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Translational Genomics Research Institute

Division of Pathogen Genomics
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EDUCATION AND TRAINING

- 1994 Northern Arizona University, Flagstaff, AZ
Bachelor of Science in Microbiology
- 2000 Northern Arizona University, Flagstaff, AZ
Master of Science in Biology
- 2006 Johns Hopkins University, Baltimore, MD
Doctor of Philosophy in Environmental Health Sciences

PROFESSIONAL EMPLOYMENT

- 10/12-Prsnt. George Washington University
Professor, Department of Environmental and Occupational Health
Founder and Director, Antibiotic Resistance Action Center
Principal Responsibilities: Conduct research that advances public health; inform science-based public health policy; instruct students; and mentor junior researchers.
- 02/10-Prsnt. Translational Genomics Research Institute (TGen), Flagstaff, AZ
Associate Professor, Division of Pathogen Genomics
Founder and Director, Center for Microbiomics and Human Health
Founder and Director, Center for Food Microbiology and Environmental Health
Principal Responsibilities: Perform research that advances public health and clinical medicine; develop tools and approaches to advance microbiome and food microbiology research; and mentor junior researchers.
- 02/08-02/10 Translational Genomics Research Institute (TGen), Flagstaff, AZ
Associate Investigator, Division of Pathogen Genomics
Founder and Director, Center for Metagenomics and Human Health
Principal Responsibilities: Same as above.
- 06/09-12/11 Interdisciplinary Health Policy Institute, Flagstaff, AZ
Senior Scientist
Director, Office of Wellness and Healthy Communities
Principal Responsibilities: Conduct research that advances community health and wellness; increase research collaborations between TGen and NAU; and create opportunities for student training in public health.
- 01/09-12/10 Pew Charitable Trusts, Washington, DC
Senior Science Advisor, Pew Campaign on Human Health and Industrial Farming (HHIF)

Principal Responsibilities: Advise the HHIF on their efforts to curb unnecessary antibiotic use in food-animal production.

- 01/07-02/08 Johns Hopkins University School of Medicine, Baltimore, MD
Director of Pathogenesis and Molecular Diagnosis of Infectious Diseases
 Principal Responsibilities: Develop tools and analytic approaches for characterizing the human microbiome, particularly as it relates to persistence of chronic wounds.
- 08/03-12/06 Johns Hopkins University, Baltimore, MD
Graduate Research Assistant
 Principal Responsibilities: Characterize the occupational and community health risks associated with industrial poultry production.
- 12/05-08/06 Pew Commission on Industrial Farm Animal Production, Baltimore, MD
Research Specialist
 Principal Responsibilities: Conduct a comprehensive literature review on the public health risks associated with antibiotic use in food-animal production.
- 04/02-08/03 Johns Hopkins University, Baltimore, MD
Research Associate
 Principal Responsibilities: Build a BSL-2 microbiology laboratory for studying antibiotic-resistant zoonotic bacterial pathogens, including *Campylobacter* and *E. coli*; conduct research to elucidate the public health risks associated with antibiotic use in food-animal production.
- 11/00-04/02 Intralytix, Inc., Baltimore, MD
Research Scientist
 Principal Responsibilities: Develop phage cocktails to control bacterial pathogens, including *Listeria* spp., *E. coli* 0157:H7, and *Salmonella*; and manage the food-safety research team.
- 09/97-07/00 Keim Genetic Laboratory, Northern Arizona University, Flagstaff, AZ
Research Scientist
 Principal Responsibilities: Engineer high-resolution genotyping systems for biothreat pathogens, including *Bacillus anthracis* and *Yersinia pestis*; characterize the genetic determinants of fluoroquinolone resistance in *B. anthracis*; and manage the *B. anthracis* research team.
- 01/96-05/97 Northern Arizona University, Flagstaff, AZ
Laboratory Instructor
 Principal Responsibilities: Teach introductory laboratory course in the biology of microorganisms, environmental microbiology, and immunology.
- 01/95-05/97 Northern Arizona University, Flagstaff, AZ
Graduate Research Assistant
 Principal Responsibilities: Characterize bacteriocin production in halophilic Archaea.

HONORS AND AWARDS

Honors

- 05/30/14 *Invited Speaker* – Antibiotic Resistance: Why the Trans-Atlantic Trade and Investment Partnership Must Protect Public Health. Congressional Briefing. Washington, DC.

- 03/09/13 *Invited Testimony* – Animal Drug User Fee Act (ADUFA), Energy and Commerce Committee, US House of Representatives, Washington, DC.
- 12/15/12 *Recognized article* – Discover Magazine, 100 Top Stories of 2012 (#71 “*Pig Farms Breed Resistant Staph*”).
- 03/08/12 *Invited Speaker* – US Congressional Briefing on Antimicrobial Resistance. Washington DC.
- 04/14/10 *Invited Speaker* – US House Briefing on Antimicrobial Resistance and Human Health. Washington DC.
- 12/02/09 *Invited Speaker* – US House Briefing on Antimicrobial Resistance and Costs to the Health System. Washington, DC.
- 07/13/09 *Invited Testimony* – US House Committee on Antimicrobial Drug Use on Farms. Washington, DC.
- 07/07/05 *Invited Speaker* – US House Briefing on Industrial Animal Production and Public Health. Washington, DC.

Awards

- 2003-2005 *Predoctoral fellow Award* – the Center for a Livable Future, Johns Hopkins School of Public Health.
- 2004 *Best Health Communication Project* – the Center for Communications Programs, Johns Hopkins School of Public Health.
- 2000 *Outstanding Master’s Thesis Award* – Department of Biological Sciences, Northern Arizona University.

