

**CURRICULUM VITAE**  
**Carlota Medus, Ph.D., M.P.H.**

**Address**

Business                      Foodborne Diseases Unit  
Foodborne, Waterborne, Vectorborne, and Zoonotic Diseases Section  
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**Education**

2005    Ph.D. Environmental Health Sciences  
          Concentration: Infectious disease epidemiology, foodborne disease epidemiology  
          School of Public Health, University of Minnesota

1999    M.P.H. Epidemiology  
          School of Public Health, University of Minnesota

1990    B.A. Psychology  
          College of Liberal Arts, University of Minnesota

**Professional Experience**

1998-Present. Foodborne Diseases Unit  
Foodborne, Waterborne, Vectorborne, and Zoonotic Diseases  
Infectious Disease Epidemiology, Prevention and Control  
Minnesota Department of Health

- 1998-1999. Student Worker Paraprofessional Senior
- 1999-2002. Epidemiologist Intermediate
- 2002-2006. Epidemiologist Senior
- 2006-2017. Epidemiologist Principal, Unit Lead
- 2017-Present. Epidemiologist Supervisor Senior

**Supervisory Roles**

2017-Present. Supervision of twelve epidemiology staff (10 epidemiologists, one research scientist, and one health program representative). Supervision of all Foodborne Disease Unit activities as part Federally funded programs including but not limited to enteric disease surveillance, FoodNet, Minnesota Integrated Food Safety Center of Excellence, norovirus surveillance, outbreak detection and investigations, outbreak reporting to CDC's NORS, and state-funded activities such as the Foodborne and Waterborne Illness Hotline (1-877-FoodIII).

2020-Present. Epidemic Intelligence Service Officer, Secondary Supervisor. Prior to secondary supervisor classification, mentored every EISO assigned to MDH in foodborne disease surveillance, and outbreak detection and investigation.

1999-Present. Supervision of “Team Diarrhea”, approximately eight to 14 graduate students working in foodborne disease surveillance, outbreak investigation, and FoodNet studies (currently 12 students, 215 students since 1999).

### **Outbreak Investigations and Surveillance Activities**

1999-Present. Active surveillance for enteric pathogens, FoodNet site Co-Principal Investigator. Responsible for *Campylobacter*, *Listeria*, *Salmonella*, Shiga toxin producing *E. coli* (STEC), *Shigella*, *Vibrio*, and *Yersinia* surveillance, including cluster investigation, outbreak detection, and multi-state collaboration in investigations. Implemented surveillance for pathogenic *E. coli* detected by culture independent diagnostic testing (CIDT), including enterotoxigenic *E. coli* (ETEC) and enteroaggregative *E. coli* (EAEC or EAagg). Also in charge of outbreak detection using the Foodborne and Waterborne Illness Hotline, a centralized complaint system, including outbreaks caused by norovirus, bacterial intoxications, and all other etiologies not captured by the pathogen-specific surveillance system.

1999-Present. Outbreak investigations, enteric diseases (foodborne and other routes of transmission), including multi-state outbreak investigations. Responsible for leading investigations, working with other agencies, and communicating findings as needed. Examples include: *S. Typhi* in a group home (2004); multi-state *S. Typhimurium* associated with tomatoes from Ohio (2006); a multi-state *S. Typhimurium* outbreak associated with peanut butter (2008-2009); a multi-state *E. coli* O157:H7 outbreak associated with cookie dough (2009); multi-drug resistant *S. Typhimurium* associated with prepackaged salad (2010); *S. Heidelberg* associated with a NICU (2012); *S. Typhimurium* associated with unpasteurized Mexican-style cheese sold at a street corner (2013); a multi-state *Listeria* outbreak associated with pasteurized cheese (2013); three *Salmonella* Enteritidis outbreaks detected by whole genome sequencing associated with pre-packaged chicken Kiev (2014-2021). Currently have oversight of all investigations in the Foodborne Diseases Unit - median, 45 confirmed foodborne outbreaks per year (range, 22 to 68 per year), and 200 to 400 additional investigations per year.

1999-Present. Investigation and response, acute disease outbreaks and/or public health emergencies. Assist as needed in investigation, data collection, staffing hotlines for the public and/or health care providers. Examples include: investigation of deaths due to *Clostridium sordellii* infections associated with allografts (2001); response to anthrax 2001 (2001-2002); dead bird monitoring for West Nile in Minnesota (2002); smallpox vaccination of public health workers (2002); immune-mediated polyradiculoneuropathy in pig slaughter plant workers (2007-2008); nH1N1 response (2009), swine influenza cases: H3N2 (2010); H1N2 (2011); Ebola response in Minnesota (2014); COVID-19 (2020-2022) response; various Hepatitis A case investigations, and other Division needs (ongoing).

2020-2021. COVID-19 response: Outbreak Detection and Response Team lead. Supervised five epidemiologists in outbreak detection in restaurants, events, and other social settings, including compiling weekly summary reports, media/communications, and data requests. Safety Team epidemiology representative-provided input and data for the Governor’s Executive Orders (EO) and developed guidance to industries interpreting the EO. Congregate Settings (correctional facilities, homeless shelters and encampments) co-lead. Health Care Provider Hotline. Case investigation of Spanish-speaking cases. Spanish translations.

### **Research, Special Studies, Projects, and Initiatives**

**On-going:**

2014-Present. Minnesota Food Safety Centers of Excellence. Assist other state or local health departments in other states in improving foodborne disease surveillance, outbreak detection and investigation in their jurisdiction. Provide real-time outbreak investigation consultation. Conduct trainings (webinars, live trainings, peer-to-peer) for epidemiologists in interviewing, epidemiological methods, and use of whole genome sequencing (WGS) in surveillance and investigations (e.g., <https://nyfoodsafety.cals.cornell.edu/molecular-epidemiology/webinars>).

2021-Present. Collaborate with CDC's Global Health Unit and COMISCA in mentoring and training of Central American ministries of health staff as part of the Field Epidemiology Training Program.

2008-Present. Outbreaks of unexplained etiology. Testing of specimens collected during investigations of outbreak of unexplained etiology across the U.S. Examples of findings in previously unidentified etiologies include sapovirus (CO, MN, OR, VT, WI), norovirus (CO), rotavirus (WI), Arcobacter (WI), and Enteropathogenic *E. coli* (CT, MN, OH). Since 2023, collaborate with CDC's metagenomics laboratory on expanding this project.

**Past activities:**

2000-2005. FoodNet population survey. Site lead.

2000-2006. Role of infected foodworkers in outbreaks of *Salmonella* in restaurants in Minnesota. Principal investigator, PhD dissertation.

2000-2009. STEC, Enterotoxigenic *E. coli* and enteropathogenic *E. coli* sentinel surveillance in Minnesota. Lead epidemiologist.

2001-2003. FoodNet case-control study of risk factors for listeriosis. Site lead.

2002-2003. FoodNet case-control study of risk factors for *Salmonella* Enteritidis infections. Site lead.

2005-2007. Evaluation of Multi-locus Tandem Repeat analysis (MLVA) for surveillance of *Salmonella* Typhimurium and *Salmonella* Enteritidis. Lead epidemiologist.

