



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Clinical Research Unit – University of Maryland	
1.	Khanna N, Nesbit L, Roghmann M, Tacket C. Translation of clinical research into practice: defining the clinician scientist. <i>Family Medicine Journal</i> . 2009; 41(6): 440-443.
2.	Tacket CO, Levine MM. CVD 908, CVD 908-htrA, and CVD 909 live oral typhoid vaccines: A logical progression. <i>Clinical Infectious Diseases</i> . 2007; 45(Suppl1):S20-S23.
3.	*Wahid R, Salerno-Goncalves R, Tacket CO, Levine MM, Sztejn MB. Generation of specific effector and memory T cells with gut and secondary lymphoid tissues homing potential by oral attenuated CVD 909 typhoid vaccine in humans. <i>Mucosal Immunology</i> . 2008; 1(5):389-398.

Immunology Research Unit – University of Maryland	
1.	Adekar SP, Al-Saleem FH, Elias MD, Rybinski K, Simpson LL, Dessain SK. A natural human IgM antibody that neutralizes botulinum neurotoxin <i>in vivo</i> . <i>Hybridoma</i> . 2008; 27(2):65-69.
2.	Adekar SP, Elias M, Al-Saleem FH, Root MJ, Simpson LL, Dessain S. A human monoclonal antibody that binds to serotype A botulinum neurotoxins. <i>Hybridoma</i> . 2008;11-17.
3.	Adekar SP, Jones RM, Elias MD, Al-Saleem FH, Root MJ, Simpson LL, Dessain SK. Hybridoma populations enriched for affinity-matured human IgGs yield high-affinity antibodies specific for botulinum neurotoxins. <i>J Immunol Meth</i> . 2008; 333:156-166.
4.	Ahsan CR, Hajnoczky G, Maksymowych AB, Simpson LL. Visualization of binding and transcytosis of botulinum toxin by human intestinal epithelial cells. <i>Journal of Pharmacology and Experimental Therapeutics</i> . 2005; 315(3):1028-1035.
5.	Al-Saleem FH, Ancharski DM, Ravichandran E, Joshi SG, Singh AK, Gong Y, Simpson LL. The role of systemic handling in the pathophysiologic actions of botulinum toxin. <i>Journal of Pharmacology</i> . 2008; 326(3):856-863.
6.	Awomoyi AA, Rallabhandi P, Pollin TI, Lorenz E, Sztejn MB, Boukhvalova MS, Hemming VG, Blanco JC, Vogel SN. Association of TLR4 polymorphisms with symptomatic respiratory syncytial virus infection in high-risk infants and young children. <i>Journal of Immunology</i> . 2007; 179(5):3171-3177.
7.	Corbett CR, Ballegeer, Singh AK, Simpson LL, Berry JD. Development of MAb to the binding domains of botulinum neurotoxin B or E using a sequential immunization strategy: anti-botulinum neurotoxin. <i>Hybridoma</i> . 2007; 26:437-438.
8.	Corbett CR, Elias MD, Simpson LL, Cassan RR, Yuan X, Ballegar E, Kabani A, Plummer FA, Jerry JD. High-throughput homogeneous immunoassay readily identifies monoclonal antibody to serovariant clostridial neurotoxins. <i>Journal of Immunological Methods</i> . 2007; 328:128-138.
9.	El Sahly HM, Atmar RL, Patel SM, Wells JM, Cate T, Ho M, Guo K, Pasetti MF, Lewis DE, Sztejn MB, Keitel WA. Safety, reactogenicity and immunogenicity of <i>Francisella tularensis</i> live vaccine strain in humans. <i>Vaccine</i> . 27: 4905-4911, 2009. PMID: 19567246.
10.	Maksymowych AB, Simpson LL. Structural features of the botulinum neurotoxin molecule that govern binding and transcytosis across polarized human intestinal epithelial cells. <i>Journal of Pharmacology and Experimental Therapeutics</i> . 2004; 310(2):633-641.
11.	Pasetti MF, Cuberos L, Horn TL, Shearer JD, Matthews SJ, House RV, Sztejn MB. An improved <i>Francisella tularensis</i> live vaccine strain (LVS) formulation is well tolerated and highly immunogenic when administered to rabbits in escalating doses using various immunization routes. <i>Vaccine</i> . 2008; 26: 1773-1785.
12.	Rallabhandi P, Awomoyi AA, Thomas KE, Phalipon A, Fujimoto Y, Fukase K, Kusumoto S, Qureshi N, Sztejn MB, Vogel SN. Differential activation of human TLR4 by <i>E. coli</i> and <i>S. flexneri</i> 2a lipopolysaccharide: Effects of lipid acylation state and TLR4 polymorphisms on signaling. <i>Journal of Immunology</i> . 2008; 180:1139-1147.

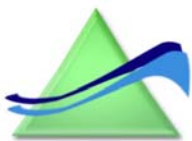


FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Immunology Research Unit – University of Maryland	
13.	Ravichandran E, Al-Saleem FH, Ancharski DM, Elias MD, Singh A, Shamim M, Gong Y, Simpson LL. A trivalent vaccine against botulinum toxin (serotypes A, B, and E) that can be administered by the mucosal route. <i>Infection and Immunity</i> . 2007; 7516(6):30143-54.
14.	Ravichandran E, Gong Y, Al-Saleem FH, Ancharski DM, Joshi SG, Simpson LL. An initial assessment of the systemic pharmacokinetics of botulinum toxin. <i>Journal of Pharmacology and Experimental Therapeutics</i> . 2006; 318(3):1343-1351.
15.	Salerno-Gonçalves R, Hepburn MJ, Bavari S, Sztein MB. Generation of heterogeneous effector and memory T cells by live attenuated tularemia vaccine in humans. <i>Vaccine</i> . September 30, 2009 [Epub ahead of print]. PMID: 19799845.
16.	Sztein MB. Cell-mediated immunity and antibody responses elicited by attenuated <i>Salmonella enterica</i> Typhi strains used as live oral vaccines in humans. <i>Clinical Infectious Diseases</i> . 2007; 45(S1):S15-S19.
17.	*Tacket CO, Pasetti MF, Sztein MB, Livio S, Levine MM. Immune responses to an oral typhoid vaccine strain that is modified to constitutively to express vi capsular polysaccharide. <i>Journal of Infectious Diseases</i> . 2004; 190(3):565-570.
18.	*Wahid R, Salerno-Gonçalves R, Tacket CO, Levine MM, Sztein MB. Cell-mediated immune responses in humans after immunization with one and two doses of oral live attenuated typhoid vaccine. <i>Vaccine</i> . 2007; 25(8):1416-1425.
19.	*Wahid R, Salerno-Goncalves R, Tacket CO, Levine MM, Sztein MB. Generation of specific effector and memory T cells with gut and secondary lymphoid tissues homing potential by oral attenuated CVD 909 typhoid vaccine in humans. <i>Mucosal Immunology</i> . 2008; 1:389-398.
20.	Zeng M, Xu Q, Elias M, Pichichero ME, Simpson LL, Smith LA. Protective immunity against botulism provided by a single dose vaccination with an adenovirus-vectored vaccine. <i>Vaccine</i> . 2007; 25:7540-7548.

Microbiology & Botulism Research Unit – Tufts University	
1.	Barnoy S, Jeong KI, Helms RF, Suvarnapunya AE, Ranallo RT, Tzipori S, Venkatesan MM. Characterization of WRSs2 and WRSs3, new second-generation <i>virG(icsA)</i> -based <i>Shigella sonnei</i> vaccine candidates with the potential for reduced reactogenicity. <i>Vaccine</i> . 2010; 28(6): 1642-1654.
2.	Berrada ZL, Goethert HK, Telford SR III. Raccoons and skunks as sentinels for enzootic tularemia. <i>Emerging Infectious Diseases</i> . 2006; 12(6):1019-1021.
3.	Boldt GE, Eubanks LM, Janda KD. Identification of a botulinum neurotoxin a protease inhibitor displaying efficacy in a cellular model. <i>Chemical Communications</i> . 2006; (29):3063-3065.