GRANTS AWARDED OR PENDING

- Current National Institutes of Health (NIAID)
Rapid emergence of livestock-associated MRSA ST398: host-adaptation & virulence (R01)
- Principal Investigator; 1.44 Calendar months
 - 06/10/2013 - 05/31/2017
 - Annual direct: \$265,856
- Current National Institutes of Health (NIAID)
Host, community, and strain-level determinants of S. aureus colonization (R01)
- Principal investigator; 1.2 Calendar months
 - 06/01/2016 – 05/31/2021
 - Annual direct: \$464,368
- Current National Institutes of Health (NIAID)
The role of penile bacteria and inflammation in HIV susceptibility: Rakai, Uganda (R01)
- Principal investigator; 1.8 Calendar months
 - 05/15/2016 – 04/30/2021
 - Annual direct: \$548,551
- Current National Institutes of Health (NIAID)
E. coli ST131-H30 colonization: defining community and population level antagonism in the gastrointestinal microbiome (R21)

- Principal investigator; 1.2 Calendar months
 - 02/20/2015- 01/31/2017
 - Annual direct: \$150,000
- Current National Institutes of Health (NIAID)
Modeling Staphylococcus aureus antagonism in pediatric nasal communities
- Co-investigator; 0.6 Calendar months
 - 04/25/2016 – 03/31/2018
 - Annual direct: \$187,970
- Current National Science Foundation
Collaborative Research, Dimensions: Microbial Biodiversity of Carbon Mineralization-Interactions
- Co-Principal Investigator; 0.24 Calendar months
 - 01/01/2013-12/31/2017
 - Annual direct: \$21,821
- Current National Science Foundation
The impact of intensive livestock production on the disease ecology of antibiotic resistant Staphylococcus
- Co-Investigator; 0.60 Calendar months
 - 09/15/2013 - 08/31/2018
 - Annual direct: \$49,387
- Current National Science Foundation
Improving care, decreasing cost, and preserving antibiotics through rapid diagnostics
- Co-Investigator; 0.06 Calendar months
 - 01/01/2016 – 6/30/2017
 - Annual direct: \$45,000
- Current National Institutes of Health (NIAID)
Sexual initiation, microbiome, and HIV susceptibility; Rakai, Uganda
- Co-Investigator; 0.36 Calendar months
 - Performance period: 12/01/2016 - 11/30/2020
 - Annual direct: \$74,042
- Pending National Institutes of Health (NIAID)
Epidemiology of Staphylococci in humans and animals: reservoirs of zoonotic resistance genes?
- Co-Investigator; 0.60 Calendar months
 - 04/01/2018 – 03/31/2022
 - Annual direct: \$49,897
- Pending National Institutes of Health (NIAID)
Antimicrobial Resistant E. coli before and after California Senate Bill 27 (ARES): A Natural Experiment
- Co-Investigator; 0.60 Calendar months
 - 04/01/2017 – 03/31/2022
 - Annual direct: \$162,061

GRANTS CONCLUDED

Completed United States Department of Agriculture

- Staphylococcus aureus: Is Raw Meat a Risk Factor for Colonization and Infection*
- Co-Investigator; 0.12 Calendar months
 - 04/01/2013 - 03/31/2015
 - Annual direct: \$48,748
- Completed National Science Foundation
Collaborative Research: A New Paradigm for Understanding How Leaf Litter Quality Affects Stream Ecosystems
- Co-Principal Investigator; 0.24 Calendar months
 - 12/01/2011 - 11/30/2015
 - Annual direct: \$18,528
- Completed Canadian Institute of Health Research
Defining the Clinical and Immune Causes of Disproportionately High HIV Levels in Semen
- Co-Investigator; 0.12 Calendar months
 - 10/01/2011-09/30/2015
 - Annual direct: \$35,000
- Completed National Institutes of Health (NIAID/NIDCR)
Microbial ecology in the Chronic Rhinosinusitis Microbiome (R15)
- Co-Investigator; 0.60 Calendar months
 - 09/01/2010 - 08/31/2014
 - Annual direct: \$32,327
- Completed National Institutes of Health (NIAID)
Genital Anaerobes, Inflammation and HIV Risk; Rakai (R01)
- Principal Investigator (MPI); 1.20 Calendar months
 - 06/01/2010 - 05/31/2014
 - Annual direct: \$207,103
- Complete GWU Food-for-Thought Grant Program
Evaluating Foodborne Origins for Pediatric Urinary Tract Infections
- Co-PI; 0.60 Calendar months
 - 01/01/2013 - 5/31/2014
 - Annual direct: \$36,500
- Completed United States Army Medical Research and Materiel Command
Colonization and extraintestinal infection with multidrug resistant E. coli: identifying community reservoirs
- Principal Investigator; 1.20 Calendar months
 - 08/29/2011 - 12/28/2013
 - Annual direct: \$295,276
- Completed Hill's Pet Nutrition
Feline Gastrointestinal Microbiome: impacts of specialized diets
- Principal Investigator; 0.24 Calendar months
 - 08/01/2012 - 12/31/2013
 - Annual direct: \$41,238
- Completed United States Army Medical Research and Materiel Command

- Prospective Molecular Characterization of Burn Wound Colonization: Novel Tools and Analysis*
- Principal Investigator
 - Total award: \$1,015,000
- Completed United States Army Medical Research and Materiel Command
Genomic Analysis of Complex Microbial Communities in Wounds
- Principal Investigator
 - Total award: \$1,867,000
- Completed Hill's Pet Nutrition
Canine Oral Microbiome in Health and Disease
- Principal Investigator; 0.24 Calendar months
 - Annual direct: \$ 80,478
- Completed The National Food Institute at the Technical University of Denmark (DTU)
Whole Genome Sequencing of Food Borne Pathogens
- Principal Investigator (sub-contractor)
 - Total sub-award: \$100,000
- Completed The Pew Charitable Trusts
Antibiotic Resistant Pathogens on Meat and Poultry
- Principal Investigator
 - Total award: \$290,000
- Completed The Johns Hopkins Center for Livable Future
Johns Hopkins Center for a Livable Future Student and Faculty Innovation Grant '93, '94, & '95
- Principal Investigator
 - Total for three consecutive awards: \$58,000

PUBLICATIONS

Articles in Refereed Journals

Larsen J, Stegger M, Andersen PS, Petersen A, Larsen AR, Westh H, Agersø Y, Fetsch A, Kraushaar B, Käsbohrer A, Feßler AT, Schwarz S, Cuny C, Witte W, Butaye P, Denis O, Haenni M, Madec JY, Jouy E, Laurent F, Battisti A, Franco A, Alba P, Mammina C, Pantosti A, Monaco M, Wagenaar JA, de Boer E, van Duin E, Heck M, Domínguez L, Torres C, Zarazaga M, **Price LB**, Skov RL. Evidence for Human Adaptation and Foodborne Transmission of Livestock-Associated Methicillin-Resistant *Staphylococcus aureus*. *Clin Infect Dis*. 2016 Nov 15;63(10):1349-1352. PubMed PMID: 27655995; PubMed Central PMCID: PMC5091345.