2006-2016. Laboratory practices surveys and tracking uptake of culture independent diagnostic testing in Minnesota. Lead epidemiologist.

2008-2009. Risk factors for non-O157 STEC infections in Minnesota, case-control study. Study lead investigator.

2010-2023. Risk factors for non-O157 STEC infections in FoodNet sites. Co-chair multi-site working group and site principal investigator.

2012. Comparative Study of STEC Testing Methods in Minnesota. Senior investigator.

2014-2018. Worked with CDC in establishing a multi-state *Vibrio* working group and improving data-sharing among states.

2014-2019. Implementation of whole genome sequencing (WGS) for enteric disease surveillance and outbreak detection. Retrospective and prospective evaluation of WGS for *Salmonella* Enteritidis surveillance. Subsequent implementation for all *Salmonella* serotypes, *Campylobacter*, and other enteric pathogens.

2018-2021. Hurricane recovery assistance to Puerto Rico and U.S. Virgin Islands: Training and consultation to improve foodborne and waterborne disease surveillance and outbreak investigations.

### **Subject Matter Expert Activities**

2016-Present. Council to Improve Foodborne Outbreak Response (CIFOR). SME, Lead Development Team.

- Outbreak of Unknown Etiologies Guidelines
- CIFOR Guidelines for Foodborne Disease Outbreak Response. Chapter 4

2022-Present. Food Safety Modernization Act (FSMA) Surveillance Working Group (S-WG) of the Board of Scientific Counselors, Deputy Director for Infectious Diseases, CDC.

### **Teaching**

#### **Appointments:**

6/2009-Present. Adjunct Assistant Professor, Environmental Health Sciences, School of Public Health, University of Minnesota

6/2009-6/2012. Adjunct Assistant Professor, Public Health Institute, School of Public Health, University of Minnesota

5/2007-6/2009. Adjunct Lecturer, Public Health Institute, School of Public Health, University of Minnesota

#### **Courses:**

2007-2012. Faculty, Global Food Systems: Beef, dairy, eggs, fresh produce, grains and cereals, pork, and poultry. Public Health Institute, University of Minnesota

2006-Present. Lecturer/guest lecturer in a variety of graduate-level and undergraduate courses, including: Exposure to Environmental Hazards, Maternal and Child Health Global Health, Public Health Issues and Veterinary Medicine Opportunities, Foundations of Public Health, Farm to Table Study Program, Department of Biochemistry, Molecular Biology, and Biophysics Undergraduate Honors Seminar, Ecole des hautes études en santé publique (Paris, France).

#### **Mentoring & Academic Advising:**

1999-Present. Responsible for supervision of "Team Diarrhea", approximately eight to 16 graduate students working in foodborne disease surveillance, outbreak investigation, and FoodNet studies (currently 12 students, 215 students since 1999).

1999-Present. Site preceptor for 61 environmental health sciences and epidemiology students completing SPH field experience requirements. List of students available upon request.

2009-Present. Chair of three PhD student committee, member of eight additional PhD students' committees (seven graduated, 1 in progress), and 32 MPH student committees, including

project advising (32 graduated), Divisions of Environmental Health and Epidemiology, SPH. List of students available upon request.

2007-2009. Site supervisor, Veterinary Public Health residents from the University of Minnesota on 3-month Foodborne Disease Unit rotations (4 students). List of students available upon request.

2009-2013. Academic advisor for three MPH-level students (3 graduated), Division of Environmental Health, School of Public Health (SPH). List of students available upon request.

2017-2018. Site supervisor, Medical School student from the University of Minnesota public health/infectious disease epidemiology rotation (2 students). List of students available upon request.

### Publications

1. Kassenborg H, Danila R, Snippes P, Wiisanen M, Sullivan M, Smith K, Crouch N, **Medus C**, Weber R, Korlath J, Ristinen T, Lynfield R, Hull HF, Pahlen J, Boldingh T, Elfering K, Hoffman G, Lewis T, Friedlander A, Heine H, Culpepper R, Henchal E, Ludwig G, Rossi C, Teska J, Ezzell J, Eitzen E, US Dept of Agriculture, NCID, and CDC. Human ingestion of *Bacillus anthracis*- contaminated meat, Minnesota, August 2000. MMWR 2000; 49:813-6.
2. Anderson A, Heryford A, Sarisky J, Higgins C, Monroe S, Beard S, Newport C, Cashdollar J, Shay Fout G, Robbins D, Seys S, Musgrave K, **Medus C**, Bartkus J, Vinjé J, Bresee J, Mainzer H, Glass R. A waterborne outbreak of Norwalk-like virus among snowmobilers – Wyoming, 2001. J Infect Dis 2003; 15;187(2):303-6.
3. Marcus R, Rabatsky-Ehr T, Mohle-Boetani J, Farly M, **Medus C**, Shiferaw B, Carter M, Zansky S, Kennedy M, Van Gilder T, Hadler JL. Dramatic Decrease in the Incidence of *Salmonella* Enteritidis Infections in 5 FoodNet Sites: 1996-1999. Clin Infect Dis 2004;38(Suppl3):S135-41.
4. Imhoff B, Morse D, Shiferaw B, Hawkins M, Vugia D, Lance-Parker S, Hadler J, **Medus C**, Moore M, Van Gilder T. Burden of Self-Reported Acute Diarrheal Illness in FoodNet Surveillance Areas, 1998-1999. Clin Infect Dis 2004;38(Suppl3):S219-26.
5. Green L, Selman C, Banerjee A, Marcus R, **Medus C**, Angulo FJ, Radke V, Buchanan S, EHS-Net Working Group. Food service workers' self-reported food preparation practices: an EHS-Net study. Int J Hyg Environ Health 2005; 208:27-35.
6. Smith KE, Anderson F, **Medus C**, Leano F, Adams J. Outbreak of Salmonellosis at elementary schools associated with dissections of owl pellets. J Vector-borne and Zoonotic Dis 2005; 5(2):133-136.
7. Marcus R, Varma J, **Medus C**, Jones TF, Anderson BJ, Crume T, Moore MR, Fullerton K, Voetsch A, White P, Lyszkowicz E, Angulo F, for the Emerging Infections Program FoodNet Working Group. Re-assessment of risk factors for sporadic *Salmonella* serotype Enteritidis infections: A case-control study in five FoodNet sites, 2002-2003. Epidemiol and Infect 2007; 135(1):84-92.

