *Food Safety Preventive Controls for Human Food, FSPCA Curriculum for PCQI Certification*. GCL-Eurofins Chile. March 2016, Santiago Chile.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. March 2016. Guatemala, Guatemala.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. February 2016. Panama, Panama.

Sánchez M.X., *Poultry School, en español 2016 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2016, Athens, Atlanta, Georgia.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. January 2016. San Salvador, El Salvador.

Sánchez M.X., A. Calle. *Good Documentation Practices for FSMA Compliance and Support of Food Safety Management Systems*. USAID-USDA-FAS-OCBD. December 2015. Comayagua, Honduras.

Sánchez M.X., A. Calle. *Introduction and Implementation of Pre-requisites and HACCP Systems, International HACCP Alliance Curriculum*. Texas Tech University, October, 2015, Lubbock, Texas.

Sánchez M.X., *Meat School, en español 2015 Latest Developments in Quality, Safety and Value Adding in Meat Processing*. Texas Tech University-ICFIE, October, 2015, Lubbock, Texas.

Sánchez M.X., A. Calle, A. Echeverry, A. Castillo. *School of Inspectors. Meat and Poultry Inspection, Pre-Requisites, HACCP, Pathogen Reduction and Performance Standards*. INVIMA, The Food Consortium Colombia, October-November 2015, Bogotá, Cali, Medellin, Barranquilla, Colombia.

Sánchez M.X. *Labeling and Regulatory Issues Associated with GMO's/ Transgenic products*. USDA-FAS, September 2015, Guayaquil, Cuenca, Quito, Ecuador.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. July 2015. Bridgetown, Barbados.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. June 2015. Pt. of Spain, Trinidad and Tobago.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. May 2015. Bogotá, Colombia.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. May 2015. Lima, Perú.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. May 2015. Asuncion, Paraguay.

Sánchez M.X., F. Garay. *Advanced HACCP Implementation for the Poultry Industry*. Federation of Avian Processors (FENAVI). The Food Consortium Colombia, April 2015, Bogota, Colombia.

Sánchez M.X., A. Calle. *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. February 2015. Santo Domingo and Santiago, Dominican Republic.

Sánchez M.X., *Poultry School, en español 2015 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2015, Athens, Atlanta, Georgia.

Sánchez M.X., *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. August 2014. Comayagua, Honduras.

Sánchez M.X., *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. July 2014. San Jose, Costa Rica.

Sánchez M.X., *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. June 2014. San Salvador, El Salvador.

Sánchez M.X., *Introduction to the Food Safety Modernization Act Framework, Regulations, Export Requirements and Compliance Preparedness Tools*. USAID-USDA-FAS-OCBD and IICA. May 2014. Guatemala, Guatemala.

Sánchez M.X., J. Villena. *Advanced HACCP Implementation for the Poultry Industry*. Federation of Avian Processors (FENAVI). The Food Consortium Colombia, March 2014, Bogota, Colombia.

Sánchez M.X., *Poultry School, en español 2014 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2014, Athens, Atlanta, Georgia.

Sánchez M.X., A. Castillo, M. Singh, J. Luna, *Advanced HACCP for Meat Slaughtering Facilities and Inspection Training for Equivalency 2013*. Instituto Nacional de Vigilancia de Medicamentos y Alimentos (INVIMA), Ministry of Health of Colombia, December 2013, Bogota, Medellin, Cali, Colombia.

Sánchez M.X. Workshop *Current Issues in Meat and Poultry*. Prinal, November 2013, Santiago, Chile.

Sánchez M.X., *Pathogen Detection and Microbial Validation to Support Food Safety Management Programs 2013*. Serviço Nacional de Aprendizagem Industrial (SENAI), October 2013, Chapeco, Brazil.

Sánchez M.X., F. Nunes. *Escola Internacional de Processamento Avícola 2013. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. Serviço Nacional de Aprendizagem Industrial (SENAI), October 2013, Chapeco, Brazil.

Sánchez M.X., A. Echeverry, A. Calle. *HACCP Implementation and Inspection*. Ministry of Agriculture of Nicaragua, IICA Nicaragua, OIRSA, October 2013, Managua, Nicaragua.

Sánchez M.X., M. Brashears, M. Miller. *Best Production and Processing Practices, HACCP Implementation and USDA Equivalence of Inspection for Meats*. Ministry of Health and Agricultural Development of Panama, September 2013, Santiago, Panama.

