
JULIANA M. RUZANTE

Summary of Professional Experience

Juliana M. Ruzante is a research public health analyst in RTI International's Center for Health and Environmental Modeling. She is a public health veterinarian with more than 20 years of expertise in food safety and epidemiology of foodborne diseases. She develops strategies to expand RTI's work in the area of food safety and antimicrobial resistance by fostering partnerships across institutes and organizations. Dr. Ruzante also directs and provides technical advice to several projects in food safety, antimicrobial resistance, and public health. She has extensive experience working with data from several foodborne surveillance systems in the United States and using this information to support the development of evidence-based policies and practices to prevent foodborne illness from farm to fork. She has been working with researchers from National Institute of Antimicrobial Resistance Research and Education (NIAMRRE) at Iowa State University (ISU) to develop an antimicrobial resistance (AMR) data coordinating center in Veterinary Medicine and is the lead technical researcher for two contracts with ISU aimed to develop this platform for USDA/APHIS. She is also the technical lead and project director for several Food and Drug Administration (FDA) projects exploring the prevalence and severity of food allergy data in the United States, and the use of diversity, equity, inclusion, and accessibility (DEIA) principles in gathering data; engaging with stakeholders; and conducting research exposures chemicals in foods. Dr. Ruzante has authored several reports and peer-reviewed papers and served on advisory committees, including the National Advisory Committee on Microbiological Criteria for Foods; the Food and Drug Administration's Food Advisory Committee; and expert meetings organized by the National Academies, The Food and Agriculture Organization of the United Nations, and the World Health Organization. Dr. Ruzante is an adjunct assistant professor at the School of Public Health at San Diego State University and an affiliate member of National Institute of Antimicrobial Resistance Research and Education (NIAMRRE).

Education

PhD, Comparative Pathology, University of California, Davis, Davis, CA, 2007.
MS, Preventive Veterinary Medicine, University of California, Davis, Davis, CA, 2007.
DVM, University of São Paulo, São Paulo, Brazil, 2000.

Professional Experience

2017 to date. San Diego State University, School of Public Health.

Adjunct Assistant Professor (2018 to date).

Lecturer (2017 to 2021). Develop and taught a spring semester course on Environmental Protection for MPH students. The course provided an overview of issues central to environmental health concentrating on food safety and the control of vector-borne diseases.

2014 to date. RTI International, Research Triangle Park, NC.

Research Public Health Analyst, Center for Health and Environmental Modeling. Serves as an expert in food safety, antimicrobial resistance (AMR), and One Health issues. Expands RTI's business portfolio by fostering partnerships, applying for grants, and presenting RTI's work to potential clients. Manages and leads RTI's work on the area of AMR in Veterinary Medicine and

One Health. Works across disciplines at RTI to develop innovative solutions for food safety and AMR.

2011 to 2014. The Pew Charitable Trusts, Washington, DC.

Senior Associate, Food Safety Campaign. Developed, carried out, and managed a comprehensive research plan to evaluate the safety of meat and poultry. Served as an expert to the Food Safety Campaign and the Food Team at the Government Performance group for issues related to food safety, risk analysis, and priority setting.

2008 to 2011. University of Maryland, College Park, MD.

Research Associate, Risk Analysis Program Manager, Joint Institute for Food Safety and Applied Nutrition (JIFSAN). Responsible for coordinating and managing the JIFSAN's food safety risk analysis training programs and FoodRisk.org, an online database on food safety and risk analysis. Networked with federal agencies and international organizations to leverage funds for capacity development in the area of risk analysis. Served as affiliated faculty at the Department of Food Science and Nutrition at University of Maryland. Served as a Principal Investigator (PI) and Co-PI of several grant projects that involved multiple institutions across the United States and Europe. Served as a member of the Graduate Thesis Committee and provided scientific guidance to visiting scientists and undergraduate students.

2007 to 2008. University of Guelph, Guelph, ON.

Postdoctoral Fellow, School of Engineering. Developed and operationalized a multifactorial framework to rank foodborne risks using multi-criteria decision analysis (MCDA). Designed and conducted research in the areas of consumer perception and acceptance of risk, expert elicitation on food source attribution, and burden of illness to support the implementation of the framework. Participated in systematic review projects as a reviewer. Presented the work at several meetings. Wrote grants and reports. Submitted papers to peer-reviewed journals.