4.	Boldt GE, Kennedy JP, Hixon MS, McAllister LA, Barbieri JT, Tzipori S, Janda KD. Synthesis, characterization and development of a high-throughput methodology for the discovery of botulinum neurotoxin A inhibitors. <i>Journal of Combinatorial Chemistry</i> . 2006; 8(4):513-521.
5.	Boldt GE, Kennedy JP, Janda KD. Identification of a potent botulinum neurotoxin protease inhibitor using <i>in situ</i> lead identification chemistry. <i>Organic Letters</i> . 2006; 8(8):1729-1732.
6.	Brown DW, Gunning KB, Henry DM, Awdeh ZL, Brinker JP, Tzipori S, Herrmann JE. A DNA oligonucleotide microarray for detecting human astrovirus serotypes. <i>Journal of Virological Methods</i> . 2008; 147 (1):86-92.
7.	Capková K, Hixon MS, McAllister LA, Janda KD. Toward the discovery of potent inhibitors of botulinum neurotoxin A: Development of a robust LC MS based assay operational from low to subnanomolar enzyme concentrations. <i>Chem Commun</i> . 2008. 14:3525-7.
8.	Capková K, Salzedana NT, Janda KD. Investigations into small molecule non-peptidic inhibitors of the botulinum neurotoxins. <i>Toxicon</i> . 2009. 54:575-82.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology & Botulism Research Unit – Tufts University	
9.	Chang T, Mello CM, Cai S, Singh BR. Development and screening of RNA aptamers for Type A botulinum neurotoxin light chain by using surface plasmon resonance. <i>34th Annual Northeast Bioengineering Conference Proceedings Book</i> . Providence, RI. 2008; 49-50.
10.	Eubanks LM, Hixon MS, Jin W, Hong S, Clancy CM, Tepp WH, Baldwin MR, Malizio CJ, Goodnough MC, Barbieri JT, Johnson EA, Boger DL, Dickerson TJ, Janda KD. An <i>in vitro</i> and <i>in vivo</i> disconnect uncovered through high-throughput identification of botulinum neurotoxin A antagonists. <i>Proceedings of the National Academy of Sciences of the United States of America</i> . 2007; 104(8):2602-2607.
11.	Giel JL, Sorg JA, Sonenshein AL, Zhu J. 2010. Metabolism of bile salts in mice influences spore germination in <i>Clostridium difficile</i> . <i>PLoS One</i> . 5:1-7.
12.	He X, Sun X, Wang J, Wang X, Zhang Q, Tzipori S, Feng H. Antibody-enhanced, FcR-mediated endocytosis of <i>Clostridium difficile</i> toxin A. <i>Infection and Immunity</i> . 2009. PMID: 19307220.
13.	He X, Wang J, Steele J, Sun X, Nie W, Tzipori S, Feng H. An ultrasensitive rapid immunocytotoxicity assay for detecting <i>Clostridium difficile</i> toxins. <i>J Microbiol Methods</i> . 2009 Jul;78(1):97-100.
14.	Hu X, Kang S, Chen X, Shoemaker CB, Jin MM. Yeast surface 2-hybrid to detect protein-protein interactions via the secretory pathway as a platform for antibody discovery. <i>J. Biol. Chem</i> . 2009. 284:16369-76.
15.	Jeong KI, Zhang Q, Nunnari J, Tzipori S. A piglet model of acute gastroenteritis induced by <i>Shigella dysenteriae</i> type 1. <i>Journal of Infectious Diseases</i> . 2010; 201(6): 903-911.
16.	Krautz-Peterson G, Chapman-Bonofiglio S, Boisvert K, Feng H, Herman IM, Tzipori S, Sheoran AS. Intracellular neutralization of Shiga toxin 2 by an A-subunit-specific human monoclonal antibody. <i>Infection and Immunity</i> . 2008; 76(5):1931-1939.
17.	Kuntumalla S, Braisted JC, Huang ST, Parmar PP, Clark DJ, Alami H, Zhang Q, Donohue-Rolfe A, Tzipori S, Fleischmann RD, Peterson SN, Pieper R. Comparison of two label-free global quantitation methods, APEX and 2D gel electrophoresis, applied to the <i>Shigella dysenteriae</i> proteome. <i>Proteome Sci</i> . 2009 Jun 29;7:22.
18.	Kuo CL, Oyler G, Shoemaker CB. Lipid and cationic polymer based transduction of botulinum holotoxin, or toxin protease alone, extends the target cell range and improves the efficiency of intoxication. <i>Toxicon</i> . 2009 Oct 21. (epub ahead of print).
19.	Maass DR, Sepulveda J, Pernthaner A, Shoemaker CB. Alpaca (<i>Lama pacos</i>) as a convenient source of recombinant camelid heavy chain antibodies (VHHs). <i>Journal of Immunological Methods</i> . 2007; 324:13-25.
20.	Matyas B, Nieder HS, Telford SR. Pneumonic tularemia on Martha's Vineyard: clinical, epidemiologic, and ecological characteristics. <i>Annals of the New York Academy of Sciences</i> . 2007; 1105:351-377.
21.	Moe ST, Thompson AB, Smith GM, Fredenburg RA, Stein RL, Jacobson AR. Botulinum neurotoxin serotype A inhibitors: Small-molecule mercaptoacetamide analogs. <i>Bioorganic & Medicinal Chemistry</i> . 2009; 17: 3072-3079.
22.	Ng J, Hirota SA, Gross O, Li Y, Ulke-Lemee A, Seamone M, Feng H, Armstrong G, Tschopp J, MacDonald J, Muruve D, Beck P. <i>Clostridium difficile</i> toxin-induced inflammation and intestinal injury are mediated by the inflammasome. <i>Gastroenterology</i> . 2010, 139(2):542-52
23.	Pieper R, Zhang Q, Parmar PP, Huang ST, Clark DJ, Alami H, Donohue-Rolfe A, Fleischmann RD, Peterson SN, Tzipori S. The <i>Shigella dysenteriae</i> serotype 1 proteome, profiled in the host intestinal environment, reveals major metabolic modifications and increased expression of invasive proteins. <i>Proteomics</i> . 2009 Oct 7.
24.	Salzameda NT, Barbieri JT, Janda KD. Synthetic substrate for application in both high and low throughput assays for botulinum neurotoxin B protease inhibitors. <i>Bioorg Med Chem Lett</i> . 2009. 19:5848-50.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology & Botulism Research Unit – Tufts University	
25.	Sheng J, Oyler G, Zhou B, Janda K, Shoemaker CB. Identification and characterization of a novel cell-penetrating peptide. <i>Biochem Biophys Res Commun.</i> 2009. 382:236-40.
26.	Silvaggi NR, Boldt GE, Hixon M, Tzipori S, Janda KD, Allen KN. Structures of <i>Clostridium botulinum</i> neurotoxin serotype A complexed with small molecule inhibitors highlights active-site flexibility. <i>Chemistry and Biology.</i> 2007; 14(5):533-542.
27.	Silvaggi NR, Wilson DM, Tzipori S., Allen KN. Catalytic features of the botulinum neurotoxin A light chain revealed by high resolution structures of an inhibitory peptide complex. <i>Biochemistry.</i> 2008; 47 (21):5736-45.
28.	Sorg J, Sonenshein AL. Bile salts and glycine as cogerminants for <i>Clostridium difficile</i> spores. <i>J. Bacteriol.</i> 2008. 190:2505-2512.
29.	Sorg JA, Sonenshein AL. Chenodeoxycholate is an anti-germinant for <i>Clostridium difficile</i> spores. <i>Journal of Bacteriology.</i> 2009; 191:11154-1117.
30.	Steele J, Feng H, Parry N, Tzipori S. Piglet models of acute or chronic <i>Clostridium difficile</i> illness. <i>J Infect Dis</i> 201(3): 428-34.
31.	Sun X, He X, Tzipori S, Gerhard R, Feng H. Essential role of glucosyltransferase activity in <i>Clostridium difficile</i> toxin-induced secretion of TNF-alpha by macrophages. <i>Microbial Pathogenesis.</i> 2009. PMID: 19324080.