Sánchez M.X., M. Singh, J. Cortez. *Salmonella and Campylobacter Control in the Food Industry*. The Food Consortium Colombia, September 2013, Bogota, Colombia.

Sánchez M.X. *US Export Requirements, USDA, FDA. Export Platform*. Ministry of Agriculture, COEXPORT, IICA El Salvador, August 2013, San Salvador, El Salvador.

Sánchez M.X., C. Alvarado, C. Narciso, J. Cortez. *Management of Food Safety in the Production of Eggs. Validation and Verification, Pre-Requirements and HACCP Plans*. The Food consortium Colombia, July 2013, Bogota, Colombia.

Sánchez M.X. *Best Production and Processing Practices, HACCP Implementation and USDA Equivalence of Inspection for Poultry*. Ministry of Agriculture of Uruguay, July 2013, Montevideo, Uruguay.

Sánchez M.X., E. Perez, M. Caipo, E. Negron. *Risk Assessment Tool for Salmonella and Campylobacter Control in Chicken Meat*. IICA, FAO, PAHO, OIRSA, June 2013, Panama, Panama.

Sánchez M.X. *US Export Requirements, USDA, FDA. Export Platform*. IICA Panama, Ministry of Commerce, June 2013, Santiago, Panama.

Sánchez M.X., M. Brashears, M. Miller, A. Echeverry. *Best Production and Processing Practices, HACCP Implementation and USDA Equivalence of Inspection for Meats*. Ministry of Health and Agriculture of Dominican Republic, IICA Dominican Republic, June 2013, Santo Domingo, Dominican Republic.

Sánchez M.X. *US Export Requirements, USDA, FDA and FSMA*. IICA Ecuador, FEDEXPORT, AGROCALIDAD, Ministry of Health, and Ministry of Agriculture, Ecuador, May 2013, Quito and Guayaquil, Ecuador.

Sánchez M.X. *US Food Control System Mission, Washington DC. Visit for Ecuador Delegation*. IICA Ecuador, AGROCALIDAD, Ministry of Health, and Ministry of Agriculture, Ecuador, March 2013, Washington, DC., Maryland, US.

Sánchez M.X., Martino, K. *Poultry School, en español 2013 Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2013, Athens, Atlanta, Georgia.

Sánchez M.X., A. Calle. *HACCP Implementation and Inspection*. Ministry of Agriculture of Nicaragua, IICA Nicaragua, October 2012, Managua, Nicaragua.

Sánchez M.X., F. Nunes. *Escola de Processamento Avícola 2012. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. Serviço Nacional de Aprendizagem Industrial (SENAI), September 2012, Chapeco, Brazil.

Sánchez M.X. *Food Control Systems*. ILSI-NorAndino, IICA Ecuador, AGROCALIDAD, Ministry of Health, and Ministry of Agriculture, Ecuador, August 2012, Quito, Ecuador.

Sánchez M.X. *Best Production and Processing Practices and Inspection for Poultry*. Ministry of Health of Venezuela, IICA Venezuela, August, 2012, Caracas, Venezuela.

Sánchez M.X., H. Thippareddi, A. Castillo, J. Cortez. *Listeria monocytogenes Control in the Food Industry*. The Food Consortium Colombia, June 2012, Bogota, Colombia.

Sánchez M.X., A. Calle. *HACCP Implementation and Inspection*. Ministry of Health and Ministry of Agriculture of Barbados, IICA Barbados, May 2012, Bridgetown, Barbados.

Sánchez M.X. *US Export Requirements, USDA, FDA and FSMA*. IICA Peru, Ministry of Health, and Ministry of Agriculture, Peru, April 2012, Lima, Peru.

Sánchez M.X. *US Food Control System Mission, Washington DC. Visit for Colombian Delegation*. IICA Colombia, UERIA, Ministry of Health, Colombia, March 2012, Washington, DC., Maryland, US.

Sánchez M.X. *US Export Requirements, USDA, FDA and FSMA*. IICA Bahamas, Ministry of Health, and Ministry of Agriculture, Bahamas, March 2012, Nassau, Bahamas.

Sánchez M.X., Martino, K. *Poultry School, en español 2012. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2012, Athens, Atlanta, Georgia.

Sánchez M.X. *Food Safety and Trade Conference IICA 2011, USDA-APHIS, FSIS, FDA-CFSAN, FDA-FSMA, US Codex Office*. IICA-Miami, December 2011, Miami, USA.

Sánchez M.X., F. Nunes. *Escola de Processamento Avícola 2011. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. Serviço Nacional de Aprendizagem Industrial (SENAI), November 2011, Chapecó, Brazil.

