# Fernando Sampedro, Ph.D.

SENIOR CONSULTANT

## CONTACT INFORMATION

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## PROFESSIONAL PROFILE

Dr. Fernando Sampedro is a food scientist with ToxStrategies' Foods and Consumer Products Practice. He has 15 years of experience as an international consultant and is also an affiliated professor at the University of Minnesota, with a distinguished academic career of 20 years. He holds an M.Sc. and a Ph.D. in Food Science and Technology. His expertise includes microbial and chemical quantitative risk assessment and related software (@Risk, FDA-IRISK, Combase, ICMSF), development of national risk-based food inspection and surveillance programs (domestic and import-export), process validation, microbial inactivation kinetics, HACCP, and FSMA (preventive control for human and animal food, FSVP, produce safety rule and intentional adulteration rule). He has led research and consultancy projects with numerous companies, industry associations, and federal and international agencies. He has trained government, academia, and industry professionals in 18 countries in the areas of food safety, risk analysis, and FSMA.

Dr. Sampedro has delivered 85 workshops (in both English and Spanish) in the areas of food safety, risk analysis tools, allergens risk management, food processing, HACCP validation, and FSMA. He has worked with groups in industry, government, and academia, both domestically and in Argentina, Canada, Chile, Colombia, Costa Rica, Ecuador, Ethiopia, Honduras, Kenya, Mexico, Paraguay, Peru, Philippines, Spain, Thailand, Uganda, Uruguay, and Vietnam. He has also served as an invited lecturer at universities in Colombia, Uruguay, and Thailand.

Dr. Sampedro has published 45 articles and nine book chapters in the peer-reviewed literature (see a partial list below, and the full list at https://orcid.org/0000-0003-1155-2751). He has conducted 25 research projects and developed 15 technical reports to commodity organizations and the food industry, including such examples as the USDA Foreign Agricultural Service, the American Frozen Food Association, the National Cattlemen's Beef Association, the National Pork Producers Council, the U.S. National Center for Food Protection and Defense, and the Pan American Health Organization (Brazil). He has given 40 invited presentations at national international conferences and symposia and is a member of multiple professional societies and institutes.

## EDUCATION AND DEGREES EARNED

2008 Ph.D., Food Technology
Institute of Agrochemistry and Food Technology (Spanish National Research Council-CSIC), Spain

2001 M.Sc., Food Science and Technology
Polytechnic University of Valencia, Spain

1999 B.Sc., Agricultural Engineering
Polytechnic University of Valencia, Spain

## ACADEMIC ACTIVITIES

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|---|---|
| 2011–present | Faculty and Researcher, College of Veterinary Medicine and School of Public Health, University of Minnesota |
| 2009–2011 | Research Associate, Agricultural Research Service, USDA |
| 2008 | Research Associate, Institute of Agrochemistry and Food Technology (Spanish National Research Council-CSIC), Spain |
| 2006 | Visiting Scientist, Agricultural Research Service, USDA, USA |
| 2005 | Visiting Scientist, Catholic University of Leuven, Belgium |
| 2004–2007 | Doctoral Fellow, Institute of Agrochemistry and Food Technology (CSIC), Spain |
| 2003 | Research Assistant, Institute of Agrochemistry and Food Technology (CSIC), Spain |

## PROFESSIONAL ASSOCIATIONS AND ACTIVITIES

Institute of Food Technologists (IFT) HACCP training

Food Safety Risk Analysis, Royal Veterinary College (London)

Quantitative Risk Analysis, University of Maryland-JIFSAN

Lead Trainer in FSMA Preventive Control for Human Food Rule and FSMA Produce Safety Alliance

Coordinator of the international consortium in food safety risk analysis for Latin America (FSRisk)

Professional Associations Member: Institute of Food Technologists, International Association for Food Protection

Member of the editorial board of the *Microbial Risk Analysis Journal* and reviewer for multiple international journals

Review panel member at multiple national and international scientific meetings related to food safety and food technology

## SELECTED PROFESSIONAL EXPERIENCE

Led research in microbial quantitative risk assessment of *Salmonella* in meat products (ground turkey, beef, and pork) and *Listeria* in ready-to-eat food products for policy development under USDA and FDA.

Led development of national risk-based inspection programs for dairy, seafood, fresh produce, and ready-to-eat meat product chains in Costa Rica, Guatemala, Honduras, and Uruguay, which supported development of the inspection scheme for all food establishments in those countries.