Johnson JR, Davis G, Clabots C, Johnston BD, Porter S, DebRoy C, Pomputius W, Ender PT, Cooperstock M, Slater BS, Banerjee R, Miller S, Kisiela D, Sokurenko EV, Aziz M, **Price LB**. Household Clustering of *Escherichia coli* Sequence Type 131 Clinical and Fecal Isolates According to Whole Genome Sequence Analysis. *Open Forum Infect Dis*. 2016 Jun 16;3(3):ofw129. PubMed PMID: 27703993; PubMed Central PMCID: PMC5047392.

Liu CM, Prodger JL, Tobian AA, Serwadda D, Galiwango RM, Nalugoda F, Kighoma N, Mwinike J, Anyokorit M, **Price LB**, Wawer MJ, Kigozi G, Gray RH. Genital Anaerobic Bacterial Overgrowth and the PrePex Male Circumcision Device, Rakai, Uganda. *J Infect Dis*. 2016 Aug 15;214(4):595-8. doi: 10.1093/infdis/jiw182. PubMed PMID: 27190185; PubMed Central PMCID: PMC4957438.

- Johnson TJ, Danzeisen JL, Youmans B, Case K, Llop K, Munoz-Aguayo J, Flores-Figueroa C, Aziz M, Stoesser N, Sokurenko E, **Price LB**, Johnson JR. Separate F-Type Plasmids Have Shaped the Evolution of the H30 Subclone of *Escherichia coli* Sequence Type 131. *mSphere*. 2016 Jun 29;1(4). PMID: 27390780; PMCID: PMC4933990
- Davis GS, **Price LB**. Recent Research Examining Links Among *Klebsiella pneumoniae* from Food, Food Animals, and Human Extraintestinal Infections. *Curr Environ Health Rep*. 2016 Jun;3(2):128-35. PMID: 27022987
- Johnson TJ, Aziz M, Liu CM, Sokurenko E, Kisiela DI, Paul S, Andersen P, Johnson JR, **Price LB**. Complete Genome Sequence of a CTX-M-15-Producing *Escherichia coli* Strain from the H30Rx Subclone of Sequence Type 131 from a Patient with Recurrent Urinary Tract Infections, Closely Related to a Lethal Urosepsis Isolate from the Patient's Sister. *Genome Announc*. 2016 May 12;4(3). PMID: 27174264; PMCID: PMC4866839
- Morrissey EM, Mau RL, Schwartz E, Caporaso JG, Dijkstra P, van Gestel N, Koch BJ, Liu CM, Hayer M, McHugh TA, Marks JC, **Price LB**, Hungate BA. Phylogenetic organization of bacterial activity. *ISME J*. 2016 Mar 4. PMID: 26943624
- Stoesser N, Sheppard AE, Pankhurst L, de Maio N, Moore CE, Sebra R, Turner P, Anson LW, Kasarskis A, Batty EM, Kos V, Wilson DJ, Phetsouvanh R, Wyllie D, Sokurenko E, Manges AR, Johnson TJ, **Price LB**, Peto TEA, Johnson JR, Didelot X, Sarah Walker A, Crook DW. Evolutionary history of the global emergence of the *Escherichia coli* epidemic clone ST131. *MBio*. 2016;7(2) PMCID: PMC4807372
- Wymore AS, Liu CM, Hungate BA, Schwartz E, **Price LB**, Whitham TG, Marks JC. The Influence of Time and Plant Species on the Composition of the Decomposing Bacterial Community in a Stream Ecosystem. *Microb Ecol*. 2016 May;71(4):825-34. PMID: 26879940
- Leibler JH, Jordan JA, Brownstein K, Lander L, **Price LB**, Perry MJ. Staphylococcus aureus nasal carriage among beefpacking workers in a midwestern united states slaughterhouse. *PLoS ONE*. 2016;11(2). PMCID: PMC4750916
- Robinson TP, Wertheim HFL, Kakkar M, Kariuki S, Bu D, **Price LB**. Animal production and antimicrobial resistance in the clinic. *Lancet*. 2016;387(10014):e1-3. PMID: 26603925
- Hargreaves ML, Shaw KM, Dobbins G, Vagnone PMS, Harper JE, Boxrud D, Lynfield R, Aziz M, **Price LB**, Silverstein KAT, Danzeisen JL, Youmans B, Case K, Sreevatsan S, Johnson TJ. Clonal dissemination of *Enterobacter cloacae* harboring blaKPC-3 in the upper midwestern united states. *Antimicrob Agents Chemother*. 2015;59(12):7723-34. PMID: 26438492; PMCID: PMC4649179
- Johnson JR, Porter SB, Thuras P, Johnson TJ, **Price LB**, Tchesnokova V, Sokurenko EV. Greater ciprofloxacin tolerance as a possible selectable phenotype underlying the pandemic spread of the H30 subclone of *Escherichia coli* sequence type 131. *Antimicrob Agents Chemother*. 2015;59(11):7132-5. PMID: 26601194; PMCID: PMC4640600
- Casey JA, Kim BF, Larsen J, **Price LB**, Nachman KE. Industrial food animal production and community health. *Curr Environ Health Rep*. 2015;2(3):259-71.
- Larsen J, Petersen A, Soerum M, Stegger M, van Alphen L, Valentiner-Branth P, Knudsen LK, Larsen LS, Feingold B, **Price LB**, Andersen PS, Larsen AR, Skov RL. Meticillin-resistant *Staphylococcus aureus* CC398 is an increasing cause of disease in people with no livestock contact in Denmark, 1999 to 2011. *Euro Surveill*. 2015;20(37). PMID: 26535590; PMCID: PMC4902279
- Driebe EM, Sahl JW, Roe C, Bowers JR, Schupp JM, Gillette JD, Kelley E, **Price LB**, Pearson TR, Hepp CM, Brzoska PM, Cummings CA, Furtado MR, Andersen PS, Stegger M, Engelthaler DM, Keim PS. Using Whole Genome Analysis to Examine Recombination across Diverse Sequence Types of *Staphylococcus aureus*. *PLoS One*. 2015 Jul 10;10(7):e0130955. PMID: 26161978; PMCID: PMC4498916.