Sánchez M.X., H. Thipparedi, R. W. Mandigo. *Workshop Processed Meats School*. APA-ASPROCER, INTECAR, November 2011, Santiago, Chile.

Sánchez M.X., H. Thipparedi. *Workshop Food Safety Risk Ranking and Risk Assessment Tools*. IICA, Colombia, Unidad de Evaluación de Riesgos de Inocuidad de Alimentos (UERIA), September, 2011, Bogotá, Colombia.

Sánchez M.X. *Workshop Introduction to Risk Assessment and Food Safety*. Servicio Nacional de Sanidad y Calidad Agropecuaria (SENASA), IICA Argentina, September, 2011, Buenos Aires, Argentina.

Sánchez M.X., G. J. Luna, O. Oyarzabal, F. Diez-Gonzales. *Workshop Control of Pathogens in Food Processing Operations*. U. Tadeo Lozano. July, 2011, Bogotá, Colombia.

Sánchez M.X., M. Valladares. *Workshop Good Manufacturing Practices*. Diplomado MOTTS. IICA Nicaragua. July, 2011, Managua, Nicaragua.

Sánchez M.X. *Workshop Export Requirements US Market*. Dominican Association of Exporters (ADOEXPO). IICA Dominican Republic. February and April, 2011, Santo Domingo, Dominican Republic.

Sánchez M.X. *Workshop Introduction to Risk Assessment and Food Safety Issues in Meat and Poultry Products*. IICA Uruguay, February, 2011, Montevideo, Uruguay.

Sánchez M.X., Martino, K. *Poultry Processing, en español 2011. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, January-February, 2011, Athens, Atlanta, Georgia.

Sánchez M.X., Curso *HACCP Train-the Trainer*. APA-ASPROCER, INTECAR, December 2010, Santiago, Chile.

Sánchez M.X., G. J. Luna. *Workshop Cleaning and Disinfection in Food Processing Plants*. U. Tadeo Lozano, ECOLAB, 3M. September, 2010, Bogotá, Colombia.

Sánchez M.X., Curso *HACCP Train-the Trainer*. IICA Ecuador, May, 2010, Quito, Ecuador.

Sánchez M.X., Martino, K. *Poultry Processing, en español 2010. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, February, 2010, Athens, Atlanta, Georgia.

Sánchez M.X., Luna, J. *Curso HACCP Train-the Trainer*. Universidad de Bogotá, Tadeo Lozano, August, 2009, Bogotá, Colombia

Sánchez M.X., Martino, K. *Poultry Science, en español 2009. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. University of Georgia, August, 2009, Athens, Georgia.

Sánchez M.X., Osburn, W. *Poultry Science, en español 2008. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. Texas A&M University, August, 2008, College Station, Texas.

Sánchez M.X., Byrd, J.A., Caldwell, D., Farnell, M., Hardin, M., Harris, K., Pillai, S. *Safe Poultry 2008. Integrated Food Safety Programs in Poultry Processing*. Texas A&M University, August, 2008, College Station, Texas

Sánchez M.X., and Flores, R. *Better Process Control School*. University of Nebraska-Lincoln, Food Processing Center, August, 2008. Lincoln, Nebraska.

Sánchez M.X., and Rupnow, J. *Workshop in Cleaning and Disinfection in Food Processing Operations*. Universidad de San Buenaventura and ECOLAB, February, 2008. Cali, Colombia.

Sánchez M.X., Osburn, W., Keeton, J., Brooks, R. *Poultry 101, en español 2007. Latest Developments in Quality, Safety and Value Adding in Poultry Processing*. Texas A&M University, August, 2007, College Station, Texas (In Spanish)

Sánchez M.X., Estrada, C., Caraballo, L., Rupnow, J., and Taylor, S. *Industrial Seminar on Food allergies. El Porque de las Alergias Alimentarias y Estrategias de Prevención y Control en la Producción de Alimentos*. Universidad de Bogotá Jorge Tadeo Lozano and ILSI, May, 2006. Bogotá, Colombia (In Spanish)

Sánchez M.X., and Rupnow, J. *The ServSafe® Program. Programa de Certificación en Inocuidad Alimentaria Para Restaurantes*. Universidad de Bogotá Jorge Tadeo Lozano and ECOLAB, May, 2006. Bogotá, Colombia (In Spanish)