Led development of an import-export risk-based inspection program at the ports of entry in Peru that allowed the country to define the inspection scheme for all agricultural products imported into the country.

Led the development of a food safety risk analysis network in Latin America funded by WTO with government agencies from 10 countries, along with FAO and WHO.

Led research in characterizing the inactivation of swine viruses in different feed matrices and African Swine Fever virus surrogate.

Led the development of a WHO regional guidance on the design and implementation of a risk-based inspection program for food safety authorities in Latin America.

Participated in an expert panel to develop an FAO international guidance on the prioritization of food safety risks at a national level.

Led the training and capacity building of government officials on food safety risk analysis and risk-based inspection in 10 Latin American countries.

## MANUSCRIPTS

Balestreri C, Schroeder DC, **Sampedro F**, Marqués G, Palowski A, Urriola PE, van de Ligt JLG, Yancy HF, Shurson GC. 2024. Unexpected thermal stability of two enveloped megaviruses, *Emiliania huxleyi* virus and African swine fever virus, as measured by viability PCR. Virol J 21(1):1; doi: 10.1186/s12985-023-02272-z.

Godínez-Oviedo A, **Sampedro F**, Bowman JP, Garcés-Vega FJ, Hernández-Iturriaga M. 2023. Risk ranking of food categories associated with Salmonella enterica contamination in the central region of Mexico. Risk Anal 43(2):308-323; doi: 10.1111/risa.13907.

Godínez-Oviedo A, **Sampedro F**, Bowman JP, Garcés-Vega FJ, Hernández-Iturriaga M. 2022. Genotypic and phenotypic quantitative microbial risk assessment model of human salmonellosis related to the consumption of chicken meat in the central region of Mexico. Food Res Int 162(A):111901; doi: 10.1016/j.foodres.2022.111901.

Palowski A, Balestreri C, Urriola PE, van de Ligt JLG, **Sampedro F**, Dee S, Shah A, Yancy HF, Shurson GC, Schroeder DC. 2022. Survival of a surrogate African swine fever virus-like algal virus in feed matrices using a 23-day commercial United States truck transport model. Front Microbiol 13(Dec 9):1059118; doi: 10.3389/fmicb.2022.1059118.

**Sampedro F**, Pérez-Rodríguez F, Servadio JL, Gummalla S, Hedberg CW. 2022. Quantitative risk assessment model to investigate the public health impact of varying Listeria monocytogenes allowable levels in different food commodities: A retrospective analysis. Int J Food Microbiol 383(Dec 16):109932; doi: 10.1016/j.ijfoodmicro.2022.109932.

Schambow R, **Sampedro F**, Urriola PE, van de Ligt JLG, Shurson GC, Perez AM. 2022. Rethinking the uncertainty of African swine fever virus contamination in feed ingredients and risk of introduction into the United States. Transbound Emerg Dis 69(1):157–175; doi: 10.1111/tbed.14358.

Shurson GC, Palowski A, van de Ligt JLG, Schroeder DC, Balestreri C, Urriola PE, **Sampedro F**. 2022. New perspectives for evaluating relative risks of African swine fever virus contamination in global feed ingredient supply chains. Transbound Emerg Dis 69(1):31–56; doi: 10.1111/tbed.14174.

Costa M, Brusa V, Padola NL, Etcheverría A, **Sampedro F**, Fernandez PS, Leotta GA, Signorini ML. 2021. Analysis of scenarios to reduce the probability of acquiring hemolytic uremic syndrome associated with beef consumption. Food Sci Technol Int 28(7):613-621; doi: 10.1177/10820132211046124.

McEachran MC, **Sampedro F**, Travis DA, Phelps NBD. 2021. An expert-based risk ranking framework for assessing potential pathogens in the live baitfish trade. Transbound Emerg Dis 68(6):3643–3473; doi: 10.1111/tbed.13951.

Brusa V, Costa M, Padola NL, Etcheverria A, **Sampedro F**, Fernandez PS, Leotta GA, Signorini ML. 2020. Quantitative risk assessment of haemolytic uremic syndrome associated with beef consumption in Argentina. PLOS One 15(11):e0242317; doi: 10.1371/journal.pone.0242317.