- Liu CM, Hungate BA, Tobian AA, Ravel J, Prodger JL, Serwadda D, Kigozi G, Galiwango RM, Nalugoda F, Keim P, Wawer MJ, **Price LB**, Gray RH. Penile microbiota and female partner bacterial vaginosis in Rakai, Uganda. *MBio*. 16;6(3). PMID: 26081632; PMCID: PMC4471566.
- Tobin MR, Goldshear JL, **Price LB**, Graham JP, Leibler JH. A framework to reduce infectious disease risk from urban poultry in the United States. *Public Health Rep*. 2015;130(4):380-91. PMID: 26346104; PMCID: PMC4547567
- Davis GS, Waits K, Nordstrom L, Weaver B, Aziz M, Gauld L, Grande H, Bigler R, Horwinski J, Porter S, Marc Stegger M, Johnson JR, Liu CM, **Price LB**. Intermingled *Klebsiella pneumoniae* populations between retail meats and human urinary tract infections. *Clin Infect Disease*. 2015;61(6), pp.892-899. PMCID: PMC4551003
- Mau RL, Liu CM, Aziz M, Schwartz E, Dijkstra P, Marks JC, **Price LB**, Keim P, Hungate BA. Linking soil bacterial biodiversity and soil carbon stability. *ISME J*. 2014 June 23. PMID: 25350158; PMCID: PMC4438316
- Liu CM, **Price LB**, Hungate, BA, Abraham A, Larsen LA, Christensen K, Stegger M, Skov R, Andersen PS. *Staphylococcus aureus* and the Ecology of the Nasal Microbiome. *Science Advances*. 2015 June 5. 1:e1400216. PMID: 26601194; PMCID: PMC4640600
- Price LB**, Koch BJ, Hungate BA. Ominous projections for global antibiotic use in food animal productions (invited Commentary). *Proc Nat Acad Sci*. 2015 May 5;112(18):5554-5. Epub 2015 Apr 28. PMID: 25922534; PMCID: PMC4426449.
- Johnson TJ, Hargreaves M, Shaw K, Snippes P, Lynfield R, Aziz M, **Price LB**. Complete Genome Sequence of a Carbapenem-Resistant Extraintestinal Pathogenic *Escherichia coli* Strain Belonging to the Sequence Type 131 H30R Subclade. *Genome Announc*. 2015 Apr 9;3(2). pii: e00272-15. doi: 10.1128/genomeA.00272-15. PMID: 25858844; PMCID: PMC4392156.
- Ahmed LN, **Price LB**, Graham JP. An exploratory study of dog park visits as a risk factor for exposure to drug-resistant extra-intestinal pathogenic *E. coli* (ExPEC). *BMC Res Notes*. 2015 Apr 10;8:137. doi: 10.1186/s13104-015-1103-2. PMID: 25886556; PMCID: PMC4397871.
- Hungate BA, Mau RL, Schwartz E, Gregory Caporaso J, Dijkstra P, van Gestel N, Koch BJ, Liu CM, McHugh TA, Marks JC, Morrissey EM, **Price LB**. Quantitative microbial ecology through stable isotope probing. *Appl Environ Microbiol*. 2015;81(21):7570-81. PMID: 26296731; PMCID: PMC4592864
- Liu CM, Kohanski MA, Mendiola M, Soldanova K, Dwan MG, Lester R, Nordstrom L, **Price LB**, Lane AP. Impact of saline irrigation and topical corticosteroids on the postsurgical sinonasal microbiota. *Int Forum Allergy Rhinol*. 2015 Mar;5(3):185-90. doi: 10.1002/alr.21467. Epub 2014 Dec 29. PMID: 25556553; PMCID: PMC4628778
- Wilmes P, Muller E, Nicolás P, Cedric L, Hoopmann M, Narayanasamy S, Lebrun L, Roume H, Lin J, May P, Hicks N, Heintz-Buschart A, Linda W, Liu C, **Price LB**, Gillece J, Guignard C, Schupp J, Vlassis N, Baliga N, Moritz R, and Keim P. Community integrated omics links the dominance of a microbial generalist to fine-tuned resource usage. *Nature Communications*. *Nat Commun*. 2014 Nov 26;5:5603. PMID: 25424998; PMCID: PMC4263124
- Eppinger M, Pearson T, Koenig SS, Pearson O, Hicks N, Agrawal S, Sanjar F, Galens K, Daugherty S, Crabtree J, Hendriksen RS, **Price LB**, Upadhyay BP, Shakya G, Fraser CM, Ravel J, Keim PS. Genomic epidemiology of the Haitian cholera outbreak: a single introduction followed by rapid, extensive, and continued spread characterized the onset of the epidemic. *MBio*. 2014 Nov 4;5(6):e01721. doi: 10.1128/mBio.01721-14. PMCID: PMC4222100.
- Stegger M, Wirth T, Andersen PS, Skov RL, De Grassi A, Simões PM, Tristan A, Petersen A, Aziz M, Kiil K, Cirković I, Udo EE, del Campo R, Vuopio-Varkila J, Ahmad N, Tokajian S, Peters G, Schaumburg F, Olsson-Liljequist B, Givskov M, Driebe EE, Vigh HE, Shittu A, Ramdani-Bougessa N, Rasigade JP, **Price LB**, Vandenesch F, Larsen AR, Laurent F. Origin and evolution of European community-acquired methicillin-resistant *Staphylococcus*

aureus. *MBio*. 2014 Aug 26;5(5):e01044-14. doi: 10.1128/mBio.01044-14. PMID: 25161186; Central PMCID: PMC4173770.