Sánchez M.X., Amezquita A., Swanson, K., Vasavada, P.C. and Rupnow, J. *The Critical Points of HACCP: Pre-requisites Programs, Cleaning and Sanitation*. Universidad de Bogotá Jorge Tadeo Lozano, May, 2005. Bogotá, Colombia (In Spanish)

Sánchez M.X., Vanegas, J.C., Campo, O., Moreno, A., Hernandez, J.E. and Rupnow, J. *International Seminar. Bioterrorism in the Commercialization of Colombian Foods into the US*. Universidad Pontificia Bolivariana, Colombian-American Chamber of Commerce and INTAL, October, 2004. Medellín, Colombia (In Spanish)

Sánchez M.X., Thipparedi, H., Amezquita A., Salgar, R., Romero, J. and Rupnow, J. *International Seminar on Food Safety and HACCP Plans*. Universidad Pontificia Bolivariana and INTAL, May, 2004. Bogotá, Colombia (In Spanish)

Sánchez M.X., Thippareddi, H., Amezquita A., Salgar, R., Romero, J. and Rupnow, J. *International Seminar on Food Safety and HACCP Plans*. Universidad Pontificia Bolivariana and INTAL, May, 2004. Medellín, Colombia *(In Spanish)*

Sánchez M.X., Burson, D., Thippareddi, H., Rupnow, J. and Baumert, R. *Advanced Course in Food Safety and HACCP Plans*. Escuela Superior Politécnica del Litoral, June, 2003. Guayaquil, Ecuador *(In Spanish)*

Sánchez M.X., Burson, D., Thippareddi, H., Rupnow, J. and Baumert, R. *Advanced Course in Food Safety and HACCP Plans*. Ecuadorian Society of Food Chemists. Biochemists Professional Society. May, 2003. Quito, Ecuador *(In Spanish)*