32.	Sun X, Savidge TC, Feng H. The enterotoxicity of <i>Clostridium difficile</i> toxins. <i>Toxins.</i> 2010, 2(7), 1848-1880.
33.	Takahashi T, Joshi S, Al-Saleem F, Ancharski D, Singh A, Nasser Z, Simpson LL, Localization of the Sites and Characterization of the Mechanisms by which Anti-Light Chain antibodies Neutralize the Actions of the Botulinum Holotoxin. <i>Vaccine.</i> 2009; 28;27(19):2616-24.
34.	Willis B, Eubanks LM, Dickerson TJ, Janda KD. The strange case of the botulinum neurotoxin: Using chemistry and biology to modulate the most deadly poison. <i>Angew Chem Int Ed Engl.</i> 2008 47:8360-79.
35.	Yang G, Zhou B, Wang J, He X, Sun X, Nie W. Tzipori S, Feng H. Expression of recombinant <i>Clostridium difficile</i> toxin A and B in <i>Bacillus megaterium</i> . <i>BMC Microbiology.</i> 2008; 8:192.
36.	Zhang Q, Donohue-Rolfe A, Krautz-Peterson G, Sevo M, Parry N, Abeijon C, Tzipori S. Gnotobiotic piglet infection model for evaluating the safe use of antibiotics against <i>Escherichia coli</i> O157:H7 infection. <i>J Infect Dis.</i> 2009 Feb 15;199(4):486-93.
37.	Zhou Y, Singh BR. Cloning, high-level expression, single-step purification, and binding activity of His(6)-tagged recombinant type B botulinum neurotoxin heavy chain transmembrane and binding domain. <i>Protein Expression and Purification.</i> 2004; 34:8-16.

Microbiology Research Unit – Michigan State University	
1.	Abu-Ali G., Lacher D.W., et al. Gene content and evolution of pathogenic <i>Escherichia coli</i> of the EHEC clonal complexes. <i>BMC Genomics.</i> 2009 Jul 3;10:296
2.	Abu-Ali G, Manning SD. Applications of genomics in foodborne pathogen research: Evolution. <i>In: Genomics of Foodborne Pathogens.</i> Springer, New York, NY.
3.	Abu-Ali G, Ouellette LM, et al. Differences in adherence and virulence gene expression between two outbreak strains of enterohaemorrhagic <i>Escherichia coli</i> O157:H7. <i>Microbiology.</i> 2010; 156:408-19.
4.	Abu-Ali G, Ouellette LM, et al. Increased adherence and expression of virulence genes in a lineage of <i>Escherichia coli</i> O157:H7 commonly associated with human infections" <i>PLoS One.</i> 2010; Apr 21:5(4):e10167.
5.	Al-Majali AM, Ababneh MM, Shorman M, Saeed AM. Interaction of <i>Escherichia coli</i> heat-stable enterotoxin (STa) with its putative receptor on the intestinal tract of newborn kids. <i>FEMS Immunol Med Microbiology.</i> 2007; 49:35-40.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology Research Unit – Michigan State University	
6.	Antonopoulos DA, Huse S, Morrison HG, Schmidt TM, Sogin ML, Young V. Reproducible Community dynamics of the gastrointestinal microbiota following antibiotic perturbation. <i>Infect Immun</i> . 2009. PMID: 19307217.
7.	Arshad MM, Asmar HA, Rahbar MH, Bouton ML, Wells E, Wilkins MJ, Saeed AM. Risk factors for <i>Salmonella Oranienburg</i> outbreak in a nursing home in Michigan. <i>Journal of the American Geriatrics Society</i> . 2006; 54(4):715-717.
8.	Arshad MM, Wilkins MJ, Downes FP, Rahbar MH, Erskine RJ, Boulton ML, Saeed AM. A registry-based study on the association between human salmonellosis and routinely collected parameters in Michigan, 1995-2001. <i>Foodborne Pathogens and Disease</i> . 2007; 4(1):16-25.
9.	Arshad MM, Wilkins MJ, Downes FP, Rahbar MH, Erskine RJ, Boulton ML, Younus M, Saeed AM. Epidemiologic attributes of invasive non-typhoidal <i>Salmonella</i> infections in Michigan, 1995-2001. <i>International Journal of Infectious Diseases</i> . March 2008; 12(2): 176-182.
10.	Arshad MM, Wilkins MJ, Downes FP, Rahbar MH, Erskine RJ, Boulton ML, Younus MW, Saeed AM. Epidemiology of infant salmonellosis in Michigan: Records of 1995-2001. <i>Journal of Pediatric Infectious Diseases</i> . 2007; 2(2):89-94.
11.	Bell JA, St. Charles JL, Murphy AJ, Rathinam VA, Plovanich-Jones AE, Stanley EL, Wolf JE, Gettings JR, Whittam TS, Mansfield LS. Multiple factors interact to produce responses resembling spectrum of human disease in <i>Campylobacter jejuni</i> infected C57BL/6 IL-10 ^{-/-} mice. <i>BMC Microbiology</i> . 2009; 9:57.
12.	Bergholz TM, Kailasan Vanaja S, et al. Gene expression induced in <i>Escherichia coli</i> O157:H7 upon exposure to model apple juice. <i>Appl Environ Microbiol</i> . 2009. PMID: 19346340.
13.	Bergholz TM, Tarr CL, et al. Recent gene conversions between duplicated glutamate decarboxylase genes (<i>gadA</i> and <i>gadB</i>) in pathogenic <i>Escherichia coli</i> . <i>Mol Bio Evol</i> . 2008; 24:2323-2333.
14.	*Besser TE, Shaikh N, Holt NJ, Tarr PI, Konkel ME, Malik-Kale P, Walsh CW, Whittam TS, Bono J. Greater diversity of Shiga toxin-encoding bacteriophage insertion sites among <i>Escherichia coli</i> O157:H7 isolates from cattle than from humans. <i>Applied and Environmental Microbiology</i> . February 2007; 73(3):671-679.
15.	Boedeker EC. Gastrointestinal infections, an overview: from pathogens to metagenomes. <i>Curr Opin Gastroenterol</i> . 2008; 24:1-3.
16.	Boedeker EC. Gut microbes, the innate immune system and inflammatory bowel disease: location, location, location. <i>Curr Opin Gastroenterol</i> . 2007; 23:1-3.
17.	Britton RA, Versalovic J. Probiotics and gastrointestinal infections. <i>Interdisciplinary Perspectives in Infectious Disease</i> . 2008;290769. Epub 2009 Feb 4.
18.	Chang JY, Antonopoulos DA, Kalra A, Tonelli A, Khalife WT, Schmidt TM, Young VB. Decreased diversity of the fecal Microbiome in recurrent <i>Clostridium difficile</i> -associated diarrhea. <i>J. Infect Dis</i> . 2008; 197:435-438.
19.	Cho S, Boxrud DJ, Bartkus JM, Whittam TS, Saeed AM. Multiple-locus variable-number tandem repeat analysis of <i>Salmonella enteritidis</i> isolates from human and non-human sources using a single multiplex PCR. <i>FEMS Microbiology Letters</i> . August 10, 2007; 275(1):16-23.
20.	Cho S, Whittam TS, Boxrud DJ, Bartkus JM, Rankin SC, Wilkins MJ, Somsel P, Downes FP, Musser KA, Root TP, Warnick LD, Wiedmann M, Saeed AM. Use of multiple-locus variable number tandem repeat analysis and phage typing for subtyping <i>Salmonella enteritidis</i> from sporadic human cases in the United States. <i>J. Appl. Microbiol</i> . 2009 Jul 20.
21.	Cho S, Whittam TS, et al. Allele distribution and genetic diversity of VNTR loci in <i>Salmonella enterica</i> serotype Enteritidis isolates from different sources. <i>BMC Microbiology</i> . 2008; 8:146.
22.	Crane JK, Naeher TM, Shulgina I, Zhu C, Boedeker EC. Effect of zinc in enteropathogenic <i>Escherichia coli</i> infection. <i>Infect Immun</i> . 2007; 75:5974-5984.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology Research Unit – Michigan State University	
23.	Donabedian SM, Perri MB, Naqvi A, Gordoncillo MJ, Abdujamilova N, Bartlett P, Zervos MJ. Characterization of vancomycin-resistant <i>Enterococcus faecium</i> isolate from swine in three Michigan counties. <i>J. Clin. Micro.</i> 2009.