Liu CM, Osborne BJ, Hungate BA, Shahabi K, Huibner S, Lester R, Dwan MG, Kovacs C, Contente-Cuomo TL, Benko E, Aziz M, **Price LB**, Kaul R. The semen microbiome and its relationship with local immunology and viral load in HIV infection. *PLoS Pathog*. 2014 Jul 24;10(7):e1004262. PMID: 25058515; PMCID: PMC4110035.

Schinasi L, Wing S, L Augustino K, Ramsey KM, Nobles DL, Richardson DB, **Price LB**, Aziz M, MacDonald PD, Stewart JR. A case control study of environmental and occupational exposures associated with methicillin resistant *Staphylococcus aureus* nasal carriage in patients admitted to a rural tertiary care hospital in a high density swine region. *Environ Health*. 2014 Jun 23;13(1):54.

Neyra RC, Frisancho JA, Rinsky JL, Resnick C, Carroll KC, Rule AM, Ross T, You Y, **Price LB**, Silbergeld EK. Multidrug-resistant and methicillin-resistant *Staphylococcus aureus* (MRSA) in hog slaughter and processing plant workers and their community in North Carolina (USA). *Environ Health Perspect*. 2014 May;122(5):471-7. doi: 10.1289/ehp.1306741.

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Millman JM, Waits K, Grande H, Marks AR, Marks JC, **Price LB**, Hungate BA. Prevalence of antibiotic-resistant *E. coli* in retail chicken: comparing conventional, organic, kosher, and raised without antibiotics. Version 2. F1000Res. 2013 Jul 11;2:155. doi: 10.12688/f1000research.2-155.v2.

Price LB, Johnson JR, Aziz M, Clabots C, Johnston B, Tchesnokova V, Nordstrom L, Stegger M, Andersen PS, Pearson T, Keim P, and Sokurenko EV. Epidemic clonal expansion of CTX-M-15-producing *Escherichia coli* ST131. *MBio*. 2013 Dec 17;4(6). pii: e00377-13.

Stegger M, Liu CM, Larsen J, Soldanova K, Aziz M, Contente-Cuomo T, Petersen A, Vandendriessche S, Jiménez JN, Mammina C, van Belkum A, Salmenlinna S, Laurent F, Skov RL, Larsen AR, Paal S, Andersen PS, and **Price LB**. Rapid differentiation between livestock-associated and livestock-independent *Staphylococcus aureus* CC398 clades. *PLoS One*. 2013 Nov 14;8(11):e79645.

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Banerjee R, Robicsek A, Kuskowski MA, Porter S, Johnston BD, Sokurenko E, Tchesnokova V, **Price LB**, Johnson JR. Molecular Epidemiology of *Escherichia coli* Sequence Type ST131 and its H30 and H30-Rx Subclones Among Extended-Spectrum Beta-Lactamase-Positive and -Negative *E. coli* Clinical Isolates from the Chicago Region (2007-2010). *Antimicrob Agents Chemother*. 2013 Sep 30.

Wymore AS, Compson ZG, Liu CM, **Price LB**, Whitham TG, Keim P, and Marks JC. Contrasting rRNA gene abundance patterns for aquatic fungi and bacteria in response to leaf-litter chemistry. 2013. *Freshwater Sciences*. 32(2), 663-672.

Rinsky JL, Nadimpalli M, Wing S, Hall D, Baron D, **Price LB**, Larsen J, Stegger M, Stewart J, Heaney CD.

Livestock-associated methicillin and multidrug resistant *Staphylococcus aureus* is present among industrial, not antibiotic-free livestock operation workers in North Carolina. *PLoS One*. 2013 Jul 2;8(7):e67641. doi: 10.1371/journal.pone.0067641.

Tchesnokova V, Billig M, Chattopadhyay S, Linardopoulou E, Aprikian P, Roberts PL, Skrivankova V, Johnston B, Gileva A, Igusheva I, Toland A, Riddell K, Rogers P, Qin X, Butler-Wu S, Cookson BT, Fang FC, Kahl B, **Price LB**, Weissman SJ, Limaye A, Scholes D, Johnson JR, Sokurenko EV. Predictive Diagnostics for *Escherichia coli* Infections Based on the Clonal Association of Antimicrobial Resistance and Clinical Outcome. *J Clin Microbiol*. 2013 Sep;51(9):2991-9. doi: 10.1128/JCM.00984-13.

Liu CM, Soldanova K, Nordstrom L, Dwan MG, Moss OL, Contente-Cuomo TL, Keim P, **Price LB**, Lane AP. Medical therapy reduces microbiota diversity and evenness in surgically recalcitrant chronic rhinosinusitis. *Int Forum Allergy Rhinol*. 2013 Jul 10. doi: 10.1002/alr.21195.

Nordstrom L, Liu CM, and **Price LB**. Foodborne urinary tract infections (FUTIs): a new paradigm for antimicrobial-resistant foodborne illness. *Front Microbiol*. 2013;4:29.

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2,011,094,356 *Methods And Kits Used In The Detection Of Fungus* (2012) C Liu, S Kachur, P Keim, and **L. Price**.

2,004,104,212 *Molecular Signature And Assay For Fluoroquinolone Resistance In Bacillus Anthracis* (2004) P Keim, T Pearson, **L Price**, and J Busch.

Provisional

120410-176 *Primers, Assays And Methods For Detecting An E. coli Subtype* (provisional) **L Price**, JR Johnson, and E Sokurenko.

61/702,659 *Isolated Genes And Transgenic Organisms For Producing Biofuels* (provisional) E Muller, P Wilmes, PS Keim, JD Gillece, JM Schupp, **LB Price** And DM Engelthaler.