GUEST/ INVITED LECTURES

U.S. Soybean Export Council, Meat Kickstart 2020, Cancun, Mexico 05/2020
International Production and Processing Expo, Latin American Poultry Summit, Atlanta, GA 01/2020
World Food Safety Day 2019, Dominican Republic 10/2019
Agroalimentaria 2019, Dominican Republic 05/2019
Colombian Avian Congress 2018, Bucaramanga, Colombia 09/18
International Production and Processing Expo 2018, Atlanta, GA, 01/18
World Pepper Congress 2017, Aguascalientes, Mexico 10/17
ExpoCarnes, Mexico 2017, Monterrey, Mexico, 03/17
Reciprocal Meat Conference (RMC) 2016, St. Angelo, Texas 06/16
WHO/PAHO Salmonella and Poultry Conference 2016, Santo Domingo, Dominican Republic 04/16
Congreso Avícola AveSui 2016, Chapeco, Brazil 04/16
Global Food Safety Conference (GFSI) 2014, Anaheim, CA, 02/14
IFT Annual Meeting and Food Expo 2013, Chicago, IL, 07/2013
V Congreso Internacional de Microbiología Industrial, Bogota, Colombia, 05/2013
Seminario SOCHMA, Santiago, Chile, 04/2013
AMI Technical Sessions, IPPE 2013, Atlanta, GA, 01/2013
International Capsicum Convention, Ica, Peru, 04/ 2012
IFT-ALACTA, Monterrey, Mexico, 02/2012
Workshop Internacional: Segurança dos Alimentos e Tecnologias Innovadoras para a Industria de Alimentos, Chapeco, Brasil, 11/2011
INOFOOD 2011, Cumbre y Expo Internacional de Inocuidad Alimentaria, Santiago, Chile, 11/2011
X Simposio Internacional de Inocuidad de Alimentos (SINDA), Bogotá, Colombia, 09/2011
XXII Congreso Latinoamericano de Avicultura (ALA), Buenos Aires, Argentina, 09/2011
VII Curso Latinoamericano de Tecnología Cárnicia, Medellín, Colombia, 09/2011
IFT Annual Meeting and Food Expo 2011, New Orleans, LA, 07/2011
Simposio de Inocuidad de Alimentos y Análisis de Riesgos (3M), Campinas, Chapeco, Brasilia, Brasil, 06/2011
Seminario Internacional Sobre Salmonellosis Aviar (ALA-UBABEF), Rio de Janeiro, Brasil, 06/2011
Seminario Latino Americano de Abate e Processamento de Frangos de Corte, Maringa, Brazil 03/2011
X Congreso Colombiano de Ciencia y Tecnología de Alimentos (ACTA), XVI Seminario Latinoamericano y del Caribe de Ciencia y Tecnología de Alimentos (ALACCTA), 2º Simposio Latinoamericano de Inocuidad de Alimentos del International Association for Food Protection (IAFP), Bogotá, Colombia, 9/2010
EXPOAPEN 2010, Asociacion de Productores y Exportadores de Nicaragua, Managua, Nicaragua, 9/2010
ILSI, Simposio Los retos en la Inocuidad de los Alimentos, Caracas, Venezuela, 7/2010
I Congreso Internacional de Inocuidad Alimentaria, Quito, Ecuador, 03/2010
UNL Food Science and Technology Seminar Series, Lincoln, NE, 02/2010
COMECARNE-USAPEEC-USMEF, Espacio Industria Carnica 2009, Mexico City, Guadalajara, Mexico, 10/2009
Worldwide Food Expo 2009, Pan American Technical Sessions, Chicago, IL, 10/2009
II Simposio Inocuidad y Calidad en la Industria de Alimentos, Maracaibo, Venezuela, 10/2009
VI Curso Latinoamericano de Tecnología Cárnicia, Medellín, Colombia, 09/2009
2009 Midwest Poultry Federation Convention, St. Paul, MN, 03/2009
Simposio ACHIPIA, CEPAL, Patógenos Emergentes en los Alimentos: Listeria, Santiago, Chile, 01/2009
Listeria Control Seminar, APA-ASPROCER, Chile, Santiago, Chile, 01/2009
IPE Poultry® and Carnetec® Magazine Symposium, Atlanta, GA, 01/2009
2008 I Seminario de Procesamiento de Aves, Quito, Ecuador, 11/2008
2008 Poultry Science Association, Niagara Falls, Canada, 07/2008
2008 Congreso Nacional de Avicultura, Maracaibo, Venezuela, 05/2008
2008 Midwest Poultry Federation Convention, St. Paul, MN, 03/2008
IPE Poultry® and Carnetec® Magazine Symposium, Atlanta, GA, 01/2008
AMI Poultry® and Carnetec® Magazine Symposium, Chicago, IL, 10/2007
XX Congreso Latinoamericano de Avicultura, Porto Alegre, Brasil, 09/2007
V Curso Latinoamericano de Tecnología Cárnicia, Medellín, Colombia, 09/2007
II Congreso de Ciencias Bioquímicas y Farmacéuticas, Quito, Ecuador, 05/2007
IPE Poultry® and Carnetec® Magazine Symposium, Atlanta, GA, 01/2007
3M® Rapid Methods Workshop, Quito and Guayaquil, Ecuador, 11/2006
University of Wisconsin- River Falls, Current Concepts in Foodborne Pathogens and Rapid and Automated Methods in Food Microbiology, River Falls, Wisconsin, 10/2006
Colegio de Postgraduados Seminario Avícola, Aguascalientes, México, 08/2006
Asociación Nacional de Especialistas Ciencias Avícolas (ANECA), Ixtapa, México, 04/2006
Asociación Mexicana Especialistas Nutrición Animal (AMENA), Pto.Vallarta, México, 10/2005

VII Semana Nacional Alimentaria, Pamplona, Colombia, 10/2005
I Congreso de Ciencias Bioquímicas y Farmacéuticas, Quito, Ecuador, 05/2005
Federación Nacional de Avicultores, Bogotá, Colombia, 05/2005
VIII Congreso Latinoamericano de Microbiología (ICMSF), Bogota, Colombia, 05/2005
III Curso Latinoamericano de Tecnología Cárnica, Medellín, Colombia, 09/2003
Pharmaceutical Biochemists Professional Society Lecture Series in Quito, Ecuador, 05/2002

SELECTED PRESENTATIONS/ SCIENTIFIC ABSTRACTS

Ilan Arvelo, Marcos Sanchez. IAFP. *Antimicrobial Effect of Copper-based Surfaces on Environmental Foodborne Pathogens Associated with Meat and Poultry Processing Facilities.* IAFP 2017.

Alejandra Ramirez-Hernandez, Mindy M. Brashears, and Marcos X. Sánchez-Plata. IAFP. *Validation of a Chicken Surface Methodology to Assess the Performance of Antimicrobial Interventions on Chicken Parts.* IAFP 2017

Ilan Arvelo-Yagua, Sergio Rocha, Patricia Landaiba, Luis Armijos, and Marcos X. Sanchez-Plata. TTU Graduate Research Conference. *Antimicrobial Effect of Copper-based Surfaces on Environmental Foodborne Pathogens Associated with Meat and Poultry Processing Facilities.*

Alejandra Ramirez-Hernandez, Mindy Brashears, and Marcos X. Sanchez. *Validation of the Efficacy of Lactic Acid, Lactic Acid-Citric-Acid Blends, and Peracetic acid on Skin-on and Skin-off Chicken thighs inoculated with Salmonella spp. under Simulated Commercial Processing Conditions.* IAFP 2017.