8. **Medus C**, Smith KE, Bender JB, Besser JM, Hedberg CH. Outbreaks of *Salmonella* in Restaurants in Minnesota, 1995-2003: Evaluation of the Role of Infected Foodworkers. *J Food Prot* 2006;69(8):1870-1878.
9. Scallan E, Jones TF, Cronquist A, Thomas S, Frenzen P, Hoefler D, **Medus C**, Angulo FJ and the EIP working group. Factors associated with seeking medical care and submitting a stool sample in estimating the burden of foodborne illness. *Foodborne Pathog and Dis* 2006;3(4):432-438.
10. Varma JK, Samuel MC, Marcus R, Hoekstra RM, **Medus C**, Segler S, Anderson BJ, Jones TF, Shiferaw B, Haubert N, Meggison M, McCarthy PV, Graves L, Van Gilder T, Angulo FJ. *Listeria monocytogenes* infections from foods prepared in a commercial establishment: a case-control study of potential sources for sporadic illness in the United States. *Clin Infect Dis* 2007;44: 521-528 .
11. Voetsch DC, Angulo FJ, Jones TF, Moore MR, Nadon C, McCarthy P, Shiferaw B, Meggison MB, Hurd S, Anderson B, Cronquist A, Vuigia DJ, **Medus C**, Segler S, Graves LM, Griffin PM for the CDC Emerging Infections Program FoodNet Working Group. Reduction in the incidence invasive listeriosis in the FoodNet sites, 1996-2003. *Clin Infect Dis* 2007;44: 513-520.
12. Boxrud D, Pederson-Gulrud K, Wotton J, **Medus C**, Lyszkowicz E, Besser J, Bartkus JM. Comparison of Multiple-Locus Variable Number Tandem Repeat Analysis, Pulsed-Field Gel Electrophoresis, and Phage Typing for Subtype Analysis of *Salmonella* enterica Serotype Enteritidis. *J Clin Microbiol* 2007 Feb;45(2):536-43. Epub 2006 Dec 6.
13. Jones TF, Ingram LA, Cieslak PR, Vugia DJ, Tobin-D'Angelo M, Hurd S, **Medus C**, Cronquist A, Angulo FJ. Salmonellosis Outcomes Differ Substantially by Serotype. *JID* 2008; 198 (1): 109-14.
14. Smith KE, **Medus C**, Meyer SDW, Boxrud DJ, Leano F, Hedberg CW, Elfering K, Braymen C, Bender JB, Danila RN. Outbreaks of Salmonellosis in Minnesota (1998 through 2006) Associated with Frozen, Microwaveable, Breaded, Stuffed Chicken Products. *JFP* 2008; 71 (10): 2153-2160
15. **Medus C**, Meyer S, Smith K, Jawahir S, Miller B, Viger K, MS, Forstner M, Brandt E, Nowicki S, Salehi E, Phan Q, Kinney A, Cartter M, Flint J, Bancroft J, Adams J, Hyytia-Trees E, Theobald L, Talkington D, Humphrys M, Bopp C, Gerner-Smidt P, Barton Behravesh C, Williams I, Sodha S, Langer A, Schwenson C, Angulo F. Multistate Outbreak of *Salmonella* Infections Associated with Peanut Butter and Peanut Butter-Containing Products — United States, 2008–2009. *MMWR* 2009;58(4):85-90.
16. Hedican EB, **Medus C**, Besser JM, Juni BA, Koziol B, Taylor C, Lappi V, Smith KE. Clinical characteristics of O157 versus non-O157 Shiga toxin-producing *Escherichia coli* (STEC) infections in Minnesota, 2000-2006. *Clin Infect Dis*. 2009 Aug 1;49(3):358-64

17. Hedican E, Hooker C, Jenkins T, **Medus C**, Jawahir S, Leano F, Smith K. Restaurant *Salmonella* Enteritidis outbreak associated with an asymptomatic infected food worker. *J Food Prot.* 2009 Nov;72(11):2332-6.
18. Holzbauer SM, DeVries AS, Sejvar JJ, Lees C, Adjemian J, McQuiston JH, **Medus C**, Lexau C, Harris JR, Recuenco SE, Belay ED, Howell JF, Buss B, Hornig M, Gibbins JD, Brueck SE, Smith KE, Danila RN, Lipkin WI, Lachance DH, Dyck PJD, Lynfield R. Epidemiologic Investigation of Immune-Mediated Polyradiculoneuropathy Among Abattoir Workers Exposed to Porcine Brain. *PLoS One.* March 2010 5(3):1-10.
19. **Medus C**, Smith KE, Bender JB, Leano F, Hedberg CW. *Salmonella* infections in foodworkers identified through routine public health surveillance in Minnesota: impact on outbreak recognition. *Journal of Food Protection*, Vol. 73, No. 11, 2010, Pages 2053–2058.
20. Hoefler D, Hurd S, **Medus C**, Cronquist A, Hanna S, Hatch J, Hayes T, Larson K, Nicholson C, Wymore K, Tobin-D'Angelo M, Strockbine N, Snippes P, Atkinson R, Griffin PM, and Gould LH, for the Emerging Infections Program FoodNet Working Group. Laboratory practices for the identification of Shiga toxin-producing *Escherichia coli* in the United States, FoodNet sites, 2007. *Foodborne Pathogens and Disease*, 2011 Apr;8(4):555-60. Epub 2010 Dec 27.
21. Lowther SA, **Medus C**, Scheftel J, Leano F, Jawahir S, and Smith K. Foodborne Outbreak of *Salmonella* Subspecies IV Infections Associated with Contamination from Bearded Dragons. *Zoonoses Public Health.* 2011 Dec;58(8):560-6.
22. Cavallaro E, Date K, **Medus C**, Meyer S, Miller B, Kim C, Nowicki S, Cosgrove S, Bergmire-Sweat D, Phan Q, Flint J, Daly ER, Adams J, Hyytia-Trees E, Gerner-Smidt P, Hoekstra RM, Schwensohn C, Langer A, Sodha SV, Rogers MC, Angulo FJ, Tauxe R, Williams IT, Barton Behravesh C, Team atSTOI. *Salmonella* Typhimurium infections associated with peanut products. *N Engl J Med.* August 18, 2011;365(7):601-10.
23. Barton Behravesh C, Blaney D, **Medus C**, Bidol SA, Phan Q, Soliva S, Daly ER, Smith K, Miller B, Taylor Jr T, Nguyen T, Perry C, Hill TA, Fogg N, Kleiza A, Moorhead D, Al-Khaldi S, Braden C, Lynch MF. Multistate outbreak of *Salmonella* serotype Typhimurium infections associated with consumption of restaurant tomatoes, United States, 2006: Hypothesis-generation through case exposures in multiple restaurant clusters. *Epidemiol Infect.* 2012 Jan 20:1-9
24. Neil KP, Biggerstaff G, MacDonald K, Hyytia-Trees E, **Medus C**, Musser KA, Stroika S, Zink D, Sotir M. A novel vehicle for transmission of *Escherichia coli* O157:H7 to humans: *E. coli* O157:H7 infections associated with the consumption of prepackaged raw cookie dough - United States, 2009. *Clin Infect Dis.* 2012 Feb;54(4):511-8. Epub 2011 Dec 8.
25. Silk BJ, Date KA, Jackson KA, Pouillot R, Holt KG, Graves LM, Ong KL, Hurd S, Meyer R, Marcus R, Shiferaw B, Norton DN, **Medus C**, Zansky SM, Cronquist AB, Henao OL, Jones TF, Vugia DJ, Farley MM, Mahon BE. Invasive Listeriosis in the Foodborne Diseases Active Surveillance Network (FoodNet), 2004–2009: Further Targeted Prevention