2002 to 2007. University of California, Davis, Davis, CA.

Junior Specialist (April to June 2007). Helped the Western Institute for Food Safety and Security (WIFSS) with developing consumer information materials about food safety. Developed technical content for WIFSS's website. Represented the WIFSS in meetings and provided technical support in the areas of food safety and animal health.

Graduate Student Researcher (2005 to 2007). Developed the WIFSS agroterrorism training material to spread awareness to farm workers. Coauthored and delivered the Principles of Detection and Diagnosis—Strategies and Technologies course Appointed as a University of California, Davis representative. Represented the university at the Food Safety Research Consortium.

Graduate Student Researcher (2002 to 2006). For the Dairy Food Safety Laboratory, designed, optimized, and conducted field studies to evaluate the accuracy of a culture method and real-time polymerase chain reaction (PCR) assay for the detection of *Mycobacterium avium* subsp. *paratuberculosis* (MAP) in milk. Was awarded a 1-year grant from the U.S. Department of Agriculture (USDA) to use a multiplex real-time PCR assay to screen milk filters and environmental samples for MAP. Collaborated with the Brazilian Dairy website, MilkPoint, to write articles about animal health.

2000 to 2002. Chapecó Cia Industrial de Alimentos, São Paulo, Brazil.

Quality Control Assistant. Served as a liaison between Marketing and Commercial Departments and the Quality Control Department. Responsible for evaluating the quality and safety complaints associated with the company's products. Performed food safety inspections at retail and

warehouses and at poultry and pork processing plants. Coordinated the implementation of the consumer service hotline. Served as a member of the commission from the União Brasileira de Avicultura (UBA, Brazilian Poultry Association) in charge of developing the proposal titled Brazilian Guidelines for Pathogen Reduction in Poultry—from Farm to Fork. Served as the group leader for the Consumer and Retail section of the document.

Professional Service

Affiliate Member, National Institute of Antimicrobial Resistance Research and Education (NIAMRRE), 2020 to date
Member, International Network on Risk-Benefit Assessment of Foods (RBA Network), 2018 to date
Guest Lecturer on Evidence-based decision making in food safety at the International Training Program on Food Safety, University of Ghent, Belgium, 2017 to 2019
Member, U.S. Food and Drug Administration's Food Advisory Committee, 2014 to 2016
Member, National Advisory Committee on Microbiological Criteria for Foods, 2013 to 2015
Member, National Research Council's Committee on a review of USDA's Agricultural and Food Research Initiative, 2013 to 2014
Member, Standing Committee on the Use of Public Health Data in FSIS's Food Safety Programs from National Research Council and Institute of Medicine, 2008 to 2013
Member, Microbial Modeling and Risk Analysis Professional Development Group at International Association of Food Protection, 2009 to 2011
Member, National Research Council Committee on the Evaluation of the Food Safety Requirements of the Federal Purchase Ground Beef Program, 2010
Committee member, for the review of methodology proposed by FSIS for follow-up surveillance of in-commerce business from the National Academies, Institute of Medicine 2009
Committee member, for the review of use of process indicators in FSIS Public Health Risk-based Inspection System from the National Academies, Institute of Medicine, 2008 to 2009
Served as an expert on the meeting organized by the Food Agriculture Organization and the World Health Organization on the risks associated with in follow-up formula, 2008
Member, Food Safety Research Consortium Steering Committee, 2006 to 2007

Computer Skills

Palisade Decision Tools with @Risk, Statistical software Minitab, Decision-Lab, and Decision analysis.

Languages

Spanish and Portuguese (fluent in both)

Books, Book Chapters, and Monographs

Ruzante, J. M., Whiting, R. C., Dennis, S. B., & Buchanan, R. L. (2012). Microbial risk assessment. In M. P. Doyle, and R. L. Buchanan (Eds.), *Food microbiology: Fundamental and frontiers* (5th ed.). Washington, DC: ASM International.