Gabriela Arteaga-Arredondo, M. Sanchez-Plata. *Needs Assessment for FDA-FSMA Compliance in Produce Exporting Operations in Mexico and Central America. Compliance with the Produce Standards and Preventive Controls for Human Food.* IFT 2017.

Inestroza, B., A. Ramirez, M.X. Sanchez-Plata, A.R. Parks, A. Echeverry, M.M. Brashears. 2016. *Thermal inactivation of Salmonella spp. in high fat ground beef.* Meat Science, Volume 112, February 2016, Pages 166-167. doi:10.1016/j.meatsci.2015.08.147

Alejandra Ramirez-Hernandez, Brenda Hinestroza, Amy Parks, Mindy Brashears, and Marcos X. Sanchez. *Validation of the Efficacy of Lactic Acid, Lactic Acid-Citric-Acid Blends, and Peracetic acid on Skin-on and Skin-off Chicken thighs inoculated with Salmonella spp. under Simulated Commercial Processing Conditions.* IAFP 2016.

Ilan Arvelo. Alexandra Calle, PhD., Keelyn Hanlon, Andrea English, Marcos Sanchez, PhD., and Mindy Brashears, PhD. IAFP. *Efficacy of Salmonella detection in ground beef and cilantro by five commercially available tests.* IAFP 2016.

Gabriela Arteaga-Arredondo, M. Sanchez. *Needs Assessment for FDA-FSMA Compliance in Produce Exporting Operations in Mexico and Central America. Compliance with the Produce Standards and Preventive Controls for Human Food.* IFT 2016.

Arteaga, G. A., Calle, A., Sánchez-Plata, M. X. *Development and Validation of an Assessment Tool to Ascertain Readiness to Comply with the FSMA Final Rule for Preventive Controls For Human Food.* IAFP-Latin Food, 2016.

Alexandra Calle, Ilan Arvelo, Keelyn Hanlon, Gabriela A. Arteaga, Marcos X. Sánchez-Plata, Mindy Brashears. *Comparison of five Salmonella detection methods in ground beef.* BIFSCO 2016.

Sánchez, M.X. *Antimicrobial Intervention Alternatives for Poultry Processing.* 2009 Midwest Poultry Federation Convention. March, 2009. St. Paul, MN.

Chimbombi, E., E. M. Castell-Perez, R. G. Moreira, J. Kim, and M. X. Sánchez –Plata. *Targeted elimination of Salmonella Typhimurium in cantaloupe (Cucumis melo, L.) using electron beam irradiation.* Institute of Food Technologists. June, 2009. Anaheim, CA.

Chimbombi, E., E. M. Castell-Perez, R. G. Moreira and M. X. Sánchez –Plata. *Prediction of accumulation (growth and mobility) of Salmonella enterica serovar Typhimurium in freshly cut cantaloupe (Cucumis melo L.).* Institute of Food Technologists. June, 2009. Anaheim, CA.

Gomes, C, P. Da Silva, E. M. Castell-Perez, R. G. Moreira and M. X. Sánchez –Plata. *Antimicrobial activity of food-grade lysozyme, trans-cinnamaldehyde, eugenol and garlic extract compounds against Salmonella spp. and Listeria spp.* Institute of Food Technologists. June, 2009. Anaheim, CA.

Gomes, C., Da Silva, P., Castell-Perez, M.E., Moreira, R.G., Sanchez-Plata, M.X., *Antimicrobial activity of food-grade compounds against Salmonella spp. and Listeria spp.* Institute of Food Technologists. June, 2009. Anaheim, CA.

Sánchez, M.X. *Antimicrobial Intervention Alternatives for Poultry Processing.* 2009 Midwest Poultry Federation Convention. March, 2009. St. Paul, MN.

Sánchez, M.X. *Control de Listeria monocytogenes en Productos Cárnicos.* 2009 Seminario APA-ASPROCER . January, 2009. Santiago, Chile.

Sánchez, M.X. *Actualización Tecnológica en Procesamiento de Productos Cárnicos.* 2008 Espacio Industria Cárnica. Innovación Tecnológica, USAPEEC y COMECARNE, November, 2008. México DF, México.