- Needed for Higher-Risk Groups. Clin Infect Dis. 2012 Jun; 54 (suppl 5):S396-404. Epub 2012 May10.
26. Chai SJ, White PL, Lathrop SL, Solghan SM, **Medus C**, McGlinchey BM, Tobin-D'Angelo M, Marcus R, Mahon BE. *Salmonella* enterica Serotype Enteritidis: Increasing Incidence of Domestically Acquired Infections. Clin Infect Dis. 2012 Jun; 54 (suppl 5):S488-497. Epub 2012 May10.
  27. Lappi V, Archer JR, Cebelinski E, Leano F, Besser JM, Klos RF, **Medus C**, Smith KE, Fitzgerald C, and Davis JP. An Outbreak of Foodborne Illness Among Attendees of a Wedding Reception in Wisconsin Likely Caused by *Arcobacter butzleri*. Foodborne Pathog Dis. 2013 Mar;10(3):250-5. Epub 2013 Feb 4.
  28. Gould LH, Mody RK, Ong KL, Clogher P, Cronquist AB, Garman KN, Lathrop S, **Medus C**, Spina NL, Webb TH, White PL, Wymore K, Gierke RE, Mahon BE, Griffin For The Emerging Infections Program Foodnet Working Group. Increased Recognition of Non-O157 Shiga Toxin-Producing *Escherichia coli* Infections in the United States During 2000-2010: Epidemiologic Features and Comparison with *E. coli* O157 Infections. Foodborne Pathog Dis. 2013 May;10(5):453-60. Epub 2013 Apr 6.
  29. Luna-Gierke RE, Wymore K, Sadlowski J, Cloger P, Gierke RW, Tobin-D'Angelo M, Palmer A, **Medus C**, Nicholson C, McGuire S, Martin H, Garman K, Griffin PM and Mody RK. Multiple-Aetiology Enteric Infections Involving Non-O157 Shiga Toxin-Producing *Escherichia coli* – FoodNet, 2001–2010. Zoonoses and Public Health. Feb 2014 [Epub ahead of print]
  30. Choi MJ, Jackson KA, **Medus C**, Beal J, Rigdon CE, Cloyd TC, Forstner MJ, Ball J, Bosch S, Bottichio L, Cantu V, Melka DC, Ishow W, Slette S, Irvin K, Wise M, Tarr C, Mahon B, Smith KE, Silk BJ. Multistate outbreak of listeriosis linked to soft-ripened cheese – United States, 2013. MMWR. 2014 Apr 4; 63(13): 294-5.
  31. Iwamoto M, Huang JY, Cronquist AB, **Medus C**, Hurd S, Zansky S, Dunn J, Woron AM, Oosmanally N, Griffin PM, Besser J, Henao OL. Bacterial Enteric Infections Detected by Culture-Independent Diagnostic Tests — FoodNet, United States, 2012–2014. MMWR 2015; 64(09);252-257
  32. Taylor A, Lappi V, Wolfgang W, Lapierre P, Palumbo M, **Medus C**, Boxrud D. Characterization of foodborne outbreaks of *Salmonella enterica* serovar Enteritidis with whole genome sequencing SNP-based analysis for surveillance and outbreak detection. J Clin Microbiology. In Press
  33. **Medus C**, Besser JM, Juni BA, Koziol B, Lappi V, Smith KE, Hedberg CW. Long-Term Sentinel Surveillance for Enterotoxigenic *E. coli* and Non-O157 Shiga Toxin-Producing *E. coli* in Minnesota. Open Forum Infect. Dis. 2016 Jan 18;3(1):ofw003
  34. Bottichio L, **Medus C**, Sorenson A, Donovan D, Sharma R, Dowell N, Williams I, Wellman A, Jackson A, Tolar B, Griswold T, Basler C. Outbreak of *Salmonella* Oslo Infections Linked to Persian Cucumbers – United States, 2016. MMWR Morb Mortal Wkly Rep 2016;65:1430–1433. DOI: <http://dx.doi.org/10.15585/mmwr.mm655051a3>.



35. Gieraltowski L, Schwensohn C, Meyer S, Eikmeier D, **Medus C**, Sorenson A, Forstner M, Madad A, Blankenship J, Feng P, Williams I. Notes from the Field. Multistate Outbreak of Escherichia coli O157:H7 Infections Linked to Dough Mix — United States, 2016. *MMWR Morb Mortal Wkly Rep* 2017;66:88–89. DOI: <http://dx.doi.org/10.15585/mmwr.mm6603a6>.
36. Hall V, **Medus C**, Wahl G, Sorenson A, Orth M; Santovenia M, Burdette E, Smith K. Notes from the Field: Vibrio cholerae Serogroup O1, Serotype Inaba — Minnesota, August 2016. *MMWR Morb Mortal Wkly Rep* 2017;66:961–962. DOI: <http://dx.doi.org/10.15585/mmwr.mm6636a6>.
37. Eikmeier D, **Medus C**, Smith K. Incubation Period for Outbreak-Associated, Non-Typhoidal Salmonellosis Cases, Minnesota, 2000–2015. *Epidemiol Infect.* 2018 Mar;146(4):423-429. Epub 2018 Feb
38. Beczkiewicz A, Cebelinski E, Decuir M, Lappi V, Wang X, Smith K, Boxrud D, **Medus C**. Relative Frequency of Enteroaggregative Escherichia coli High among Patients with Reportable Enteric Pathogens, Minnesota, 2016–2017. *Clin Infect Dis.* 2019 Jul 18;69(3):473-479. doi: 10.1093/cid/ciy890.
39. Hassan R, Buuck S, Noveroske D, **Medus C**, Sorenson A, Laurent J, Rotstein D, Schlater L, Freiman J, Douris A, Simmons M, Donovan D, Henderson J, Tewell M, Snyder K, Oni O, Von Stein D, Dassie K, Leeper M, Adediran A, Dowell N, Gieraltowski L, Basler C. Multistate Outbreak of Salmonella Infections Linked to Raw Turkey Products - United States, 2017-2019. *MMWR Morb Mortal Wkly Rep.* 2019 Nov 22;68(46):1045-1049. doi: 10.15585/mmwr.mm6846a1.
40. Firestone MJ, Eikmeier D, Scher D, **Medus C**, Hedeem N, Smith K, Hedberg CW. Can Aggregated Restaurant Inspection Data Help Us Understand Why Individual Foodborne Illness Outbreaks Occur? *J Food Prot.* 2020 May 1;83(5):788-793. doi: 10.4315/JFP-19-576. PMID: 31928421.
41. Rounds J M, Taylor A J, Eikmeier D, Nichols M M, Lappi V, Wirth S E, Boxrud D J, Smith K E, **Medus C**. Prospective Salmonella Enteritidis Surveillance and Outbreak Detection using Whole Genome Sequencing, Minnesota 2015-2017. *Epidemiol Infect.* 2020 Jun 16;1-21. 148:e254. doi: 10.1017/S0950268820001272. PMID: 32539900; PMCID: PMC7689598.
42. Buuck S, Smith K, Fowler RC, Cebelinski E, Lappi V, Boxrud D, **Medus C**. Epidemiology of Enterotoxigenic Escherichia coli Infection in Minnesota, 2016-2017. *Epidemiol Infect.* 2020 Sep 1;148:e206. doi: 10.1017/S0950268820001934..
43. Hoard JC, **Medus C**, Schleiss MR. A 3-Year-Old with Fever and Abdominal Pain: Availability Bias in the Time of COVID-19. *Clin Pediatr (Phila).* 2021 Jan;60(1):83-86. doi: 10.1177/0009922820964455. Epub 2020 Oct 13. PMID: 33047983.