24.	Eaton KA, Danon SJ, Krakowka S, Weisbrode SE. A reproducible scoring system for quantification of histologic lesions of inflammatory disease in mouse gastric epithelium. <i>Comp Med.</i> 2007; 57:57-56.
25.	Eaton KA, Friedman D, Francis G, Tyler G, Young V, Haeger J, Abu-Ali G, Whittam T. Pathogenesis of renal disease due to enterohemorrhagic <i>Escherichia coli</i> in germ-free mice. <i>Infection and Immunity.</i> July 2008; 76(7): 3054-3063.
26.	Eaton KA, Whittam TS, Francis GJ, Wu V, Benson L. A germ-free mouse model of renal disease due to enterohemorrhagic <i>Escherichia coli</i> . <i>Veterinary Pathology.</i> 2006; 43:863.
27.	Feng PC, Monday SR, Lacher DW, Allison L, Siitonen A, Keys C, Eklund M, Nagano H, Karch H, Keen J, Whittam TS. Genetic diversity among clonal lineages within <i>Escherichia coli</i> O157:H7 stepwise evolutionary model. <i>Emerging Infectious Diseases.</i> 2007; 13(11):1701-1706.
28.	Frank DN, St. Amand AL, Feldman RA, Boedeker EC, Harpaz N, Pace NR. Molecular-phylogenetic characterization of microbial community imbalances in human inflammatory bowel diseases. <i>Proceedings of the National Academy of Sciences.</i> 2007; 104(34):13780-13785.
29.	Garner CD, Antonopoulos DA, Wagner B, Duhamel GE, Keresztes I, Ross DA, Young VB and Altier C. 2009. Perturbation of small intestinal microbial ecology by streptomycin alters pathology in a <i>Salmonella enterica</i> serovar <i>Typhimurium</i> murine model of infection. <i>Infect Immun.</i> 2009 Jul;77(7):2691-702. Epub 2009 May 11
30.	Hazbon MH, Motiwala AS, et al. Convergent evolutionary analysis identifies significant mutations in drug resistance targets of <i>Mycobacterium tuberculosis</i> . <i>Antimicrobial Agents Chemotherapy.</i> 2008; 52(9):3369-3376.
31.	Hyma KE, Lacher DW, Nelson AM, Bumbaugh AC, Janda JM, Strockbine NA, Young VB, Whittam TS. Evolutionary genetics of a new pathogenic <i>Escherichia</i> species: <i>Escherichia albertii</i> and related <i>Shigella boydii</i> strains. <i>Journal of Bacteriology.</i> 2005; 187(2):619-628.
32.	Jacobson MJ, Lin G, et al. Phylogenetic analysis of <i>Clostridium botulinum</i> type A by multi-locus sequence typing. <i>Microbiology.</i> 2008; 154(pt 8):2408-2415.
33.	Konczy P, Ziebell K, et al. Genomic O island 122, locus for enterocyte effacement, and the evolution of virulent verocytotoxin-producing <i>Escherichia coli</i> . <i>Journal of Bacteriology.</i> 2008; 190(17):5832-5840.
34.	Kulasekara BR, Jacobs M, Zhou Y, Wu Z, Whittam TS, Kaul R, Brittnacher M, Miller SI, et al. Analysis of the genome of the <i>Escherichia coli</i> O157:H7 2006 spinach-associated outbreak isolate indicates candidate genes that may enhance virulence. <i>Infection and Immunity.</i> September 2009; 77(9):3713-21.
35.	Lacher DW, Steinsland H, Blank TE, Donnenberg MS, Whittam TS. Molecular evolution of typical enteropathogenic <i>Escherichia coli</i> : Clonal analysis by multilocus sequence typing and virulence gene allelic profiling. <i>Journal of Bacteriology.</i> 2007; 189(2):342-350.
36.	Lacher DW, Steinsland H, Whittam TS. Allelic subtyping of the intimin locus <i>eae</i> of pathogenic <i>Escherichia coli</i> by fluorescent RFLP. <i>FEMS Microbiology Letters.</i> August 2006; 261(1):80-87.
37.	Manning SD, Madera RT, Schneider W, Dietrich SE, Khalife W, Brown W, Whittam TS, Somsel PA, Rudrik JT. Surveillance for Shiga toxin-producing <i>Escherichia coli</i> (STEC) in Michigan, 2001-2005. <i>Emerging Infectious Diseases.</i> 2007; 13(2):318-321.
38.	Manning SD, Motiwala AS, Springman AC, Qi W, Lacher DW, Ouellette LM, Mladonicky JM, Somsel P, Rudrik JT, Dietrich SE, Zhang W, Swaminathan B, Alland D, Whittam TS. Variation in virulence among clades of <i>Escherichia coli</i> O157:H7 associated with disease outbreaks. <i>Proc. Natl. Acad. Sci.</i> 2008; 105(12):4868-4873.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology Research Unit – Michigan State University	
39.	Manning SD, Springman AC, et al. Association of group B <i>Streptococcus</i> colonization and bovine exposure: A prospective cross-sectional cohort study. 2010; <i>PLoS One</i> 5:e8795.
40.	Oaks JL, Besser TE, Walk ST, Gordon DM, Beckmen KB, Burek KA, Haldorson GJ, Bradway S, Ouellette L, Rurangirwa FR, Davis MA, Dobbin G, and Whittam TS. <i>Escherichia albertii</i> in wild and domestic birds. <i>Emerg Infect Dis</i> 16:638-46.
41.	Mansfield LS, Bell JA, Wilson DL, Murphy AJ, Elsheikha HM, Rathinam VA, Fierro BR, Linz JE, and Young VB. C57BL/6 and congenic interleukin-10 deficient mice can serve as models of <i>Campylobacter jejuni</i> colonization and enteritis. <i>Infection and Immunity</i> . 2006; 75(3):1099-1115. Epub 2006 Nov 27.
42.	Mansfield LS, Bell JA, Wilson DL, Murphy AJ, Fierro BR, Rathinam VA, Young VB. C57BL/6 mice and their IL-10 knockout (KO) can serve as models of <i>Campylobacter jejuni</i> colonization and Enteritis. <i>Keystone Symposium, Determinants of Host Resistance, Susceptibility or Immunopathology to Pathogens: Integrating Knowledge from Experimental Models to Human Disease (J2)</i> . Abstract Book. Keystone, CO. January 6-11, 2006.
43.	Mansfield LS, Patterson JS, Fierro BR, Murphy AJ, Rathinam VA, Kopper JJ, Barbu NI, Onifade TJ, Bell JA. Genetic background of IL-10 ^{-/-} mice alters host-pathogen interactions with <i>Campylobacter jejuni</i> and influences disease phenotype. <i>Microbial Pathogenesis</i> . 2008; 45(4):241-57. Epub: 10.1016/j.micpath.2008.05.010.
44.	Mansfield LS, Schauer DB, Fox JG. Animal models of <i>Campylobacter jejuni</i> infections, in: <i>Campylobacter</i> , I. Nachamkin, CM. Szymanski and MJ. Blaser (eds), <i>American Society for Microbiology Press</i> . Washington D.C., Chapter 21:367-381.
45.	Monday SR, Keys C, Hanson P, Shen Y, Whittam TS, Feng P. Produce isolates of the <i>Escherichia coli</i> Ont: H52 serotype that carry both Shiga toxin 1 and stable toxin genes. <i>Applied and Environmental Microbiology</i> . 2006; 72(4):3062-3065.
46.	Palaniappan RUM, Zhang Y, Chiu D, Torres A, DebRoy C, Whittam TS, Chang YF. Differentiation of <i>Escherichia coli</i> pathotypes by oligonucleotide spotted array. <i>Journal of Clinical Microbiology</i> . 2006; 44(4):1495-1501.