Sánchez, M.X. *Tendencias Mundiales de Producción de Productos Cárnicos.* USAPEEC y COMECARNE, November, 2008. México DF, México.

Sánchez, M.X. *Intervenciones Antimicrobianas en el Chiller y Post-Chill.* Inocuidad de Pollos Frescos. Primer Seminario Internacional de Procesamiento de Aves. Mejoremos la Calidad del Pollo en el País. CONAVE, November, 2008. Quito, Ecuador.

Sánchez, M.X. *Procesamiento Primario. Transporte, Aturdimiento, Sacrificio y Escaldado* Primer Seminario Internacional de Procesamiento de Aves. Mejoremos la Calidad del Pollo en el País. CONAVE, November, 2008. Quito, Ecuador.

Kakani, G., V. Molina, J. Regenstein, J. A. Byrd and M. X. Sánchez. *Effect of Kosher Salt Application on Microbial Profiles of Poultry Carcasses.* International Association for Food Protection. August, 2008. Columbus, OH.

Sánchez, M.X., G. Kakani, J. Regenstein and J. A. Byrd. *The Effects of Kosher Salt as an Antimicrobial Intervention in Poultry Processing*. XXIII World's Poultry Congress. July, 2008. Brisbane, Australia.

Martin, B. C. and M. X. Sánchez-Plata. *Evaluation of Pulse Electric Fields to Reduce Salmonella spp. Levels in Scalding Water during Poultry Processing*. Poultry Science Association. June, 2008. Niagara Falls, Canada.

Byrd, J., M. Farnell, M. Sanchez, J. McReynolds, H.M. Scott, M. Davis, D.J. Nisbet and D.J. Caldwell. 2008. *Differentiation of Fungi Collected from Commercial Broiler Houses by Automated rep-PCR*. World's Poultry Science Congress. Brisbane, Australia.

Byrd, J.A., M.B. Farnell, M.X. Sanchez, J.L. McReynolds, H.M. Scott, M.A. Davis, D.J. Nisbet, and D.J. Caldwell. 2008. *The Identification of Fungi Collected from Commercial Broiler Houses using an Automated rep-PCR System*. Biomin World Nutrition Forum. Austria.

Narciso-Gaytán, C., D. K. Shin, C. A. Bailey, A. R. Sams and M. X. Sánchez-Plata. *Effect of Dietary Conjugated Linoleic Acid, Flaxseed, and Menhaden Fish Oil on Lipid Oxidation Stability of Sous Vide Chicken Meat from Broilers Fed with Commercial and Supranutritional Levels of Vitamin E*. Poultry Science Association. June, 2008. Niagara Falls, Canada. Poult. Sci. 87 (Suppl. 1):42.

Sánchez-Plata, M. X. *Bi-Lingual Modules for Online Education in Poultry Processing, Further Processing and Food Safety in the U.S. and Latin America*. Poultry Science Association. June, 2008. Niagara Falls, Canada.

Sánchez-Plata, M. X. *Issues in organic poultry processing: safety, quality and plant considerations*. Poultry Science Association. June, 2008. Niagara Falls, Canada.

Gomes, C., Silva, P., Kim, J., Castell-Perez, E. Moreira, R. and Sanchez-Plata, M. 2008. *Enhancing the killing effect of e-beam irradiation with radiosensitization strategies using modified atmosphere packaging (MAP)*. Institute of Food Technologists. June, 2008. New Orleans, LA.

Benli, H., M. X. Sánchez-Plata and J. Keeton. *Effectiveness of various combinations of acidified calcium sulfate, ϵ -polylysine and lauramide arginine ethyl ester for decontamination of Salmonella spp. on poultry carcasses*. Institute of Food Technologists. June, 2008. New Orleans, LA.

Carrillo-Domínguez S., S. A. Romero, G. E. Avila, C. Vasquez, B. Fuente, J. M. E. Carranco, C. C. Calvo, M. X. Sánchez-Plata and R. F. Pérez-Gil. *Dietary Effect of the Combined Supplementation of Conjugated Linoleic Acid and Fish Oil on Layer Hens and Fatty Acid Composition of Shell Eggs*. International Society for the Study of Fatty Acids and Lipids (ISSFAL). May, 2008. Kansas City, MO.

Sánchez M.X. *Carcass Chilling Types and Antimicrobial Chilling Interventions to Improve Product Safety and Extend Shelf-Life in Poultry Processing*. 2008 Midwest Poultry Federation Convention. March, 2008. St. Paul, MN.