PRESENTATIONS (Since Nov 2010)

- 11/09/10 *Guess Who's Coming to Dinner? What is Being Detected in Meat and Produce.* Pew Scholars Program 25th Anniversary Reunion, Science and Society Session. Duck Key, FL.
- 11/10/10 *Prevalence of High-Priority Antibiotic Resistant Bacteria in The US Food Supply.* 2010 APHA Annual Meeting and Exposition. Denver, CO.
- 01/25/11 *Public Health Impacts Of Antibiotic Use In Food Animal Production: Beyond The Traditional Foodborne Pathogens.* Managing the Risk of Foodborne Hazards: STECs and Antibiotic-Resistant Pathogen Conference. Washington, DC.
- 03/21/11 *Antibiotic Use In Food Animal Production: Potential Impacts On Human Health.* Flagstaff Medical Center Seminar Series. Flagstaff, AZ.
- 04/14/11 *Look Who's Coming to Dinner: Antibiotic Resistant Bacteria in Meat and Poultry.* Science on Tap. Flagstaff, AZ.
- 04/16/11 *Multidrug Resistant Staphylococcus aureus in US Meat and Poultry.* American Society for Microbiology Annual Meeting for the Arizona-Southern Nevada Regional Chapter. Flagstaff, AZ
- 06/23/11 *Raised Without Antibiotics: Why It Matters.* Pew Charitable Trusts Headquarters. Philadelphia, PA
- 09/02/11 *Quantifying The Human Health Impacts Antibiotic Use In Food Animal Production.* North Country Health Grand Rounds. Flagstaff, AZ.
- 09/11/11 *The Origins And Evolution Of MRSA ST398: Through The Lens Of Genome Sequencing.* 2nd ASM-ESCMID Conference on Methicillin-resistant Staphylococci in Animals: Veterinary and Public Health Implications. Washington, DC
- 10/16/11 *Biobhunters: How genomic analysis is aiding the fight against bioweapons, global epidemics and deadly food contaminants.* ScienceWriters2011. Flagstaff, AZ.
- 10/18/11 *Antibiotic-Resistant Urinary Tract Infections: A New Paradigm For Foodborne Infections.* FoodMed 2011. Seattle, WA.

- 10/25/11 *Livestock-Associated Methicillin Resistant Staphylococcus Aureus (LA-MRSA): An Emerging Threat?* Texas A&M Seminar Series. College Station, TX.
- 02/06/12 *MRSA ST398: The Birth Of A Superbug.* Hvidovre Hospital Seminar Series. Hvidovre, Denmark.
- 03/12/12 *Livestock-Associated MRSA ST398: The Birth Of A Superbug.* Johns Hopkins University School of Public Health. Baltimore, MD.
- 03/14/12 *Antibiotic Resistance 101: Risks To Children.* Chicago Mom's group. Healthy Schools Campaign. Chicago, IL.
- 03/14/12 *Choosing Meat And Poultry Products Labeled, "Raised Without Antibiotics".* Parent Education Session. Whole Foods Market. Chicago, IL.
- 03/15/12 *Choosing Meat And Poultry Products Labeled, "Raised Without Antibiotics".* Parent Education Session II. Whole Foods Market. Chicago, IL.
- 03/16/12 *Understanding Sustainable Meat Procurement.* Good Food Festival Panel. Chicago, IL.
- 03/22/12 *"Raised Without Antibiotics": Why It Matters.* Community Education Seminar. New Frontiers. Sedona, AZ.
- 03/28/12 *Livestock-Associated MRSA ST398: The Birth Of A Superbug.* Knight Science Journalism at Massachusetts Institute of Technology, Food Boot Camp. Cambridge, MA.
- 04/11/12 *Foodborne Urinary Tract Infections (FUTIs): a new paradigm for food-associated illness.* Arizona Environmental Health Association Conference. Tempe, AZ.
- 04/11/12 *Antibiotic-Resistant Foodborne Urinary Tract Infections (FUTIs): A New Paradigm for Food Associated Illness.* Physicians for Social Responsibility (University of Washington Chapter), Seattle, WA.
- 05/10/12 *Foodborne Urinary Tract Infections (FUTIs).* Science in Northern Arizona. Flagstaff, AZ.
- 05/15/12 *Livestock-Associated MRSA ST398: the Birth of a Superbug.* Illumina Summit. Dana Point, CA.
- 06/05/12 *Antibiotics 101.* Changing the meat we eat—from farm to table. Applegate Farms, Bridgewater, NJ.
- 06/15/12 *Uncovering the Impacts of Circumcision on the Penis Microbiome.* Copenhagenomics. Copenhagen, Denmark.
- 06/29/12 *Quantifying Foodborne Urinary Tract Infections "FUTIs": a progress report.* 3rd ASM Conference on Antimicrobial Resistance in Zoonotic Bacteria and Foodborne Pathogens in Animals, Humans and the Environment. Aix-en-Provence, France.
- 07/09/12 *Antibiotic Abuse In Food-Animal Production.* James Beard Foundation Chefs food camp for policy and change. Blackberry Farms, Knoxville, TN.
- 08/01/12 *Using Genomics for Infectious Disease Investigations: Public health, Clinical Medicine, and Discovery.* Illumina Summit. Alexandria, VA.
- 08/08/12 *Chicken, Life-threatening UTIs and Women's Health.* Healthy Food, Healthy Farms Webinar Series.
- 09/18/12 *Livestock-Associated MRSA ST398: The Birth Of A Superbug.* 19th Annual International Meeting on Microbial Genomics. Lake Arrowhead, CA.