Walz E, Middleton J, **Sampedro F**, VanderWaal K, Malladi S, Goldsmith T. 2020. Modeling the transmission of foot and mouth disease to inform transportation of infected carcasses to a disposal site during an outbreak event. Front Vet Sci 6(Jan 14):501; doi: 10.3389/fvets.2019.00501.

## BOOK CHAPTERS

**Sampedro F**. 2021. Qualitative (semi-quantitative) risk assessment: Example of application for the design of a risk-based food inspection system. In: Application of Risk Analysis in Management: One Health Focus. Instituto de Saúde (SES), Brazil.

**Sampedro F**. 2021. Risk ranking: Moving towards a risk-based inspection and surveillance system. In: Pérez-Rodríguez, F (ed). Risk Assessment Methods for Biological and Chemical Hazards. CRC Press, Boca Raton, FL.

## INVITED SPEAKER

### *2022*

The Importance of Quantification and Serotyping in the Process Plant, Latin American Poultry Congress, Honduras.

Risk-based Inspection Model and Risk-based Surveillance Model, Regional Meeting on Strengthening of Technical Capacities in Food Safety, USDA FAS and IICA, Dominican Republic (2 days).

Human aspect in crisis management, World Food Safety Day, Unilever Global (online).

### *2021*

Risk-based inspection models, Training on Principles of Food Safety Risk Analyses, JIFSAN (online, 2 days).

Modernization of the Food Safety Management System, 3M Danone workshop, USA (online).

QMRA model to investigate the public health impact of varying L. monocytogenes levels in food, American Food Frozen Institute (AFFI), USA (online).

QMRA model to investigate the public health impact of varying L. monocytogenes levels in food, CAFPA Spring Seminar Series: Recent Advances in Our Understanding of Listeriosis, Capital Area Food Protection Association Spring Seminar, USA (online).

Integrated food chain risk management, International Congress for the Food Safety Week, Global Certification Bureau, Spain (online). Spanish.

Myths and facts about COVID-19 in foods, World Food Safety Week, SENASA, Honduras (online). Spanish.

Microbiological Risk Assessment Guidelines for Latin America, Simposio Internacional de Inocuidad de Alimentos (SINDA), Colombia (online). Spanish.

Food Safety Challenges in the Post-Pandemic Era, Food safety challenges for sustainable production, 5th Central American Dialogue for the UN Food Systems Summit 2021, Guatemala (online). Spanish.

Risk-based Food Inspection System, virtual roundtables: advancing the implementation of the regional framework for action on food safety in the Western Pacific, WHO Western-Pacific, Philippines (online).

*2020*

Roundtable: Is meat consumption responsible for the endemicity of HUS in Argentina?, Instituto de Promoción de la Carne Vacuna Argentina (IPCVA), Argentina (online). Spanish.

Integrated food chain risk management, InnoFood & IAFP Latin America, Chile (online). Spanish.

Roundtable: World Food Safety, I Foro de Técnicos de Seguridad Alimentaria, Veraliment, Spain (online). Spanish.

Putting a parapet on the COVID-19, IA Alimentos Magazine (interview), Colombia. Spanish.

Risk analysis: tools and case-studies, I Congreso Internacional Veraliment, Spain (online). Spanish.

Integrated food chain risk management, 3M Health Care Academy, Peru (online). Spanish.

Human component in a crisis management, Argentinian Food Safety Commission (CAIA), Argentina (online). Spanish.

Risk Analysis: Known, Emerging and Unknown Hazards, 3M Health Care Academy, México (online). Spanish.

Risk-Based Inspection in Slaughterhouses, Comité Veterinario Permanente (CVP), Uruguay (online). Spanish.

Integrated food chain risk management, International Food Safety Conference, University of Guadalajara, Mexico (online). Spanish.

Fundamentals of risk-based surveillance, World Awareness Antimicrobial Week, SENASA, Costa Rica (online). Spanish.

An integral risk management system in the food chain, Instituto de Promoción de la Carne Vacuna Argentina (IPCVA), Argentina. Spanish.

Crisis management and business continuity in the face of unknown risks, ILSI Mesoamerica, Costa Rica (online). Spanish.

Integrated food chain risk management, III Simposio Iberoamericano de Ciencias Alimentarias y Culinarias-Día de la Alimentación, University of Antioquia, Colombia (online). Spanish.