D. Shin, C. Narciso-Gaytan, M. Sartor, J. R. Regenstein, M. X. Sánchez-Plata, *Evaluation of Haugh Units and Yolk Index as Criteria to Establish a Low Temperature Storage Limit for Refrigerated Shell Eggs*. Poultry Science Association Annual Meeting, July 2007. San Antonio, TX.

G. Kakani, V. Molina, J. T. Keeton, M. X. Sánchez-Plata, *Effect of the Combined Use of Acidified Calcium Sulfate and ϵ -Polylysine Solutions as Multiple-Hurdle Interventions to Reduce Salmonella Typhimurium in Processed Broilers*. Poultry Science Association Annual Meeting, July 2007. San Antonio, TX.

G. Kakani, V. Molina, J. Regenstein, M. X. Sánchez-Plata, *The Effects of Kosher Salt as an Antimicrobial Intervention in Poultry Processing*. Poultry Science Association Annual Meeting, July 2007. San Antonio, TX.

C. Narciso-Gaytán, D.K. Shin, C. A Bailey, A. V. Haq, A. R. Sams, M. X. Sánchez-Plata, *Alpha, Gamma, and Acetate Tocopherol Determination in Chicken Muscle by HPLC*. Poultry Science Association Annual Meeting, July 2007. San Antonio, TX. Anim. Sci. Vol. 85, Suppl. 1/J. Dairy Sci. Vol. 90, Suppl. 1/Poult. Sci. Vol. 86, (Suppl. 1):379

V. Molina, M. Davis and M. X. Sánchez-Plata, *Validation of a chlorine dioxide product applied pre- and post- chilling to reduce bacterial levels in broilers*. International Poultry Scientific Forum, January 2007. Atlanta, GA.

Sánchez-Plata, M. X. *The effect of paraffin wax and a wax antimicrobial product to reduce microbial levels in processed broilers*. International Poultry Scientific Forum, January 2007. Atlanta, GA.

Sánchez-Plata, M. X., M. Sartor, J. Regenstein. *Effects of Low Refrigeration Temperature Storage on Quality Characteristics of Shell Eggs*. International Poultry Scientific Forum, January 2007. Atlanta, GA.

Sánchez M.X. *Validation of Chlorine Dioxide Solutions Applied Pre- and Post- Chilling to Reduce Bacterial Levels in Broilers*. European Poultry Conference, September, 2006. Verona, Italy.

Narciso-Gaytán, C. C. A. Bailey, A. R. Sams, H. Thippareddi, and M. X. Sánchez-Plata. *Dietary Lipid Source and Vitamin E Effect on Lipid Oxidation Stability of Cooked Chicken Patties*. Poultry Science Association Annual Meeting, July 2006. Edmonton, Canada. Poultry Science. Vol. 85(Suppl. 1): 115.

Narciso-Gaytán, C. C. A. Bailey, A. R. Sams, H. Thippareddi, and M. X. Sánchez-Plata. *Dietary Lipid Source and Vitamin E Effect on Lipid Oxidation Stability of Raw Chicken Parts*. Poultry Science Association Annual Meeting, July 2006. Edmonton, Canada.

Sánchez M.X. *Inocuidad en el Procesamiento Avícola de la Granja a la Mesa*. Colegio de Postgraduados, Seminario Avícola, Agosto, 2006. Aguascalientes, México.

Sánchez M.X. *Calidad e Inocuidad en el Procesamiento Avícola de la Granja a la Mesa*. Asociación Mexicana de Especialistas en Ciencias Avícolas (ANECA) Annual Meeting., April, 2006. Ixtapa, México.

Sánchez M.X. *Quality and Safety Effects of Antimicrobial Interventions in Poultry Processing*. Poultry Science Seminar, Texas A&M University/ USDA Southern Plains Agricultural Research Center, March, 2006. College Station, TX.

Sánchez M.X. *Influencia de la Nutrición en la Calidad de la Carne de Aves*. XII Congreso Bienal, Asociación Mexicana de Especialistas en Nutrición Animal, October, 2005, Puerto Vallarta, México.

Sánchez M.X. *Calidad e Inocuidad en el Procesamiento de Aves*. VII Semana Nacional Alimentaria, Universidad de Pamplona, October, 2005, Pamplona, Colombia.

Sánchez M.X. *Antimicrobianos y Desinfectantes*. I Congreso de Ciencias Bioquímicas y Farmacéuticas, May, 2005, Quito, Ecuador.

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