

**Brian Shawn Eblen**  
**Senior Scientist**

**Professional Profile**

Mr. Brian Shawn Eblen is a Senior Scientist in Exponent's Health Sciences Center for Chemical Regulation and Food Safety, where he contributes his more than 20 years of experience of diverse government and consulting experience to support his clients' development of food safety solutions. At Exponent, Mr. Eblen has utilized his expertise to assist clients in various areas including performing root cause analysis to determine the likely cause of product failures and evaluating food safety and quality systems for food companies. Mr. Eblen has participated on Exponent teams investigating and providing advise on many of this country's largest and most visible foodborne illness outbreaks and recalls, as well as Exponent teams supporting industry efforts to change FDA and USDA food safety regulatory policies. Mr. Eblen's broad problem-solving abilities address plant and animal based commodities across the entire food production process through retail and the food service continuum.

Prior to joining Exponent in 2006, Mr. Eblen was a microbiologist at the Food and Drug Administration's (FDA) Center for Food Safety and Applied Nutrition (CFSAN). Mr. Eblen's work at the Agency addressed many food safety issues including conducting research that provided a scientific basis for FDA's Juice HACCP regulation and serving as a science consultant to the FDA team managing the U.S. Food Code and Pasteurized Milk Ordinance. While at FDA, Mr. Eblen also provided his expertise to test and evaluate bio-threat test kits for their efficacy in foods, and participated with Centers for Disease Control in training on protocols to detect threat agents.

Mr. Eblen served with the United States Department of Agriculture's (USDA) Agricultural Research Service (ARS) at the Eastern Regional Research Center. At USDA Mr. Eblen designed experiments and managed projects that addressed many food safety issues associated with the meat industry, including conducting studies that served as the basis for the USDA Food Safety & Inspection Service (FSIS) policy on recycling brine and glycol cooling solutions and conducting water reuse studies that served as the basis for FSIS approval for use by the meat industry. Mr. Eblen also conducted research on microbiological sampling of meat carcasses that served as the scientific basis for HACCP/Pathogen Reduction regulation.

**Academic Credentials and Professional Honors**

M.S., Bioscience, Drexel University, 1997  
B.S., Microbiology, Auburn University, 1991

Outstanding Support Scientist of the Year, CFSAN (2005); Secretary's Award for Distinguished Service-Bioterrorism Preparedness, DHHS (2005); Team Award- Food Code Writer's Team, CFSAN (2005); Group Recognition Award- CFP Task Force Group, FDA (2004); Special Recognition Award- Rapid methods/LRN Group FDA CFSAN (2002); Quality Performance

Award CFSAN (2001); Group Recognition Award- *Listeria monocytogenes* risk assessment group FDA (2001); Group Recognition Award- *Salmonella* Enteritidis in eggs group FDA (2001); Teamwork/Collegiality Award CFSAN (2000); Award of Merit for Excellence in Technology Transfer Federal Laboratory Consortium (1998); Certificate of Appreciation for excellence in joint USDA FSIS/ARS efforts leading to the adoption of the HACCP/Pathogen Reduction Regulation, FSIS (1997)

## Publications

Sharma SK, Ferreria JL, Eblen BS, Whiting, RC. Detection of type A, B, E, and F *Clostridium botulinum* neurotoxins in foods by using an amplified enzyme-linked immunosorbent assay with digoxigenin0labeled antibodies. *Applied and Environ Microbiology* 2006; 72:1231–1238.

Sharma SK, Eblen BS, Bull RL, Burr DH, Whiting RC. Evaluation of lateral-flow *Clostridium botulinum* neurotoxin detection kits for food analysis. *Applied and Environ Microbiology* 2006; 71:3935–3941.

Penteado AL, Eblen BS, Miller AJ. Evidence of *Salmonella* internalization into fresh mangoes during simulated post harvest processing procedures. *J Food Protection* 2004; 67:181–184.

Eblen BS, Walderhaug MO, Edelson-Mammel SG, Chirtel SJ, De Jesus A, Merker RI, Buchanan RL, Miller AJ. Potential for internalization, growth and survival of *Salmonella* and *Escherchia coli* in O157:H7 in oranges. *J. Food Protection* 2003; 77:1578–1587.