- 10/21/12 *Why Buy Meat and Poultry from Animals Raised Without Antibiotics? It Matters!* Chicago, IL.
- 11/09/12 *Livestock-Associated MRSA ST398: the Birth of a Superbug.* Emory University. Atlanta, GA.
- 11/16/12 *Livestock-Associated MRSA ST398: the Birth of a Superbug.* University of Michigan. Ann Arbor, MI.
- 12/20/12 *MRSA ST398: The Birth Of A Superbug.* National Institutes of Health. Bacteriology and Mycology Branch Seminar Series. Bethesda, MD. Unpaid.
- 01/14/13 *Foodborne Urinary Tract Infections.* Society for Laboratory Automation and Screening (SLAS) 2013: 2nd Annual Conference and Exhibition. Orlando, FL.
- 01/16/13 *Raised Without Antibiotics.* Applegate Vendor Summit. Applegate Farms. Bridgewater, NJ.
- 01/24/13 *MRSA ST398: the Birth of a Superbug.* Institute for Genome Sciences, University of Maryland. Baltimore, MD.
- 02/11-12/13 *Foodborne Urinary Tract Infections (FUTIs): Assessing the State of the Science.* Washington, DC. (Organizer, Speaker, and Chair)
- 02/18/13 *Raised without Antibiotics.* Farm-to-Table Salon. Des Moines, IA.
- 02/18/13 *“Raised without Antibiotics”: why the label matters.* The Dr. Norman E. Borlaug World Food Prize Hall of Laureates. Des Moines, IA.
- 02/19/13 *Antibiotic-Resistant Foodborne Urinary Tract Infections (FUTIs).* Supermoms Against Superbugs Luncheon. Des Moines, IA.
- 02/25/13 *Raising Without Antibiotics.* Foodshed Farmer-Chef Summit. Lorton, VA.
- 02/28/13 *Antibiotic Resistance and Health Concerns.* Meat in the 21st Century. Washington, DC.
- 03/28/13 *Foodborne Urinary Tract Infections: A New Paradigm For Food-Associated Disease.* Knight Science Journalism at Massachusetts Institute of Technology, Food Boot Camp. Cambridge, MA.
- 04/15/13 *Antibiotics the Fading Miracle.* Supermoms Against Superbugs. Washington, DC.
- 04/22/13 *Superchefs vs Superbugs.* Wholesome Wave’s 4th Annual National Partner Convening, “Cultivating and Advocating Sustainable Growth in the Local Food Movement”. Washington, DC.
- 05/03/13 *Is Food a Source of Antibiotic-Resistant UTIs in Kids?* Food-for-Thought Symposium. Washington, DC.
- 05/16/13 *“Raised Without Antibiotics”: Why It Matters.* Webinar. Health Care Without Harm.
- 06/05/13 *Staphylococcus aureus Sequence Type 398: Evidence For Bidirectional Zoonosis And Rapid Host Adaptation.* World Summit on Evolution. Galapagos, Ecuador.
- 07/24/13 *Raised Without Antibiotics: A Label That Matters.* Kendal College. Chicago, IL.
- 09/19/13 *Translating Translational Research: The Challenges And Rewards Of Communicating Public Health Research.* Health Research Alliance Members’ Meeting. Philadelphia, PA.
- 10/07/13 *Antibiotic Abuse In Food-Animal Production.* Rachel’s Network Fall Retreat: Seeding the Future of Food. Austin, TX.

- 10/18/13 *Is Food a Source of Antibiotic-Resistant UTIs?* GWU Board of Trustees Spouses Event. Washington, DC.
- 10/25/13 *Why We Should Love Antibiotics and Protect Them From Abuse in Food-Animal Production.* Living Social Food Day Panel. Washington, DC.
- 11/05/13 *Defining Livestock-Associated MRSA* (session co-chair and presenter). 3rd ASM-ESCMID Conference on Methicillin-resistant Staphylococci in Animals: Veterinary and Public Health Implications. Copenhagen, Denmark.
- 11/08/13 *Foodborne Urinary Tract Infections: Using Genomic Epidemiology To Quantify Burden.* Microbiology Expert Panel 2013. Alexandria, VA.
- 01/31/14 *Advanced Molecular Detection –Technology & Disease Control (Panel Discussion).* The Atlanta Summit on Public Health and Prosperity. Centers for Disease Control and Prevention. Atlanta, GA.
- 02/19/14 *The Role of the Scientist in Public Health Advocacy –* Yale University. New Haven, CT.
- 03/01/14 *Factory Farms, Antibiotics, And Superbugs.* TEDxManhattan. New York, NY.
- 03/26/14 *Superbug Ecology and Food.* Knight Food Boot Camp. Cambridge, MA.
- 04/02/14 *Foodborne Urinary Tract Infections* (keynote). George Washington University Research Days. Washington, DC.
- 04/03/14 *Public Health Risks Associated with Antibiotic Use in Food-Animal Production.* Pew Charitable Trusts. Washington, DC.
- 04/07/14 *Communicating Public Health Science.* Center for a Livable Future Lerner Fellows. American Association of Public Health Association (APHA). Washington, DC.
- 04/22/14 *Antibiotics Overuse: Why Healthcare Should Care about Agriculture Use.* Food Matters webinar series. Healthcare Without Harm. Internet.
- 04/29/14 *Superbugs Panel.* Milken Global Conference. Beverly Hills, CA.
- 05/06/14 *Supermoms Against Superbugs.* Pew Charitable Trusts. Washington, DC.
- 05/06/14 *Superbugs in Food.* Natural Resources Defense Council. Washington, DC.
- 05/11/14 *Molecular Identification and Characterization of Antibiotic Resistance In Food Products.* Antibiotic Resistance at The Animal-Human Interface (ARAH). Princeton University. Princeton, NJ.
- 05/20/14 *Foodborne Urinary Tract Infections (FUTIs).* Antimicrobial Resistance Seminar Series Group. Food and Drug Administration (FDA). Rockville, MD.
- 06/24/14 *Food-Borne Urinary Tract Infection.* Novozymes Science Infusion seminar. Copenhagen, DK.
- 07/31/14 *Antibiotic Abuse in Food-Animal Production: an unnecessary risk to public Health.* FOCUS California Chicken Summit. Oakland, CA.
- 08/25/14 *Foodborne Urinary Tract Infections (FUTIs): a New Paradigm for Food-Associated Disease.* 26th Annual International Society for Environmental Epidemiology Conference. Seattle, WA.