44. White AE, Smith KE, Booth H, **Medus C**, Tauxe RV, Gieraltowski L, Walter ES. Hypothesis Generation during Foodborne Illness Outbreak Investigations. *Am J Epidemiol*. 2021 Apr 20;kwab118. doi: 10.1093/aje/kwab118. Online ahead of print.
45. Decuir M, Fowler R C, Cebelinski E, Smith K, Boxrud D, **Medus C**, Evidence of False Positivity for Vibrio Species Tested by Gastrointestinal Multiplex PCR Panels, Minnesota, 2016–2018, *Open Forum Infectious Diseases*, Volume 8, Issue 6, June 2021, ofab247, <https://doi.org/10.1093/ofid/ofab247>
46. Firestone MJ, Wienkes H, Garfin J, Wang X, Vilen K, Smith KE, Holzbauer S, Plumb M, Pung K, **Medus C**, Yao JD, Binnicker MJ, Nelson AC, Yohe S, Como-Sabetti K, Ehresmann K, Lynfield R, Danila R. COVID-19 Outbreak Associated with a 10-Day Motorcycle Rally in a Neighboring State - Minnesota, August-September 2020. *MMWR Morb Mortal Wkly Rep*. 2020 Nov 27;69(47):1771-1776. doi: 10.15585/mmwr.mm6947e1. PMID: 33237891; PMCID: PMC8022865.
47. Lehnertz NB, Wang X, Garfin J, Taylor J, Zipprich J, VonBank B, Martin K, Eikmeier D, **Medus C**, Wiedinmyer B, Bernu C, Plumb M, Pung K, Honein MA, Carter R, MacCannell D, Smith KE, Como-Sabetti K, Ehresmann K, Danila R, Lynfield R. Transmission Dynamics of Severe Acute Respiratory Syndrome Coronavirus 2 in High-Density Settings, Minnesota, USA, March–June 2020, *Emerg Infect Dis*. 2021 Aug;27(8):2052-2063. doi: 10.3201/eid2708.204838. Epub 2021 Jun 17. PMID: 34138695
48. Suhs T, Gerlach D, Garfin J, Lorentz A, Firestone M, Sherden M, Hackman K, Gray T, Siebman S, Wienkes H, Vilen K, Wang X, Como-Sabetti K, Danila R, Smith K, **Medus C**. COVID-19 Outbreak Associated with a Fitness Center - Minnesota, September–November 2020. *Clin Infect Dis*. 2021 Jul 23;ciab653. doi: 10.1093/cid/ciab653. Online ahead of print.
49. Wienkes H, Vilen K, Lorentz A, Gerlach D, Wang X, Saupe A, Danila R, Lynfield R, Smith K, **Medus C**. Transmission of and Infection With COVID-19 Among Vaccinated and Unvaccinated Attendees of an Indoor Wedding Reception in Minnesota. *JAMA Netw Open*. 2022 Feb 1;5(2):e220536. doi: 10.1001/jamanetworkopen.2022.0536. PMID: 35212747; PMCID: PMC8881767.
50. Haston JC, Miko S, Cope JR, McKell H, Walters C, Joseph LA, Griswold T, Katz LS, Andújar AA, Tourdot L, Rounds J, Vagnone P, **Medus C**, Harris J, Geist R, Neises D, Wiggington A, Smith T, Im MS, Wheeler C, Smith P, Carleton HA, Lee CC. *Cronobacter sakazakii* Infections in Two Infants Linked to Powdered Infant Formula and Breast Pump Equipment — United States, 2021 and 2022. *MMWR Morb Mortal Wkly Rep* 2023;72:223–226. DOI: <http://dx.doi.org/10.15585/mmwr.mm7209a2>.
51. Ford L, Buuck S, Eisenstein T, Cote A, McCormic ZD, Kremer-Caldwell S, Kissler B, Forstner M, Sorenson A, Wise ME, Smith K, **Medus C**, Griffin PM, Robyn M. Salmonella Outbreaks Associated with Not Ready-to-Eat Breaded, Stuffed Chicken Products - United States, 1998-2022. *MMWR Morb Mortal Wkly Rep*. 2023 May 5;72(18):484-487. doi: 10.15585/mmwr.mm7218a2. PMID: 37141151; PMCID: PMC10168604.

52. Kim TN, Decuir M, Smith K, **Medus C**, Hedberg CW. Use of Online Consumer Complaint Forms to Enhance Complaint-Based Surveillance for Foodborne Illness Outbreaks in Minnesota. *J Food Prot.* 2023 Jun;86(6):100095. doi: 10.1016/j.jfp.2023.100095. Epub 2023 Apr 25. PMID: 37100390.
53. Marder EP, Cui Z, Bruce BB, Richardson LC, Boyle MM, Cieslak PR, Comstock N, Lathrop S, Garman K, McGuire S, Olson D, Vugia DJ, Wilson S, Griffin PM, **Medus C**. Risk Factors for Non-O157 Shiga Toxin-Producing *Escherichia coli* Infections, United States. *Emerg Infect Dis.* 2023 Jun;29(6):1183-1190. doi: 10.3201/eid2906.221521. PMID: 37209671; PMCID: PMC10202860.
54. Tarr GAM, Rounds J, Vachon MS, Smith K, **Medus C**, Hedberg CW. Differences in risk factors for transmission among Shiga toxin-producing *Escherichia coli* serogroups and stx profiles. *J Infect.* 2023 Dec;87(6):498-505. doi: 10.1016/j.jinf.2023.10.017. Epub 2023 Oct 29. PMID: 38251470; PMCID: PMC10803930.

### Manuscripts in Preparation

1. Bye M, Smith K, Scheftel J, Sullivan M, Magnuson L, Ordóñez J.C., Wang X, Shaughnessy M, Ireland M, **Medus C**. *Brucella melitensis* Outbreak in Minnesota Associated with Unpasteurized Soft Cheese Imported by a Traveler Returning from Mexico. Submitted to journal.
2. Gerlach D, Cebelinski E., Buuck S., Smith K, **Medus C**. EIEC Outbreak at a Sushi Restaurant. Manuscript in preparation.