Yan, X., Peng, Y., Meng, J., Ruzante, J., Fratamico, P. M., Huang, L., et al. (2011). Ontology selection and semantic web to an integrated information system for food-borne diseases and food safety (Chapter 76). *Software tools and algorithms for biological systems*. New York: Springer.

- Davidson, V. J., Ruzante, J. M., & Donoso, C. D. (2011). Multi-factorial assessment of microbial risks in foods: Merging engineering, science and social dimensions (Chapter 7). *Food engineering at the interfaces*. New York: Springer.
- Ruzante, J. M. & Cullor, J. S. (2009). Biosecurity. *The 5-minute veterinary consult: Ruminant*. In Haskell, S. R. R. (Ed.). Philadelphia, PA: Lippencott Williams & Wilkins.
- Ruzante, J. M. (2009). Body score for dairy goats. *The 5-minute veterinary consult: Ruminant*. In Haskell, S. R. R. (Ed.). Philadelphia, PA: Lippencott Williams & Wilkins.
- Ruzante, J. M. (2009). On-farm pasteurization. *The 5-minute veterinary consult: Ruminant*. In Haskell, S. R. R. (Ed.). Philadelphia, PA: Lippencott Williams & Wilkins.

Peer-Reviewed Journal Articles

- Ruzante, J. M., Harris, B., Plummer, P., Raineri, R. R., Loy, J. D., Jacob, M., Sahin, O., & Kreuder, A. J. (2022). Surveillance of antimicrobial resistance in veterinary medicine in the United States: Current efforts, challenges, and opportunities. *Frontiers in Veterinary Science*, 9. <https://doi.org/10.3389/fvets.2022.1068406>
- Ruzante, J. M., Olin, K., Munoz, B., Nawrocki, J., Selvarangan, R., & Meyers, L. (2021). Real-time gastrointestinal infection surveillance through a cloud-based network of clinical laboratories. *PLoS One*, 16(4). <https://doi.org/10.1371/journal.pone.0250767>
- Lambertini, E., Ruzante, J. M., & Kowalcyk, B. B. (2020). The public health impact of implementing a concentration-based microbiological criterion for controlling salmonella in ground turkey. *Risk Analysis*. <https://doi.org/10.1111/risa.13635>
- Nelson, A., Manandhar, S., Ruzante, J., Gywali, A., Dhakal, B., Dulal, S., Chaulagai, R., & Dixit, S. M. (2020). Antimicrobial drug resistant non-typhoidal *Salmonella enterica* in commercial poultry value chain in Chitwan, Nepal. *One Health Outlook*, 2, 18. <https://doi.org/10.1186/s42522-020-00025-4>
- Lambertini, E., Ruzante, J. M., Chew, R., Apodaca, V., & Kowalcyk, B. B. (2019). The public health impact of different microbiological criteria approaches for *Salmonella* in chicken parts. *Microbial Risk Analysis*, 12, 44–59 <https://doi.org/10.1016/j.mran.2019.06.002>
- Pires, S. M., Boué, G., Boobis, A., Eneroth, H., Hoekstra, J., Membré, J-M., ... Nauta, M. J. (2019). Risk benefit assessment of foods: Key findings from an international workshop. *Food Research International*, 116, 859–869. <https://doi.org/10.1016/j.foodres.2018.09.021>
- Ruzante, J. M., Grieger, K. D., Lambertini, E., & Kowalcyk, B. (2017). The use of multi-criteria decision analysis in food safety risk-benefit assessment. *Food Protection Trends*, March/April, 132–139.
- Davidson, V. J., Ravel, R., Nguyen, N. T., Fazil, A., & Ruzante, J. M. (2011). Food-specific attribution of selected gastrointestinal illnesses: Estimates from a Canadian expert elicitation survey. *Foodborne Pathogens and Disease*, 8(9), 983–995. doi:10.1089/fpd.2010.0786
- Ravel, R., Davidson, V. J., Ruzante, J. M. & Fazil, A. (2010). Foodborne proportion of gastrointestinal illness: Estimates from a Canadian expert elicitation survey. *Foodborne Pathogens and Disease*, 7(12), 1463–1472. doi:10.1089/fpd.2010.0582
- Ruzante, J. M., Davidson, V. J., Caswell, J., Fazil, A., Cranfield, J., Henson, J., et al. (2010). A multi-factorial risk prioritization framework for food-borne pathogens. *Risk Analysis*, 30(5), 724–742. doi:10.1111/j.1539-6924.2009.01278.x