47.	Parthasarathy G, Mansfield LS. Recombinant IL-4 (rIL-4) enhances <i>Campylobacter jejuni</i> invasion of Intestinal Pig Epithelial Cells (IPEC-1). <i>Microbial Pathogenesis</i> 2009. PMID: 19409975.
48.	Rathinam VA, Appledorn DM, Hoag KA, Amalfitano A, Mansfield LS. <i>Campylobacter jejuni</i> -induced activation of dendritic cells involves cooperative signaling through Toll-like receptor 4 (TLR4)-MyD88 and TLR4-TRIF axes. <i>Infection and Immunity</i> . 2009; PMID: 19332531, doi:10.1128/IAI.01562-08.
49.	Rathinam VA, Hoag KA, Mansfield LS. Dendritic cells from C57BL/6 mice undergo activation and induce Th1-effector cell responses against <i>Campylobacter jejuni</i> . <i>Microbes Infect</i> . 2008; 10.1016/j.micinf.2008.07.030.
50.	Riordan JT, Tietjen JA, Walsh CW, Gustafson JE, TS Whittam. Inactivation of alternative sigma factor 54 (RpoN) leads to increased acid resistance, and alters locus of enterocyte effacement (LEE) expression in <i>Escherichia coli</i> O157:H7. <i>Microbiology</i> . 2010; 156:719-30.
51.	*Riordan JT, Viswanath SB, Manning SD, Whittam TS. Genetic differentiation of <i>Escherichia coli</i> O157:H7 clades associated with human disease by real-time PCR. <i>Journal of Clinical Microbiology</i> . 2008; 10(12-13):1316-1324.
52.	Saeed AM, Cho S, Younus Y, Leung AKC, Davies DH. Novel approaches to diagnosing Salmonellosis. Chapter in <i>Salmonella Infections: New Research</i> . 2008; 93-106.
53.	Saeed AM, Naji R. Infectious Agents. Chapter in <i>Epidemiologic Principles and Food Safety, Tamar Lasky edition</i> . Oxford University. 2007; 18-39.
54.	Saeed AM, Walk ST, Arshad MM, Whittam TS. Clonal structure and variation in virulence of <i>Salmonella enteritidis</i> isolated from mice, chickens, and humans. <i>Journal of AOAC International</i> . 2006; 89(2):504-511.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology Research Unit – Michigan State University	
55.	Schaefer L, Auchtung TA, Hermans KE, Whitehead D, Borhan B, Britton RA. The antimicrobial compound reuterin (3-hydroxypropionaldehyde) induces oxidative stress via interaction with thiol groups. <i>Microbiology</i> . 156:1589-1599. 2010.
56.	Serna AT, Boedeker EC. Pathogenesis and treatment of Shiga toxin-producing <i>Escherichia coli</i> infections. <i>Curr Opin Gastroenterol</i> . 2008; 24:38-47.
57.	Steinsland H, Lacher DW, Sommerfelt H, Whittam TS. Ancestral lineages of human enterotoxigenic <i>Escherichia coli</i> . <i>J Clin Microbiol</i> . 2010. 48:2916-24.
58.	Tarr CL, Nelson AM, Beutin L, Olsen KE, Whittam TS. Molecular characterization reveals similar clonal groups of <i>Escherichia coli</i> of serogroup O174 (OX3). <i>Journal of Bacteriology</i> . February 2008; 190(4): 1344-1349.
59.	Vanaja KS., Riordan JT. Et al. Characterization of the <i>Escherichia coli</i> O157:H7 Sakai GadE regulon. <i>J. Bacteriol</i> . 2009; 191(6):1868-1877.
60.	Vanaja KS, Springman AC. Differential expression of virulence and stress fitness-associated genes between clinical and bovine-biased genotypes of <i>Escherichia coli</i> O157:H7. <i>Appl Environ Microbiol</i> . 2010; 76: 60-8.
61.	Wick LM, Qi W, Lacher DW, Whittam TS. Evolution of genomic content in the stepwise emergence of <i>Escherichia coli</i> O157:H7. <i>Journal of Bacteriology</i> . 2005; 187(5):1783-1791.
62.	Wolfson JJ, Gorczyca LA, et al. The operon encoding subtilase cytotoxin, a novel toxin discovered in Australia, is present in non-O157 shiga toxin-producing <i>Escherichia coli</i> isolated from humans in the United States. <i>J Infect Dis</i> . 2009; 47:3058-3059.
63.	Young VB, Schmidt TM. Overview of the gastrointestinal microbiota. <i>Adv Exp Med Biol</i> . 2008; 635:29-40.
64.	Younus MW, Hartwick E, Siddiqi AA, Wilkins MJ, Davies HD, Rahbar M, Funk J, Saeed AM. The role of neighborhood level socioeconomic characteristics in <i>Salmonella</i> infections in Michigan (1997-2007): Assessment using geographic information system. <i>International Journal of Health Geographics</i> . 2007; 6(1):56.
65.	Younus MW, Wilkins MJ, Arshad MM, Rahbar MH, Saeed AM. Demographic risk factors and incidence of <i>Salmonella enteritidis</i> infection in Michigan. <i>Foodborne Pathogens and Disease</i> . 2006; 3(3):266-273.
66.	Younus M, Wilkins M, Davies HD, Rahbar MH, Funk J, Nguyen C, Cho S, Siddiqi AA, Saeed AM. Case-control study of disease determinants for non-typhoidal <i>Salmonella</i> infections among Michigan children. <i>BMC Res Notes</i> . 2010 Apr 16:3:105.
67.	Younus MW, Wilkins MJ, Nguyen C, Davies HD, Rahbar MH, Funk J, Siddiqi A, Saeed AM. The role of the contaminated environment in the occurrence of sporadic non-typhoidal <i>Salmonella</i> infections in Michigan children: Findings from a population-based case-control study. <i>American Journal of Epidemiology</i> . 2008; 167(11):S77.
68.	Zhang W, Qi W, Albert TJ, Motiwala AS, Alland D, Hyytia-Trees EK, Ribot EM, Fields PI, Whittam TS, Swaminathan B. Probing genomic diversity and evolution of <i>Escherichia coli</i> O157:H7 by single-nucleotide polymorphisms. <i>Genomic Research</i> . 2006; 16(6):757-767.
69.	Zhu C, Feng S, Sperandio V, Yang Z, Thate TE, Kaper JB, Boedeker E.C. The possible influence of LuxS in the <i>in vivo</i> virulence of rabbit enteropathogenic <i>Escherichia coli</i> . <i>Vet Microbiol</i> . 2007; 125:313-322.
70.	Zhu C, Feng S, Yang Z, Davis K, Rios H, Kaper JB, Boedeker EC. LEE-encoded regulator (Ler) mutants elicit serotype-specific protection, but not cross protection, against attaching and effacing <i>E. coli</i> strains. <i>Vaccine</i> . 2007; 25:1884-1892.
71.	Zhu C, Yu J, Yang Z, Davis K, Rios H, Wang B, Glenn G, Boedeker EC. Protection against Shiga toxin-producing <i>Escherichia coli</i> infection by transcutaneous immunization with Shiga toxin subunit B. <i>Clin Vaccine Immunol</i> . 2008; 15:359-366.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Microbiology Research Unit – Michigan State University	
72.	Ziebell K, Konczy P, Yong I, Frost S, Mascarenhas M, Kropinski AM, Whittam TS, Read SC, Karmali MA. Applicability of phylogenetic methods for characterizing the public health significance of verocytotoxin-producing <i>Escherichia coli</i> (VTEC) strains. <i>Applied Environ. Microbiol.</i> March 2008; 74(5):1671-1675.

Zoonoses Research Unit – Cornell University	
1.	Alcaine SD, Soyer Y, Warnick LD, Su W-L, Sukhnanand SS, Richards J, Fortes ED, McDonough P, Root TP, Dumas NB, Gröhn Y, Wiedmann M. Multilocus sequence typing supports the hypothesis that cow- and human- associated <i>Salmonella</i> isolates represent distinct and overlapping populations. <i>Applied and Environmental Microbiology.</i> 2006; 72(12):7575-7585.