### Select Scientific Conference Abstracts

1. Marder E, Iwamoto M, Boyle M, Karr J, **Medus C**, Nicholson C, Olsen D, Oosmanally N, Rosales M, Shiferaw B, Griffin P, Henao O. Risk Factors for Sporadic Non-O157 Shiga Toxin-Producing *Escherichia coli* Infection: Preliminary Findings from a Case-Control Study, Foodborne Diseases Active Surveillance Network, 2012–2014. VTEC Symposium; September 13-16, 2015; Boston, MA. Oral presentation.
2. **Medus C**, Taylor AJ, Rigdon CE, Sorenson AM, Lappi V, Wolfgang WJ, Boxrud DJ, Smith KE. Use of Whole Genome Sequencing in a *Salmonella* Enteritidis Outbreak Associated with Chicken Kiev. Integrated Outbreak Response and Management (InFORM) Conference 2015; November 17- 20; Phoenix, AZ. Oral presentation.
3. Burdette E, Farrell-Evans M, **Medus C**, Wong K. can Shellfish Traceback in *Vibrio* Infections in the United States, 2007–2015. Council for State and Territorial Epidemiologist (CSTE) Annual Conference 2017, June 4-8, 2017; Boise, ID.
4. Buuck S, Cebelinski E, Lappi V, Podemski N, Salo G, Smith K, **Medus C**. Epidemiology of Enterotoxigenic *Escherichia coli* Infections in Minnesota, 2015-2016. CSTE Annual Conference 2018; June 10-14; West Palm Beach, FL. Oral presentation.
5. Francois Watkins L, Folster J, Chen J, Tagg K, Karlsson M, Boyd S, Leung V, Barton K, **Medus C**, Robbins A, Hatch J, Hanna S, Colón A, Gonzales E, Friedman C. Enhanced

- Surveillance for Highly-Concerning Antimicrobial Resistance and the Emergence of Mcr Genes Among Foodborne Pathogens in the United States. CSTE Annual Conference 2018; June 10-14; West Palm Beach, FL. Oral presentation.
6. Meyer S, Horn M, Taylor A, **Medus C**, Saupe A, Nichols M, Boxrud D, Smith K. Use of Whole Genome Sequencing for *Salmonella* Typhimurium Surveillance in Minnesota. CSTE Annual Conference 2018; June 10-14; West Palm Beach, FL. Oral presentation.
  7. Patrick M, Griffin P, Bruce B, Luna-Gierke R, Marder E, Garman K, Shiferaw B, Lathrop S, Comstock N, Wilson S, Olson D, Vugia D, Boyle M, Mcguire S, **Medus C**. Risk Factors for Non-O157 *Stec* Infection in the United States, 2012-2015 – a Foodborne Diseases Active Surveillance Network (FoodNet) Case-Control Study. CSTE Annual Conference 2018; June 10-14; West Palm Beach, FL. Oral presentation.
  8. Raybern C, **Medus C**, Cebelinski E, Tubach S. Outbreak of Enteroinvasive *Escherichia coli* Associated with an Elementary School—Kansas, August 2017. CSTE Annual Conference 2018; June 10-14; West Palm Beach, FL. Oral presentation.
  9. Barrett K, **Medus C**, Garman K, Dunn J, Tack D, Geissler A. Characteristics of Shiga toxin-Positive Culture Independent Diagnostic Test (CIDT) Results Reported to FoodNet, 2012–2017. ID Week; October, 2018.
  10. Buuck S, Cebelinski E, Lappi V, Salo G, Podemski N, Boxrud D, Smith K, **Medus C**. Surveillance of Diarrheagenic *Escherichia coli* Pathotypes in Minnesota, 2016-2018. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
  11. Wiedinmyer B, Jawahir S, Smith K, **Medus C**. Comparison of 3 Different Whole Genome Sequencing Analyses (WGS) to Investigate a *Salmonella* Enteritidis Cluster, 2019. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
  12. Eikmeier D, Cebelinski E, Magnuson L, Smith K, **Medus C**, Boxrud D. Comparison of Recovery Rates of Enteric Pathogens from Positive PCR Panel Specimens, Minnesota, 2015-2018. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
  13. Eikmeier D, Cebelinski E, Magnuson L, Vilen K, Wiedinmyer B, Saupe A, Smith K, **Medus C**. Enhanced Surveillance of Enteric PCR Panel Testing in Minnesota, 2018. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
  14. Buuck S, Smilanich E, Webb P, Forstner M, Sorenson A, Cronquist L, Altman S, Smith K, **Medus C**. Lettuce, Lettuce, Lettuce...Pizza? Use of Case-Case Comparisons, Binomial Probability Calculations, and Tracebacks to Investigate an *E. coli* O157 Outbreak Associated with Frozen Pizza. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
  15. Rounds J, **Medus C**, Smith K. Gender Differences in the Occurrence of Hemolytic Uremic Syndrome Among Persons with *Escherichia coli* O157:H7 Infection, Minnesota, 1997 – 2018. CSTE Annual Conference; June 2021; Virtual. Oral presentation.

16. Decuir M, Eikmeier D, Baade C, Hedberg C, **Medus C**, and Smith K. Benefits of an Online Foodborne Complaint Form: Younger Complainants and Faster Reports. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
17. Saupe A, Wiedinmyer B, Jawahir S, Eikmeier D, Sorenson A, Lindell P, MDA Microbiology Unit, Smith K, **Medus C**. Hot Mess: Whole Genome Sequencing Variability in *Salmonella* Isolates from a Jail Outbreak, Sporadic Community Cases, and Multiple Chicken Products. CSTE Annual Conference; June 2021; Virtual. Oral presentation.
18. Gerlach D, Siebman S; Suhs T; Smith K, Como-Sabetti K, **Medus C**. Additional Case Finding in 2 COVID-19 Gym Outbreaks, Minnesota, 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
19. Suhs T, Gerlach D, Garfin J, Lorentz A, Firestone M, Siebman S, Wienkes H, Vilen K, Wang X, Como-Sabetti K, Danila R, Smith K, **Medus C**. COVID-19 Outbreak Associated with a Fitness Center — Minnesota, September–November 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
20. Vilen K, Garfin J, Wang X, **Medus C**, Smith K, Como-Sabetti K, Lynfield R COVID-19 Outbreak Associated with an Outdoor Concert, Minnesota, July 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
21. Wienkes H, Vilen K, Magnuson L, Como-Sabetti K, Smith K, **Medus C**. Impact of 6 Social Outbreaks on County COVID-19 Case Rates Compared to Surrounding Counties, Minnesota, 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
22. Firestone M, Wienkes H, Garfin J, Wang X, Beaudoin A, Fell A, Gerlach D, **Medus C**, Smith K, Holzbauer S. COVID-19 outbreak in a healthcare facility associated with a wedding — Minnesota, September–October 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
23. Firestone M; Wienkes H, Garfin J, Wang X, Vilen K, Smith K, Holzbauer S, **Medus C**, Lynfield R, Danila R and the Motorcycle Rally Outbreak Investigation Team. COVID-19 outbreak associated with a 10-day motorcycle rally in a neighboring state — Minnesota, August-September 2020. CSTE Annual Conference; June 2021; Virtual. Late-breaker, Oral presentation.
24. Noveroske D, Cote A, Freiman J, Kremer-Caldwell S, Gieraltowski L, McCormic Z, Buuck S, **Medus C**, Smilanich E, Sorenson A, Forstner M, Stone N, Mark C, Hawkins T. Preventing Illnesses Associated with Raw Breaded Stuffed Chicken Products that Appear Ready-to-Eat. InFORM Annual Conference; April 26-29, 2022; Virtual. Oral presentation (Buuck MN presenting author).
25. Wiedinmyer B, Hedeem N, Smith K, **Medus C**. Nacho Average Outbreak – The Importance of Testing Food Workers in a Restaurant-associated *Salmonella* Typhimurium Outbreak, Minnesota, November 2021. InFORM Annual Conference; April 26-29, 2022; Virtual. Oral presentation (Wiedinmyer presenting author).