Juneja VK, Novak JS, Eblen BS, Mcclane BA. Heat resistance of *Clostridium perfringens* vegetative cells as affected by prior heat shock. *J Food Safety* 2001; 21:127–139.

Juneja VK, Eblen BS, Marks HM. Modeling non-linear survival curves to calculate thermal inactivation of *Salmonella* in poultry of different fat levels. *Int J Food Microbiology* 2001; 22(70):37–51.

Miller AJ, Bayles DO, Eblen BS. Cold shock induction of thermal sensitivity in *Listeria monocytogenes*. *Appl Environ Microbiology* 2000; 66:4345–4350.

Juneja VK, Eblen BS. Heat inactivation of *Salmonella typhimurium* DT104 in beef as affected by fat content. *Lett Appl Microbiology* 2000; 30:461–467.

Juneja VK, Eblen BS. Predictive thermal inactivation model for *Listeria monocytogenes* with temperature, pH, NaCL, and sodium pyrophosphate as controlling factors. *J Food Protection* 1999; 62:986–993.

Juneja VK, Marmer BS, Eblen BS. Predictive model for the combined effect of temperature, pH, sodium chloride, and sodium pyrophosphate on the heat resistance of *Escherichia coli* O157:H7. *J Food Safety* 1999; 19:147–160.

Duffy G, Riordan DCR, Sheridan JJ, Eblen BS, Whiting RC, Blair IS, McDowell DA. Differences in thermotolerance of various *Escherichia coli* O157:H7 strains in a salami matrix. *Food Microbiology* 1999; 16:83–91.

Palumbo SA, Klein P, Capra J, Eblen BS, Miller AJ. Comparison of excision and swabbing sampling methods to determine the microbiological quality of swine carcass surfaces. *Food Microbiology* 1999; 16:459–464.

Miller AJ, Eblen BS, Oser A, Burkhardt W. Application and evaluation of mole-specific bacteriophage as a process integrity or fecal contamination indicator in a pork slaughterhouse environment. *J Appl Microbiology* 1998; 85:898–904.

Riordan DC, Duffy G, Sheridan J, Eblen BS, Whiting RC, Blair IS, McDowell DA. Survival of *Escherichia coli* O157:H7 during the manufacture of pepperoni. *J Food Protection* 1998; 61:146–151.

Rajkowski KT, Eblen BS, Laubauch C. Efficacy of washing and sanitizing trailers used for swine transport in reduction of *Salmonella* and *Escherichia coli*. *J Food Protection* 1998; 61:31–35.

Miller AJ, Call JE, Eblen BS. Growth, Injury and Survival potential of *Yersinia enterocolitica*, *Listeria monocytogenes*, and *Staphylococcus aureus* in brine chiller conditions. *J Food Protection* 1998; 60:1334–1340.

Juneja VK, Eblen BS, Marmer BS, Williams AC, Palumbo SA, Miller AJ. Thermal resistance of nonproteolytic type B and type E *Clostridium botulinum* spores in phosphate buffer and turkey slurry. *J Food Protection* 1995; 58:758–763.

Juneja VK, Eblen BS. Influence of sodium chloride on thermal inactivation and recovery of nonproteolytic *Clostridium botulinum* type B KAP B5 spores. *J Food Protection* 1995; 58:813–816.

### **Presentations and Published Abstracts**

Centrella W, Eblen BS, Maduff W, Miller AJ, Larsen S, Warren-Serna W. Prevalence and level distribution of *Salmonella* spp. from retail pork cuts from four United States cities. Poster presented at the Annual Meeting of International Association of Food Protection, Columbus, OH, August 2008.

Eblen BS. Current issues in food safety. National Science Teachers Association Annual Meeting, Boston MA, March 2008.

Eblen BS. Current issues in food safety. FDA/NSTA Professional Development Program in Food Science, Washington DC, July 2006.