- Ruzante, J. M., Lombard, J. E., Wagner, B., Fossler, C. P., Karns, J. S., Van Kessel, J. A. S., et al. (2010). Factors associated with *Salmonella* presence in environmental samples and bulk-tank milk from U.S. dairies. *Zoonoses and Public Health*, 57(7–8), e217–e225. doi:10.1111/j.1863-2378.2010.01333.x
- Ruzante, J. M., Majowicz, S. E., Fazil, A., & Davidson, V. J. (2010). Hospitalization and deaths for select enteric illnesses and associated sequelae in Canada. *Epidemiology and Infection*, 139(6), 937–945. doi:10.1017/S0950268810001883
- Ruzante, J. M., Gardner, I. A., Cullor, J. S., Kirk, J. H., Smith, W. L. & Adaska, J. M. (2008). Detection of *Mycobacterium avium* subsp. *paratuberculosis* in pre and post-pasteurized waste milk delivered to California calf ranches. *Foodborne Pathogens and Disease*, 5(5), 681–686. doi:10.1089/fpd.2008.0082
- Jaravata, C. V., Smith, W. S., Rensen, G. R., Ruzante, J. M. & Cullor, J. S., (2007). Survey of ground beef for the detection of *Mycobacterium avium* subsp. *paratuberculosis*. *Foodborne Pathogens and Disease*, 4(1), 103–106.
- Jaravata, C. V., Smith, W. L., Rensen, G. J., Ruzante, J. M. & Cullor, J. (2006). Detection of *Mycobacterium avium* subsp. *paratuberculosis* in bovine manure using Whatman FTA card technology and lightcycler real-time PCR. *Foodborne Pathogens and Disease*, 3(2), 212–215.
- Ruzante, J. M., Smith, W. L., Gardner, I. A., Thornton, C. G. & Cullor, J. S. (2006). Modified culture protocol for isolation of *Mycobacterium avium* subsp. *paratuberculosis* from raw milk. *Foodborne Pathogens and Disease*, 3(4), 457–460.
- Rensen, G. G., Smith, W. L., Ruzante, J. M., Sawyer, M., Osburn, B. & Cullor, J. (2005). Development and evaluation of a real-time fluorescent polymerase chain reaction assay for the detection of bovine contaminates in cattle feed. *Foodborne Pathogens and Disease*, 2(2), 152–159.
- Rodrigues, P. H. M., Ruzante, J. M., Senatore, A. L., Lima, F. R., Melotti, L. & Meyer, P. M. (2004). Evaluation of microbial inoculation on nutritional and fermentative quality of corn silage. *Revista Brasileira de Zootecnia*, 33(3), 538–545.

Presentations and Proceedings

- Ruzante, J. M., Kreuder, A. (2021). *A Pilot Data Coordinating Center for AMR in Veterinary Medicine*. Presented at IDEXX AMR Sprint, Online.
- Ruzante, J. M., Kreuder, A. (2021). Successful Cross-Sector Collaborations in the AMR Space: *Working Towards Establishing a Pilot Data Coordinating Center for AMR in Veterinary Medicine*. Presented at the NIAMRRE Annual Conference, Online.
- Lambertini, E., Kowalczyk, B., & Ruzante, J. M. (2017, December 12). *Assessing the impact of different microbiological criteria for Salmonella in raw poultry products*. Presented at the Society for Risk Analysis Annual Meeting, Arlington, VA.
- Ruzante, J. M., & Eskin, S. E. (2013). *Too slow: An analysis of the 2011 Salmonella ground turkey outbreak and recommendations for improving detection and response*. Poster presented at the Annual Meeting of the American Public Health Association, Boston, MA.
- Ravel, R., Davidson, V. J., Fazil, A., & Ruzante, J. M. (2010). *Divergence among Canadian experts on human illness food attribution*. Poster presented at International Conference on Emerging Infectious Diseases (ICEID), Atlanta, GA.
- Ruzante, J. M. (2010). *Building capacity in risk analysis and food safety through partnerships*. Presented at the Annual Meeting of the International Association of Food Protection, Anaheim, CA.