26. Gerlach D, Eikmeier D, Rounds J, Hedeem N, Orth M, Haan J, Smith K, Boxrud D, **Medus C**. A Novel *Campylobacter* Food Vehicle in Two Minnesota Restaurant Outbreaks - Move Over, Pâté! InFORM Annual Conference; April 26-29, 2022; Virtual. Oral presentation (Gerlach presenting author).
27. Gerlach D, Cebelinski E, Cider M, Johnson C, Hedeem N, Haan J, Smith K, Boxrud D, **Medus C**. Shigella...wait...Enteroinvasive *E. coli* Outbreak Associated with a Restaurant, Minnesota 2021. InFORM Annual Conference; April 26-29, 2022; Virtual. Oral presentation (Gerlach presenting author).
28. Decuir M, Cebelinski E, Smith K, Boxrud D, **Medus C**. Where's the Oyster? Surveillance-based Evidence of False-positive Clinical Tests for *Vibrio* spp.. CSTE Annual Conference, Louisville, KY June 18-23, 2022; Virtual presentation.
29. Buuck S, Hedeem N, Smilanich E, Sorenson A, Haan J, **Medus C**, Smith K. S. Subcluster Investigation in the Early Stages of a Large Multistate Foodborne Outbreak, CSTE Annual Conference, Louisville, KY June 18-23, 2022; Oral in-person presentation.
30. Magnuson L, Eikmeier D, Smith K, Cebelinski E, **Medus C**. Detecting Anomalies in PCR Test Performance by Monitoring Surveillance Data. CSTE Annual Conference, Louisville, KY June 18-23, 2022; Oral in-person presentation.
31. Magnuson L, Eikmeier D, Smith S, Podemski N, Erickson R, **Medus C**. Trends in Enteric Disease Surveillance During the COVID-19 Pandemic. CSTE Annual Conference, Louisville, KY June 18-23, 2022; Virtual presentation.
32. Gerlach D, Haan J, Eikmeier D, Smith K, Boxrud, D **Medus C**. Outbreak of *Campylobacteriosis* Among Men Who Have Sex with Men (MSM) in Hennepin and Ramsey Counties, Minnesota 2021. CSTE Annual Conference, Louisville, KY June 18-23, 2022; Virtual presentation.
33. Saupe A, Decuir M, Eikmeier D, Baade C, Smith K, **Medus C**. Foodborne Outbreaks and Illness Complaints in Minnesota During the COVID-19 Pandemic – Trends and Observations. CSTE Annual Conference, Louisville, KY June 18-23, 2022; Virtual presentation.
34. Decuir M, Erickson R, Haan J, Smith K, **Medus C**. Shiga-toxin producing *E. coli* shedding duration in childcare settings, Minnesota, 2012-2022. CSTE Annual Conference, Salt Lake City, UT, June 25-29, 2023. Oral presentation.
35. Eikmeier D, Magnuson L, Smith K, **Medus C**. Clinical profiles of CIDT-only and culture-confirmed *Salmonella*, *Campylobacter*, and STEC infections, Minnesota, 2017-2021. CSTE Annual Conference, Salt Lake City, UT, June 25-29, 2023. Oral presentation.
36. Gerlach D, Wiedinmyer B, Smith K, **Medus C**. Investigating putative outbreaks identified through non-traditional complaints. CSTE Annual Conference, Salt Lake City, UT, June 25-29, 2023. Oral presentation.

37. Rounds J, Tourdot L, Snippes Vagnone, Smith K, **Medus C**, Lynfield R. *Cronobacter sakazakii* surveillance in Minnesota, 2002 – 2022. CSTE Annual Conference, Salt Lake City, UT, June 25-29, 2023. Oral presentation.
38. Wiedinmyer B, Saupe A, Webb P, Jawahir S, Forstner M, Jarocki J, Muhl L, Seipel D, Buuck S, Decuir M, Magnuson L, Smith K, **Medus C**. *Salmonella* alphabet soup: A multiple serotype outbreak associated with a live animal market (LAM), Minnesota, April – December 2022. CSTE Annual Conference, Salt Lake City, UT, June 25-29, 2023. Oral presentation.
39. Eikmeier D, Smith K, **Medus C**. Adding Tools to Investigate Restaurant Outbreak Subclusters: Estimating Background Consumption Rates from Restaurant Sales Data. InFORM Conference, Washington D.C., January 21-24, 2024. Oral presentation.
40. Gerlach D, Verbrugge E, Cebelinski E, Decuir M, Wenisch C, Smilanich E, Sorenson A, Haan J, Smith K, **Medus C**. Worth the Squeeze: Enterotoxigenic *E. coli* and Enteraggregative *E. coli* Outbreak Associated with a Juice Bar, Minnesota, 2023. InFORM Conference, Washington D.C., January 21-24, 2024. Poster presentation.
41. Saupe A, Stepnick M, Kubitschek N, Smilanich, Draxler B, Smith K, **Medus C**. Are you sure it's romaine? Outbreak detection and ingredient analyses for a Shiga toxin-producing *E. coli* O157 outbreak at a restaurant. InFORM Conference, Washington D.C., January 21-24, 2024. Oral presentation.
42. Verbrugge E, Hwang H, Decuir M, Eikmeier D, **Medus C**, Haan J. Investigating False Positivity for *Vibrio* Species: Cross-reactivity of Algae-based Supplements on Culture-independent Diagnostic Tests. InFORM Conference, Washington D.C., January 21-24, 2024. Poster and oral presentations.
43. Wiedinmyer B, Saupe A, Eikmeier D, Decuir M, Cebelinski E, Smith K, **Medus C**. Pearls of Wisdom: Lessons Learned from Minnesota's Response to Multi-state Norovirus Gastroenteritis Outbreaks Associated with Raw Oysters. InFORM Conference, Washington D.C., January 21-24, 2024. Oral presentation.

### **Select Invited Presentations Including Epidemiology Training Workshops**

3/2018. Applied Whole Genome Sequencing for Epidemiologists. MN Integrated Food Safety Center of Excellence. Live learning series co-facilitator.

3/2018. OzFoodNet Meeting, New South Wales, Australia. Applied WGS: Outbreak Investigations. Invited speaker.

3/2018. OzFoodNet Meeting, New South Wales, Australia. Applied WGS: Cluster Detection. Invited speaker.

5/2018, 3/2019, 2/2022. Colorado Integrated Food Safety Center of Excellence Hypothesis Generating ECHO series; virtual. Hypothesis Generating Questionnaires and Unstructured Interviews. Invited speaker.

5/2018. Forum on Culture-Independent Diagnostics: Charting a Path for Public Health. Pew Research Center; Washington, D.C.. Detection of Enterotoxigenic *Escherichia coli* and Other Pathogenic *E. coli*. Invited speaker.

6/2018. Council of State and Territorial Epidemiologists Annual Conference, West Palm Beach, FL. Pre-Conference Workshop; Enteric Diseases. Key Steps in Investigating *Salmonella* and STEC Clusters. Invited speaker.

3/2019. OutbreakNet Regional Meeting; Omaha, NE. Managing Workflows in the Era of WGS. Invited Speaker.

5/2019. FDA Leadership Forum; Minneapolis, MN. Leading from the Public Health Front Lines. Invited Panelist.