2.	Alcaine SD, Warnick LD, Wiedmann M. Antimicrobial resistance in nontyphoidal <i>Salmonella</i> . <i>Journal of Food Protection.</i> 2007; 70(3):780-790.
3.	Alexander KA, Warnick LD, Wiedmann M. Antimicrobial resistant <i>Salmonella</i> in dairy cattle in the United States. <i>Vet. Res. Commun.</i> 2008. PMID: 18792798.
4.	Alexander KA, Warnick LD, Cripps CJ, McDonough PL, Grohn YT, Wiedmann M, Reed KE, James KL, Soyer Y, Ivanek R. Fecal shedding of, antimicrobial resistance in, and serological response to <i>Salmonella</i> Typhimurium in dairy calves. <i>Journal of the American Veterinary Medical Association.</i> September 2009; 235(6):739-48.
5.	Cummings KJ, Warnick LD, Elton M, Rodriguez–Rivera LD, Siler JD, Wright EM, Gröhn YT, Wiedmann M. <i>Salmonella enterica</i> serotype Cerro among dairy cattle in New York: An emerging pathogen? <i>Foodb. Path. Dis.</i> 7(6):659-65.
6.	Cummings KJ, Warnick LD, Elton M, Gröhn YT, McDonough PL, Siler JD. The effect of clinical outbreaks of salmonellosis on the prevalence of fecal <i>Salmonella</i> shedding among dairy cattle in New York. <i>Foodborne Pathogens and Disease.</i> 2010; 7: 815-823.
7.	Cummings KJ, Warnick LD, Alexander KA, Cripps CJ, Gröhn YT, McDonough PL, Nydam DV, Reed KE. The incidence of salmonellosis among dairy herds in the northeastern United States. <i>Journal of Dairy Science.</i> August 2009; 92(8):3766–74
8.	Chiou CS, Lin JM, Chiu CH, Chu CH, Chen SW, Chang YF, Weng BC, Tsay JG, Chen CL, Liu CH, Chu C. Clonal dissemination of the multi-drug resistant <i>Salmonella enterica</i> serovar Braenderup, but not the serovar Bareilly, of prevalent serogroup C1 <i>Salmonella</i> from Taiwan. <i>BMC Microbiol.</i> 2009; 9:264.
9.	*Davis MA, Baker KNK, Call DR, Warnick LD, Soyer Y, Wiedmann M, Besser TE. Multiple locus variable number of tandem repeats analysis for <i>Salmonella enterica</i> serovar Newport. <i>J. Clin. Micro.</i> 2009. PMID: 19386855.
10.	*Davis MA, Besser TE, Eckmann K, MacDonald JK, Green D, Hancock DD, Baker K, Warnick LD, Soyer Y, Wiedmann W, Call DR. Multidrug-resistant <i>Salmonella</i> Typhimurium, Pacific Northwest, United States. <i>Emerging Infectious Diseases.</i> 2007; 13(10):1583-1586.
11.	Davis MA, Lim JY, Soyer Y, Harbottle H, Chang YF, New D, Orfe LH, Besser TE, Call DR. Development and validation of a resistance and virulence gene microarray targeting <i>Escherichia coli</i> and <i>Salmonella enterica</i> . <i>J Microbiol Methods.</i> 2010; 82(1):36-41.
12.	Garner CD, Antonopoulos DA, Wagner B, Duhamel GE, Keresztes I, Ross DA, Young V, Altier C. Perturbation of the small intestinal microbial ecology by streptomycin alters pathology in a <i>Salmonella enterica</i> serovar Typhimurium murine model of infection. <i>Infection Immun.</i> 2009. PMID: 19433544.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Zoonoses Research Unit – Cornell University	
13.	Hoelzer K, Soyer Y, Rodriguez-Rivera LD, Cummings KJ, McDonough PL, Schoonmaker-Bopp DJ, Root TP, Dumas NB, Warnick LD, Gröhn YT, Wiedmann M, Baker KNK, Besser TE, Hancock DD, Davis MA. The prevalence of multidrug resistance is higher among bovine than human <i>Salmonella enterica</i> serotype Newport, Typhimurium, and 4,5,12:i:- isolates in the United States but differs by serotype and geographic region. <i>Appl. Environ. Microbiol.</i> 2010 76(17):5947-59.
14.	Huang Y, Suyemoto M, Garner CD, Cicconi KM, Altier C. Formate acts as a diffusible signal to induce <i>Salmonella</i> invasion. <i>Journal Bacteriology.</i> 2008; 190:4233-4241.
15.	Janvilisri T, Scaria J, Gleed R, Fubini S, Bonkosky MM, Grohn Y, Chang Y-F. Development of a microarray for identification of pathogenic <i>Clostridium</i> spp. <i>Diagnostic Microbiology and Infectious Disease.</i> 2009.
16.	Janvilisri T, Scaria J, Thompson A, Nicholson A, Limbargo B, McDonald LC, Arroyo LG, Gröhn Y, Chang YF. Microarray identification of <i>Clostridium difficile</i> core components and divergent regions associated with host origin. <i>Journal of Bacteriology.</i> 2009. PMID: 19376880.
17.	Janvilisri T, Scaria J, Chang YF. Transcriptional profiling of <i>Clostridium difficile</i> and Caco-2 cells during infection. <i>J Infect Dis.</i> 2010; 202(2):282-90.
18.	Ku YW, McDonough SP, Palaniappan RUM, Chang CF, Chang YF. Novel attenuated <i>Salmonella enterica</i> serovar Cholereausis strains as live vaccine candidates generated by signature-tagged mutagenesis. <i>Infection and Immunity.</i> 2005; 73(12):8194-8203.
19.	Lanzas C, Brien S, Ivanek R, Lo Y, Chapagain P, Ayscue P, Warnick LD, Gröhn YT. The effect of heterogenous infectious period and contagiousness on the dynamics of <i>Salmonella</i> transmission in dairy cattle. <i>Epidemiology and Infections.</i> 2008; 136(11):1496-1510. Epub January 16, 2008. PMID: 18198002.
20.	Lanzas C, Warnick LD, Ivanek R, Ayscue P, Nydam DV, Grohn YT. 2008. The risk and control of <i>Salmonella</i> outbreaks in calf-raising operations: a mathematical modeling approach. <i>Veterinary Research.</i> 2008; 39(6):61. Epub 2008 Sep 9. PMID: 18778681.
21.	Lefebure T, Stanhope MJ. Pervasive, genome wide positive selection, leading to functional divergence in the bacterial genus <i>Campylobacter</i> . <i>Genome Res.</i> 2009; 19:1224-1232. PMID: 19304960.
22.	Lefebure T, Pavinski-Bitar PD, Suzuki H, Stanhope MJ. Evolutionary dynamics of complete <i>Campylobacter</i> pan-genomes and the bacterial species concept. <i>Genome Biol. and Evol.</i> 2010. 2:646-55.
23.	Moreno Switt AI, Soyer Y, Warnick LD, Wiedmann M. Emergence, distribution and molecular and phenotypic characteristics of <i>Salmonella enterica</i> serotype 4,5,12:i:-. <i>Foodborne Pathogen Diseases.</i> 2009; 6(4):407-15.
24.	Palaniappan RUM, Zhang Y, Chiu D, Torres A, DebRoy C, Whittam TS, Chang YF. Differentiation of <i>Escherichia coli</i> pathotypes by oligonucleotide spotted array. <i>Journal of Clinical Microbiology.</i> 2006; 44(4):1495-1501.
25.	Ray KA. Epidemiology of antimicrobial resistant <i>Salmonella</i> on dairy farms in the northeast and midwest USA. <i>PhD Thesis: Population Medicine and Diagnostic Sciences.</i> Cornell University. Ithaca, NY. 2006.
26.	Ray KA, Warnick LD, Mitchell RM, Kaneene JB, Ruegg PL, Wells SJ, Fossler CP, Halbert LW, May K. Prevalence of antimicrobial resistance among <i>Salmonella</i> on midwest and northeast USA dairy farms. <i>Prev. Vet. Med.</i> 2007; 79(2-4):204-223.