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- Ruzante, J. M. (2010). *Overview of JIFSAN and food safety risk analysis*. Presented at the French National Institute for Agricultural Research (INRA), Paris, France.
- Ruzante, J. M. (2009) *FoodRisk.org: An online resource in risk analysis*. Presented at the Joint Symposium of the Interagency Risk Assessment Consortium (IRAC), the Society for Risk Analysis (SRA), the Center for Biologics Evaluation and Research (CBER), and the Joint Institute for Food Safety and Applied Nutrition (JIFSAN) titled New Tools, Methods, and Approaches for Risk Assessment, Baltimore, MD.
- Ruzante, J. M. (2009). *FoodRisk.org: An online resource in risk analysis*. Presented at a Food Safety and Inspection Service's lunch seminar, Washington, DC.
- Ruzante, J. M. (2009). *FoodRisk.org: An online resource in risk analysis*. Presented to the Advisory Council of the Joint Institute for Food Safety and Applied Nutrition (JIFSAN), Washington, DC.
- Ruzante, J. M. (2009). *FoodRisk.org: An online resource in risk analysis*. Presented at the MedVetNet Meeting, Berlin, Germany.
- Ruzante, J. M. (2009). *Overview of JIFSAN and food safety risk analysis*. Presented at Pan American Health Organization (PAHO) [Agência Nacional de Vigilância Sanitária](#) (ANVISA, National Health Surveillance Agency) training, Brasilia, Brazil.
- Ruzante, J. M. (2009). *Overview of JIFSAN and food safety risk analysis*. Presented to the Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.
- Ruzante, J. M. (2009). *Overview of risk analysis. Hot topics in risk analysis workshop*. Presented to the Asian Pacific Economic Cooperation (APEC), Singapore, Singapore.
- Ruzante, J. M. (2009). *Overview of Risk Analysis*. Presented at MARS Inc. Food Safety Symposium, Hackettstown, NJ.
- Ruzante, J. M. (2009). *The use of multi criteria decision analysis (MCDA) in food safety and public health*. Presented at Pan American Health Organization (PAHO) [Agência Nacional de Vigilância Sanitária](#) (ANVISA, National Health Surveillance Agency) training, Brasilia, Brazil.
- Ruzante, J. M. (2009). *The use of multi criteria decision analysis (MCDA) in food safety and public health*. Presented at the *Center for Food Safety and Applied Nutrition and U.S. Food and Drug Administration's Risk Analysis Seminar*, Washington, DC.
- Ruzante, J. M. (2009). *The use of multi criteria decision analysis (MCDA) in food safety and public health*. Presented to the National Academies, Washington, DC.
- Ruzante, J. M. (2009). *Understanding foodborne disease outbreak*. Presented at MARS Inc. Food Safety Symposium, Hackettstown, NJ.
- Ruzante, J. M., Gendell, S., & McKillop, K. (2009). *FoodRisk.org: An online resource on food safety risk analysis*. Poster presented to the Society of Risk Analysis, Baltimore, MD.
- Fazil, A., Ruzante, J. M., Davidson, V. J., Cranfield, J., Henson, J., Caswell, J., et al. (2008). *A multi-factorial risk prioritization framework for food-borne pathogens*. Poster presented to the Society of Risk Analysis, Boston, MA.
- Ruzante, J. M. (2008). *FoodRisk.org: An online resource in risk analysis*. Presented at the Quarterly Meeting of the Interagency Risk Assessment Consortium, Washington, DC.
- Ruzante, J. M., Davidson, V. J., Fazil, A., Cranfield, J., Henson, J., Caswell, J., et al. (2008). *A multi-factorial risk prioritization framework for foodborne pathogens*. Poster presented to the International Association of Food Protection, Columbus, OH.
- Ruzante, J. M. (2007). *Principles of detection and diagnosis*. Presented at 1-day training, Tulare, CA.
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- Ruzante, J. M., Davidson, V. J., Fazil, A., Cranfield, J., Henson, J., Caswell, J., et al. (2007). *A multi-factorial risk prioritization framework for food-borne pathogens*. Poster presented at Guelph Food Safety Seminar, Guelph, Ontario, Canada.
- Ruzante, J. M., Smith, W. L., Gardner, I. A., Thornton, C., & Cullor, J. S. (2005). *New culture protocol for isolation of Mycobacterium avium subsp. paratuberculosis in raw milk*. Poster presented at the 8th International Colloquium of Paratuberculosis, Copenhagen, Denmark.
- Ruzante, J. M., Smith, W. L., Jaravata, C., Gardner, I. A. & Cullor, J. S. (2005). *Application of a rapid extraction method with real-time PCR for the detection of Mycobacterium avium subsp. paratuberculosis in raw milk*. Poster presented at the 8th International Colloquium of Paratuberculosis, Copenhagen, Denmark.
- Fonseca, L. F. L., Ruzante, J. M., Oliveira, C. A. F., Rodrigues, P. H. M., & Pinto, D. M. (2000). *Coliform concentration in water used for cleaning milk equipment in dairy farms in Brazil and its correlation with milk quality*. Poster presented to the Pacific Congress on Milk Quality and Mastitis Control, Nagano, Japan.
- Ruzante, J. M., Fonseca, L. F. L., Oliveira, C. A. F., Rodrigues, P. H. M., & Pinto, D. M. (2000). *Concentration of hardness, alkalinity and nitrate in the water used for cleaning milk equipment in Brazilian dairy farms*. Poster presented at the X International Congress on Animal Hygiene, Maastricht, Holland.
- Ruzante, J. M., Fonseca, L. F. L., Oliveira, C. A. F., Rodrigues, P. H. M., & Pinto, D. M. (2000). *Isolation of Pseudomonas sp. in water used for cleaning milk equipment in dairy farms in Brazil and its correlation with Pseudomonas sp. isolation in milk*. Presented at X International Congress on Animal Hygiene, Maastricht, Holland.