10/2019. Tennessee Emerging Infections Program 20th Annual Scientific Presentation Day; Franklin, TN. The Changing Landscape of Surveillance: Culture Independent Diagnostic Tests and Historically Under-recognized Infections. Invited Speaker.

12/2019. University of Minnesota, School of Public Health Healthy Futures Summit; Food Safety. Minneapolis, MN. Session Moderator.

12/2020. Minnesota County Attorneys Association Annual Conference; virtual. COVID-19 in Minnesota, Situation Update. Invited Speaker.

6/2021. Council of State and Territorial Epidemiologists Annual Conference; virtual. Pre-Conference Workshop; Enteric Diseases. What foodborne enteric investigation for state & local health departments looks like since COVID. Session Moderator.

6/2022. Council of State and Territorial Epidemiologists Annual Conference, Louisville, KY. Pre-Conference Workshop; Enteric Diseases. Collecting and Sharing Information During a Brucellosis Outbreak Associated with Soft Cheese Consumption in Minnesota, 2021. Invited Speaker.

2/2023. InFORM Central Regional Meeting, St. Louis, MO. Methods and techniques for your outbreak toolkit. Session Moderator.

3/2023. University of Minnesota MNDrive Food Initiative Symposium: Behind the scenes of *Salmonella* outbreaks linked to food animals: science and policy St. Paul, MN. What role does the state Department of Health play in *Salmonella* outbreaks? Invited Speaker.

9/2023. Minnesota's Recipe for Foodborne Illness Outbreak Investigation: A Dash of WGS, A Pinch of CIDT. Industrial Food Microbiologists 50<sup>th</sup> Anniversary Meeting. Ecolab, St. Paul, MN. Invited Speaker.

1/2024. The Ever-evolving Outbreak Investigation Paradigm – A State's Perspective. State of the Outbreak Plenary Session. InFORM Conference, Washington D.C., January 21-24, 2024. Invited Plenary Speaker.

### **Select International Engagement**



11/2009. Guest lecturer. Epidemiology of Foodborne Diseases. Ecole des hautes études en santé publique, Paris, France

3/2010. Invited Speaker. Foodborne Disease Investigation and Management: An Ontario Symposium Toronto, Ontario, Canada

9/2010. Hosted Ontario team, Public Health Agency of Canada. Provided input and feedback on foodborne disease surveillance, outbreak detection and investigation.

9/2010. Consultant in Epidemiology, Food Safety in Bangladesh Project, Food and Agriculture Organization of the United Nations, Dhaka, Bangladesh. Evaluation of foodborne disease surveillance activities and assessment of government's capacity for new surveillance activities. Collaboration with government officials, including the Directorate General of Health Services, key officials at the Institute of Epidemiology, Disease Control & Research, the national laboratory, the Dhamrai Health Complex, and the International Center for Diarrhoeal Disease Research, Bangladesh.

6/2012. Hosted USAID funded program RESPOND, Central and Eastern Africa and South East Asia faculty from several universities, emphasizing One Health approaches to emergency preparedness and outbreak response.

6/2015. Evaluation and recommendations regarding the Club Union's response and interventions in a *Salmonella* outbreak associated with salad dressing made with shell eggs in-house. Panama, Panama.

8/2016. Public Health Agency of Canada. Using whole genome sequencing in cluster investigation and outbreak detection, conference call and discussion.

10/2016. Public Health Agency of Canada's FoodNet Canada- Understanding Stakeholder's information needs, invited focus group participant.

3/2018. Oz FoodNet Meeting, New South Wales, Australia. Applied WGS: Cluster Detection & Applied WGS: Outbreak Investigations. Invited speaker.

11/2021-Present- Collaboration with CDC Global Health Office and the Council of Ministers of Health of Central America (COMISCA). Mentor Field Epidemiology and Laboratory Training Program (FELTP) residents on foodborne and waterborne outbreak investigations; including participation in Universidad del Valle's Foodborne and Waterborne Disease Epidemiology Journal Club, residents' presentations regarding investigations, and planning meetings.

5/2023- Binational Enteric Disease Outbreak Investigation Training. FELTP Panama and Costa Rica, COMISCA. Panama, Panama, May 29 – June 2, 2023.

4/2024- Binational Enteric Disease Outbreak Investigation Training. FELTP El Salvador, COMISCA. San Salvador, El Salvador, April 22 – April 25, 2024.

### **Ad Hoc Peer Reviewer for Scientific Journals**

Clinical Infectious Diseases

Epidemiology and Infection  
European Journal of Clinical Microbiology & Infectious Diseases  
Journal of the Pediatric Infectious Diseases Society  
PlosOne

### **Professional Organizations**

2008- Present. Council of State and Territorial Epidemiologists member

2001- 2022. International Association for Food Protection member

2001- 2022. Minnesota Environmental Health Association member

2002- 2011. Minnesota Environmental Health Association scholarship trustee; Chair 9/2004-9/2005, 10/2007-10/2008, 9/2010-9/2011

### **Honors and Awards**

1997 & 1998. Public Health Service Traineeship.

2007. Delta Omega Honorary Public Health Society, Pi Chapter.

2008. Minnesota Environmental Health Association Merit Award for outstanding service.

2008. Community Partners Recognition, School of Public Health, University of Minnesota.

2008. National Center for Zoonotic, Vector-Borne, and Enteric Diseases, Public Health Epidemiology and Laboratory Research-IP Investigation Team, Award of Excellence.

2009. Minnesota Environmental Health Association Award to "Team Diarrhea" for outstanding service.

2009. Community Partners Award to "Team Diarrhea", School of Public Health, University of Minnesota.

2010. Certificate of Excellence, FoodNet Site Partner, Centers for Disease Control and Prevention.

2010. Minnesota Environmental Health Association Merit Award for outstanding service

2011. Charles C. Shepard Science Award for Assessment and Epidemiology in recognition of the paper by Holzbauer et al. "Epidemiologic Investigation of Immune-Mediated Polyradiculoneuropathy Among Abattoir Workers Exposed to Porcine Brain" in PLoS One. March 2010 5(3):e9782.

2011. Distinguished Service Award to the Minnesota Departments of Health and Agriculture and the School of Public Health for the Minnesota Model for Food Safety, Minnesota Agri-Growth Council.

2012. Charles C. Shepard Science Award Nomination for Cavallaro et al. "*Salmonella* Typhimurium infections associated with peanut products" in N Engl J Med. August 18, 2011;365(7):601-10.

2012. Nakano Citation, National Center for Emerging and Zoonotic Infectious Diseases for Cavallaro et al. "*Salmonella* Typhimurium infections associated with peanut products" N Engl J Med. August 18, 2011;365(7):601-10.

2013. Superior Sustained Performance award. Minnesota Department of Health.

2014. FDA/ORR Honor Award-Leveraging Collaboration for *Listeria Monocytogenes* in Soft Cheeses Work Group.

2015. Community Partners Award. School of Public Health, University of Minnesota.

2015. PulseNet Innovation Award: Collaboration between New York and Minnesota to Perform WGS on *S. Enteritidis*.

2018. FoodNet Star Award, Centers for Disease Control.

2022. The People's Protector Award, InFORM.

**Languages**

Fluent in English and Spanish.