27.	Scaria J, Palaniappan RU, Chiu D, Phan JA, Pannala L, McDonough P, Grohn YT, Porwallik S, McClelland M, Chiou CS, Chu C, Chang F. Microarray for molecular typing of <i>Salmonella enterica</i> serovar. <i>Mol. Cell. Probes.</i> 2008; 22(4):238-243.
28.	Scaria J, Sreedharan A, Chang YF. Microbial diagnostic array workstation (MDAW): A web server for diagnostic array data storage, sharing and analysis. <i>Source Code Biol. Med.</i> September 2008; 3:14-19.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Zoonoses Research Unit – Cornell University	
29.	Soyer Y, Moreno Switt A, Davis MA, Maurer J, McDonough PL, Schoonmaker-Bopp DJ, Dumas NB, Root T, Warnick LD, Grohn YT, Wiedmann M. Salmonella enteric serotype 4,5,12:i:-, an emerging Salmonella serotype that represents multiple distinct clones. <i>J. Clin. Microbiol.</i> November 2009; 3546-3556.
30.	Sukhnanand S, Alcaine SD, Su W, Hof J, Craver MPJ, Warnick LD, McDonough PL, Boor KJ, Wiedmann M. DNA sequence-based subtyping and evolutionary analysis of selected <i>Salmonella enterica</i> serotypes. <i>Journal of Clinical Microbiology.</i> 2005; 43(8):3688-3698.
31.	Yu CY, Chou SJ, Chao MR, Huang KC, Yeh CM, Chang YF, Chiou CS, Weill FX, Chiu CH, Chu CS. Prevalence and characterization of multiple-resistant (type ASSuT) <i>Salmonella enterica</i> serovar Typhimurium strains in isolates from four gosling farms and a hatchery farm. <i>Journal of Clinical Microbiology.</i> 2008; 46(2):522-526.

Zoonoses Research Unit – Washington State University	
1.	Adhikari B, Besser TE, Gay JM, Fox LK, Davis MA, Cobbold RN, Berge ACB, Hancock DD. Herd-level factors associated with introduction of new multidrug resistant <i>Salmonella</i> strains into commercial dairy farms. <i>Journal Dairy Science.</i> 2009; 92:4218-4228.
2.	Adhikari B, Besser TE, Gay JM, Fox LK, Davis MA, Cobbold RN, Berge ACB, McClanahan R, Hancock DD. The role of animal movement, including off-farm rearing of heifers, in the inter-herd transmission of MDR <i>Salmonella</i> . <i>Journal of Dairy Science.</i> 2009; 92:4229-4238.
3.	Adhikari B, Besser TE, Gay JM, Fox LK, Hancock DD, Davis MA. Multilocus variable number of tandem repeats analysis and plasmid profiling to study the occurrence of <i>bla</i> _{CMY-2} within a PFGE-defined clade of <i>Salmonella enterica</i> serovar Typhimurium isolated from cattle and humans. <i>Appl Env Microbiol.</i> Jan 2010; 76(1):69-74. Epub 2009 Oct 30.
4.	Adhikari B, Besser TE, Gay JM, Fox LK, Hancock DD, Davis MA. Multilocus variable number of tandem repeats analysis and plasmid profiling to study the occurrence of <i>bla</i> _{CMY-2} within a PFGE defined clade of <i>Salmonella enterica</i> serovar Typhimurium. <i>Appl Environ Microbiol.</i> 2010;76:69-74.
5.	Allen AJ, Park KT, Barrington GM, Lahmers KK, Hamilton MJ, Davis WC. Development of a bovine ileal cannulation model to study the immune response and mechanisms of pathogenesis of paratuberculosis. <i>Clinical Vaccine and Immunology.</i> 2009; 16(4):453-563.
6.	Besser TE, Shaikh N, Holt NJ, Tarr PI, Konkel ME, Malik-Kale P, Whittam T, Bono J. Greater diversity of Shiga toxin-encoding bacteriophage insertion sites among <i>Escherichia coli</i> O157:H7 isolates from cattle than in those from humans. <i>Applied and Environmental Microbiology.</i> 2007; 73(3):671-679.
7.	Borucki MK, Reynolds J, Call DR, Ward T, Page B, Kadushin J. Suspension microarray with dendrimer signal amplification allows direct and high throughput subtyping of <i>Listeria monocytogenes</i> from genomic DNA. <i>Journal of Clinical Microbiology.</i> July 2005; 43(7):3255-3259.
8.	Broschat SL, Call DR, Davis MA, Meng D, Ahmed A, Besser TE. Improved identification of epidemiologically related strains of <i>Salmonella enterica</i> using a fusion algorithm based on PFGE and MLVA. <i>Journal of Clinical Microbiology.</i> 2010 Aug 25. epub ahead of print
9.	Call DR. Challenges and opportunities for pathogen detection using DNA microarrays. <i>Critical Reviews in Microbiology.</i> 2005; 31(2):91-99.
10.	Call DR, Kang MS, Daniels J, Besser TE. Assessing genetic diversity in plasmids from <i>Escherichia coli</i> and <i>Salmonella enterica</i> using a mixed-plasmid microarray. <i>Journal of Applied Microbiology.</i> January 2006; 100(1):15-28.
11.	Call DR, Orfe L, Davis MA, LaFrentz S, Kang MS. Impact of compounding error on strategies for subtyping pathogenic bacteria. <i>Foodborne Pathogens and Disease.</i> 2008; 5:505-516.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Zoonoses Research Unit – Washington State University	
12.	Call, DR, RS Singer, D Meng, SL Broschat, LH Orfe, JM Anderson, DR Herndon, LS Kappmeyer, JB Daniels, and TE Besser. 2010. <i>bla</i> _{CMY-2} positive Inc A/C plasmids from <i>Escherichia coli</i> and <i>Salmonella enterica</i> are a distinct component of a larger lineage of plasmids. <i>Antimicrobial Agents and Chemotherapy</i> . 54:590-596.
13.	Christensen, J.E., Pacheco, S.A., and M.E. Konkel. Identification of <i>Campylobacter jejuni</i> secreted protein required for maximum invasion of host cells. <i>Molecular Microbiology</i> . 2009; PMID: 19627497.
14.	Cobbold RN, Davis MA, Rice DH, Szymanski M, Tarr PI, Besser TE, Hancock DD. Associations between bovine, human, and raw milk, and beef isolates of non-O157 shigatoxigenic <i>Escherichia coli</i> within a restricted geographic area of the USA. <i>J. Food Prot.</i> 2008; 71(5): 1023-1027.
15.	Daniels JB, Call DR, Hancock DD, Sischo MW, Baker K, Besser TE. <i>In review</i> . The role of ceftiofur in the selection and dissemination of <i>bla</i> _{CMY-2} – mediated cephalosporin resistance in <i>Salmonella enterica</i> and commensal <i>Escherichia coli</i> isolated from cattle. <i>Appl. Environ. Microbiol.</i> PMID: 19376926.
16.	Davis MA, Baker KN, Orfe LH, Shah DH, Besser TE, Call DR. Discovery of a gene conferring multiple-aminoglycoside resistance in <i>Escherichia coli</i> . <i>Antimicrob Agents Chemother.</i> 2010 Jun;54(6):2666-9.
17.	*Davis MA, Baker KN, Call DR, Warnick LD, Soyer Y, Wiedmann M, Besser TE. Multiple locus variable number of tandem repeats analysis for <i>Salmonella enterica</i> serovar Newport. <i>J. Clin. Micro.</i> 2009.
18.	*Davis MA, Besser TE, Eckmann K, MacDonald JK, Green D, Hancock DD, Baker K, Warnick LD, Soyer Y, Wiedmann W, Call DR. Multidrug-resistant <i>Salmonella</i> Typhimurium, Pacific Northwest, United States. <i>Emerging Infectious Diseases</i> . 2007; 13(10):1583-1586.
19.	Davis MA, Hancock DD, Besser TE, Daniels JB, Baker K, Call DR. Antimicrobial resistance in <i>Salmonella enterica</i> serovar Dublin isolates from beef and dairy sources. <i>Veterinary Microbiology</i> . January 2007; 119:221-230.