Eblen BS, Whiting RA. *Listeria monocytogenes* in ready-to-eat foods and interventions that affect the relative risk. FDA Regional Science Forum, Denver CO, May 2005.

Eblen BS, Ottenson A and Miller AJ. The effects of agricultural pesticide and antibiotic applications on apples and apple juice microflora. Presented poster presentation at the Annual meeting of FDA Science Forum, Washington DC, April 2005.

Eblen BS. Food safety concerns. FDA New Inspectors Training Course, Annapolis, MD, March 2004.

Eblen BS. Reducing foodborne illness resulting from hand contact of ready-to-eat foods. Ohio State Health Department Annual Meeting, Columbus, OH, March 2003.

Eblen BS. Current Listeria research in ready to eat foods. Pittsburgh Regional AFDO Annual Meeting, December 2002.

Eblen BS, Penteado AL and Miller AJ. Evidence of *Salmonella* internalization into fresh mangoes during simulated post harvesting procedures. Presented poster presentation at Annual meeting of International Association of Food Protection, San Diego, CA, June 2002.

Eblen BS, Whiting RC, Miller AJ. Growth potential of *Listeria monocytogenes* in commercially prepared ready-to-eat deli salads stored at refrigeration temperatures. Presented poster presentation at Annual Meeting of International Association of Food Protection, San Diego, CA, June 2002.

Eblen BS. Food microbiology review. FDA Regional Train the Trainer Course, Alameda and Modesto, CA, September 2001.

Food microbiology in Chapter 3 of the US Food Code. FDA Regional Train the Trainer Course, Houston, TX, September 2000.

Eblen BS, Walderhaug, M, Miller AJ. Routes of infiltration, survival, and growth of *Salmonella enterica* Serovar Hartford and *Escherichia coli* O157:H7 in Oranges. IAFP Annual Meeting, Atlanta, GA, August 2000.

### **Prior Experience**

Microbiologist, U.S Food and Drug Administration, Center for Food Safety and Applied Nutrition, 1999–2006

Support Scientist (1993–1999), Biological Laboratory Technician (1991–1993), United States Department of Agriculture, Agricultural Research Service, Eastern Regional Research Center

## **Project Experience**

Performed root cause analysis, for a brewery, to determine likely cause of a beer spoilage event. Provided client with likely causes of the spoilage and recommendations to prevent another occurrence.

Demonstrated that packaged frozen food exposed to a warehouse fire was safe for human consumption. The Exponent team conducted the on-site investigations, identified potential hazards, developed a laboratory analytical protocol, evaluated the results, and conducted a risk assessment. Based on Exponent's report, USDA allowed for the food to be released into commerce.

Performed an on-site investigation and risk assessment to determine if food exposed to an ammonia leak from a refrigerated warehouse was safe for human consumption. Advised the client of the potential human health risks and the approach to assess safety of the products.

On behalf of a trade association, evaluated thermal inactivation data used to develop a risk assessment demonstrating to USDA that the consumer guidance for the end-point cooking temperature of pork could be lowered to 145°F (for 3 minutes) without a significant decrease the food safety of the product. The agency issued their acceptance of this recommendation on May 22, 2011.

Evaluated for a major beverage producer several dairy operations in Europe to assess the current state of their food safety and quality systems. Advised client on prioritized areas for improvement.

Assessed and recommended improvements of food safety systems of a major dried fruit processor, including growing, field drying, harvesting and manufacturing operations. Also assessed the inherent food safety properties of the client's products.

Performed health hazard assessment of beverages with foreign material contamination. Provided client with assessment of the likely risk from this contamination and determined the potential for more contaminated units in commerce.

Provided recall management support and performed a root cause analysis to determine the likely cause of a failure of acidified baby foods.

Analyzed production records for a flavor manufacturer to determine the amount of products made with an ingredient contaminated with *Salmonella*, and determined whether further processing of the product eliminated the pathogen. Exponent provided this information to FDA and helped persuade the agency not to recall the final product.

### **Journal Peer Reviewer**

- *Journal of Food Protection*
- *Food Microbiology*

### **Professional Affiliations**

- International Association of Food Protection