Other Publications

- Ruzante, J. M., Shumaker, E. T., Holt, S., Mayer, S., Kokotovich, A., Cuchiara, M., Binder, A. R., Kuzma, J., & Grieger, K. (2022). *Eliciting stakeholder perceptions using a novel online engagement platform: A case study on nano-agrifoods*. RTI Press. RTI Press Occasional Paper No. OP-0071-2201. <https://doi.org/10.3768/rtipress.2022.op.0071.2201>

Technical Reports

- Ruzante, J. M., Kowalczyk, B., & Redmon, J. (2020). *FAO guide to ranking food safety risks at the national level*. Food and Agricultural Organization (FAO).
- The Pew Charitable Trusts. (2013). *Too slow: An analysis of the 2011 Salmonella ground turkey outbreak and recommendations for improving detection and response*. Prepared for The Pew Charitable Trusts (Ruzante, J. M. was one of the contributors). Available at http://www.pewtrusts.org/~media/legacy/uploadedfiles/phg/content_level_pages/reports/13003GroundTurkeyP15awebpdf.pdf
- The Pew Charitable Trusts. (2013). *Weakness in FSIS's Salmonella regulation*. Prepared for The Pew Charitable Trusts (Ruzante, J. M. was one of the contributors). Available at http://www.pewtrusts.org/~media/legacy/uploadedfiles/phg/content_level_pages/reports/FSISChickenOutbreakReportv6pdf.pdf
- Ruzante, J. M., & Yoe, C. (2010). *JIFSAN overview of risk analysis*. Prepared for The Joint Institute for Food Safety and Applied Nutrition.
- Ruzante, J. M., & Gillespie, J. R. (2006). *Principles of detection and diagnosis—strategies and technologies*. Prepared for The Western Institute for Food Safety and Security.

Ruzante, J. M. (2005). *WIFSS agroterrorism training material for farm workers awareness*. Prepared for The Western Institute for Food Safety and Security.

Ruzante, J. M. (2000). *Guidelines for water quality for dairy farms. Alfa-laval manual*. Prepared for Alfa-laval.