20.	Davis MA, Lim JY, Soyer Y, Harbottle H, Chang YF, New D, Orfe L, Besser TE, Call DR. Development and validation of a resistance and virulence gene microarray targeting <i>Escherichia coli</i> and <i>Salmonella enterica</i> : intra-laboratory validity versus inter-laboratory portability. <i>Journal of Microbiology Methods</i> . 2010 Jul;82(1):36-41.
21.	Davis WC. Use of expression of Foxp3 in bovine peripheral blood mononuclear cells in studies of pathogenesis of paratuberculosis. September issue <i>Paratuberculosis News Letter</i> . 2008.
22.	Dunowska M, Morley PS, Traub-Dargatz JL, Davis MA, Patterson G, Frye JG, Hyatt DR, Dargatz DA. Comparison of <i>Salmonella enterica</i> serotype Infantis isolates from a veterinary teaching hospital. <i>Journal of Applied Microbiology</i> . 2007; 102(6):1527-1536.
23.	Frank DN, St. Amand AL, Feldman RA, Boedeker EC, Harpaz N, Pace NR. Molecular-phylogenetic characterization of microbial community imbalances in human inflammatory bowel diseases. <i>Proceedings of the National Academy of Sciences</i> . 2007; 104(34):13780-13785.
24.	Kang MS, Besser TE, Call DR. Identification of genetic elements in <i>Escherichia coli</i> and <i>Salmonella enterica</i> plasmids that confer <i>bla</i> _{CMY-2} mediated resistance to expanded-spectrum cephalosporins. <i>Antimicrobial Agents and Chemotherapy</i> . 2005; 50:1590-1593.
25.	Kang MS, Besser TE, Call DR. Variability in the region downstream of the <i>bla</i> _{CMY-2} β-lactamase gene in <i>Escherichia coli</i> and <i>Salmonella enterica</i> plasmids. <i>Antimicrobial Agents and Chemotherapy</i> . 2006;50(4):1590-1593.
26.	Kang MS, Besser TE, Hancock DD, Call DR. Multiple environmental stress tests show no common phenotypes shared amongst contemporary epidemic strains of <i>Salmonella enterica</i> . <i>Applied and Environmental Microbiology</i> . 2007; 73(9): 3101-3104.
27.	Kang MS, Besser TE, Hancock DD, Porwollik S, McClelland M, Call DR. Identification of specific gene sequences conserved in contemporary and epidemic strains of <i>Salmonella enterica</i> . <i>Applied and Environmental Microbiology</i> . 2006; 72(11):6938-6947.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Zoonoses Research Unit – Washington State University	
28.	Larson CL, Christensen JE, Pacheco SA, Minnich SA, Konkel ME. <i>Campylobacter jejuni</i> secretes proteins via the flagellar type III secretion system that contribute to host cell invasion and gastroenteritis In "Campylobacter 3rd Edition", Nachamkin I, Szymanski C M, Blaser MJ. (Eds.). <i>American Society for Microbiology</i> . Washington, D.C. 2008; 315-332.
29.	Leopold SK, Magrini V, Holt NJ, Shaikh N, Mardi ER, Cagno J, Orgura Y, Iguchi A, Hayashi T, Mellmann A, Karch H, Besser TE, Sawyer SA, Whittam TS, Tarr PI. A precise reconstruction of the emergence and constrained radiations of <i>Escherichia coli</i> O157 portrayed by backbone concatenomic analysis. <i>Proc National Acad Sciences</i> . 2009.
30.	Meng D, Broschat SL, Call DR. A Java-based tool for the design of classification microarrays. <i>BMC Bioinformatics</i> . 2008; 9:328.
31.	Neal-McKinney, J.M., Christensen, J.E., M.E. Konkel. Amino-terminal residues dictate the export efficiency of the <i>Campylobacter jejuni</i> filament proteins via the flagellum. <i>Mol Microbiol</i> . 2010 Apr 1.
32.	Neal-McKinney JM, Christensen JE, Konkel ME. Differences in gene expression and secretion efficiency between <i>Campylobacter jejuni</i> FlaA and FlaB filament proteins determine flagellar length and bacterial motility.
33.	Oaks JL, Besser TE, Walk ST, Gordon DM, Beckmen KB, Burek KA, Haldorson GJ Bradway S, Ouellette L, Rurangirwa FR, Davis MA, Dobbin G, Whittam TS. <i>Escherichia albertii</i> in wild and domestic birds. <i>Emerg Infect Dis</i> 16:638-46.
34.	Piñeyro P, Zhou X, Orfe LH, Friel PJ, Lahmers K, Call DR. Development of two animal models to study the function of <i>Vibrio parahaemolyticus</i> type III secretion systems. <i>Infect Immun</i> . 2010 Sep 7. Epub ahead of print.
35.	Shah DH, Shringi S, Besser TE, Call DR. <i>Escherichia coli</i> O157:H7. In: Liu, D, Editor. <i>Molecular Detection of Foodborne Pathogens</i> , CRC Press, Chapter 27. 2009.
36.	Soyer Y, Moreno Switt A, Davis MA, Maurer J, McDonough PL, Schoonmaker-Bopp DJ, Dumas NB, Root T, Warnick LD, Gröhn YT, Wiedmann M. <i>Salmonella</i> 4,5,12:i: An emerging <i>Salmonella</i> serotype that represents multiple distinct clones. <i>J. Clin. Microbiol</i> . Sept 2009.
37.	Tri Duong T, Konkel ME. Comparative studies of <i>Campylobacter jejuni</i> genomic diversity reveal the importance of core and dispensable genes in the biology of this enigmatic food-borne pathogen. <i>Curr. Opin. Biotechnol</i> . 2009.
38.	Vanaja SK, Springman AC, Besser TE, Whittam TS, Manning SD. Differential expression of virulence and stress fitness genes between clinical and bovine-biased genotypes of <i>Escherichia coli</i> O157:H7. <i>Applied and Environmental Microbiology</i> . 210 Jan; 76 (1):60-8. Epub 2009Oct 30.
39.	Whitworth JH, Fegan N, Keller J, Gobius KS, Bono JL, Call DR, Hovde CJ, Hancock DD, Besser TE. At an international scale, <i>E. coli</i> O157:H7 Stx bacteriophage insertion genotypes have a variable distribution between human and cattle hosts. <i>Applied and Environmental Microbiology</i> . 2008; 74:7447-7450.
40.	Whitworth JH, Diverse genetic markers concordantly identify bovine-origin <i>Escherichia coli</i> O157:H7 under-represented in human disease. <i>Applied and Environmental Microbiology</i> . 2010 Jan; 76 (1): 361-5. Epub 2009 Oct 30.
41.	Zhou X. Regulation of T3SS1 genes in <i>Vibrio parahaemolyticus</i> and its involvement in pathogenesis. PhD Dissertation. Washington State University. Pullman, WA. 2006.
42.	Zhou X, Konkel ME, Call DR. Type III secretion system 1 of <i>Vibrio parahaemolyticus</i> induces oncosis in both epithelial and monocytic cell lines. <i>Microbiology</i> . March 2009; 155(Pt 3):837-51.
43.	Zhou X, Shah DH, Konkel ME, Call DR. Type III secretion system 1 genes in <i>Vibrio parahaemolyticus</i> are positively regulated by ExsA and negatively regulated by ExsD. <i>Molecular Microbiology</i> . 2008; 69:747-764.
44.	Zhou, X, ME Konkel, and DR Call. Vp1659 is a <i>Vibrio parahaemolyticus</i> T3SS1 protein that contributes to translocation of effector proteins needed to induce cytolysis, autophagy and disruption of actin structure in HeLa cells. <i>Journal of Bacteriology</i> . 2010.

* Denotes collaborative publication or presentation under multiple projects or Research Units.



FOOD & WATERBORNE DISEASES INTEGRATED RESEARCH NETWORK
Network Publications

Zoonoses Research Unit – Washington State University

45.	Zhou, X, ME Konkel, and DR Call. <i>Accepted</i> . Regulation of type III secretion system 1 gene expression in <i>Vibrio parahaemolyticus</i> is dependent on interactions between ExsA, ExsC, and ExsD. <i>Virulence</i> . 2010.
-----	--