- 09/12/14 *Antibiotic Abuse in Food-Animal Production: an unnecessary risk.* Niman Ranch Farmer Appreciation Dinner. Des Moines, IA.
- 09/16/14 *Food-Borne Urinary Tract Infection Studies.* 20th Anniversary International Meeting on Microbial Genomes. Lake Arrowhead, CA.
- 09/26/14 *Ecology of the Superbug.* University of Tennessee. Knoxville, TN.
- 10/06/14 *Molecular approaches for understanding the origins of antibiotic resistance.* Beyond Tilting at Windmills: Once Physician's Remarkable Journey in Public Health. Johns Hopkins Bloomberg School of Public Health. Baltimore, MD.
- 10/19/14 *Quantifying The Public Health Burden Of Foodborne Extraintestinal Pathogenic Escherichia coli.* 64th Annual Meeting of the American Society of Human Genetics. San Diego, CA.
- 11/20/14 *Foodborne Urinary Tract Infections.* Staten Serum Institut. Copenhagen, DK.
- 01/08/15 *Meat Matters - a 4-Part Series: Meat, Livestock & Human Health (panel discussion).* Healthy Food Action Webinar.
- 01/20/15 *Antibiotic Abuse in Livestock Production: An Unnecessary Risk to Public Health.* School Food FOCUS Webinar.
- 02/06/15 *Healthy Eating in a Wicked World: Navigating Science and Policy in a Complex Food Environment (panel discussion).* CEHN 2015 Research Conference. Austin, TX.
- 02/11/15 *Scientists vs Superbugs in Public Health Advocacy.* Yale University. Washington, DC.
- 03/04/15 *Superbugs.* Arcadia Center for Sustainable Food and Agriculture. Washington, DC.
- 03/07/15 *Breaking Down the Silos to Combat Resistance.* TEDx Manhattan. New York, NY.
- 03/26/15 *Antibiotic Resistance: A One Health Challenge.* 6th Annual Consortium of Universities in Global Health (CUGH) Global Health Conference. Boston, MA.
- 04/06/15 *Antibiotic Resistance Roundtable.* New York University. New York, NY.
- 05/09/15 *Prospective and Convenience-based Sampling Strategies for Tracing the Origins of Antibiotic-resistant Bacteria.* 4th ASM Conference on Antimicrobial Resistance in Zoonotic Bacteria and Foodborne Pathogens. Washington, DC.
- 06/15/15 *The Role of the Food Chain in Spreading Resistance.* The World HAI/Resistance Forum "Antimicrobial resistance: One World, One Fight!" Annecy, France.
- 06/19/15 *Livestock and Antibiotic Use: What It Is and What to Do.* Menus of Change, 3rd Annual Leadership Summit. Hyde Park, NY.
- 06/27/15 *A Citizen-Scientist Approach to Superbug Surveillance.* SciFoo. Mountain View, CA.
- 09/24/15 *Foodborne Urinary Tract Infections (FUTIs): a new paradigm for food associated illness.* Breakfast Keynote at the 2015 Rapid NGS Bioinformatic Pipelines for Enhanced Molecular Epidemiologic Investigation of Pathogens. Washington, DC.
- 09/28/15 *Sourcing Meat from Animals Raised Without Antibiotics: Why It Matters!* Noodles and Company Summit. Vail, CO.

- 09/30/15 *Public comment on the importance of USDA collecting and reporting data on antibiotic use in livestock.* USDA. Washington DC.
- 10/14/15 *Foodborne Urinary Tract Infections.* Infectious Disease Genomics Conference. Wellcome Genome Campus, Hinxton, Cambridge, UK.
- 10/21/15 *Antibiotics in Livestock and Public Health.* New York Times Food For Tomorrow Conference. Stone Barns Center for Food & Agriculture, Tarrytown, NY.
- 10/24/15 *Antibiotics in Livestock and Public Health.* Harvard/UCLA Food Law & Policy Conference. Harvard Law School, Cambridge, MA.
- 10/29/15 *The Ecology of Antibiotic Resistance and Livestock Production.* University of New Hampshire Seminar Series. Durham, NH.
- 12/07/15 *Quantifying the Public Health Burden of Antibiotics in Food-Animal Production: Moving Beyond The Classic Foodborne Pathogens.* Centers for Disease Control and Prevention. Atlanta, GA.
- 12/09/15 *Quantifying the Public Health Burden of Antibiotics in Food-Animal Production: Moving Beyond The Classic Foodborne Pathogens.* Summit on Animals, Public Health & Ethics, Bloomberg School of Public Health. Baltimore, MD.
- 01/20/16 *Quantifying the Public Health Burden of Antibiotics in Food-Animal Production: Moving Beyond The Classic Foodborne Pathogens.* 2016 Europe – Nordic – U.S. Symposium: New Frontiers in Antibacterial Resistance Research. Stockholm, Sweden.
- 01/29/16 *Communicating Science to Policymakers and the Public.* Responsible Conduct of Research Seminar Series. George Washington University. Washington, DC.
- 02/03/16 *Quantifying the Public Health Burden of Antibiotics in Food-Animal Production: Moving Beyond The Classic Foodborne Pathogens.* University of Minnesota, College of Veterinary Medicine Seminar Series. Saint Paul, MN.
- 02/08/16 *The Public Health Argument for Raising Livestock without Antibiotics.* Google. Mountain View, CA.
- 03/01/16 *Panel Discussion on Superbugs.* Milken Public Health Summit 2016. Washington, DC.
- 04/08/16 *Infectious Disease Genomics.* Master's Seminar Series. Amsterdam, Netherlands.
- 04/09/16 *New Insights on animal to human transmission of MRSA.* European Congress of Clinical Microbiology and Infectious Diseases (ECCMID). Amsterdam, Netherlands.
- 04/10/16 *How Antibiotics for Non-Human Use Affect Public Health (Keynote).* European Congress of Clinical Microbiology and Infectious Diseases (ECCMID). Amsterdam, Netherlands.
- 04/18/16 *Quantifying the public health burden of antibiotic use in food-animal production.* Antibiotic Resistance Containment – Stewardship, Surveillance and Research. Embassy of Sweden. Washington, DC.
- 04/26/16 *Roundtable Discussant.* Integrating science and policy for decisive action on AMR. Wellcome Trust. London, UK.
- 05/09/16 *Raised without Antibiotics: Why it Matters.* Applegate Farms. Bridgewater, NJ.
- 06/06/16 *Serving Meat Produced Without Antibiotics: Why it Matters.* 2016 Chef Culinary Conference. Amherst, MA.

- 06/18/16 *Role of Animal Food Chain in Spreading Resistance*. Antimicrobial Resistance Control: A One-Health Approach. ASM Microbe 2016. Boston, MA.
- 07/13/16 *Why Getting Antibiotics Out of Livestock Production Matters: The Basics*. Public Interest Research Group (PIRG). Washington, DC.
- 09/26/16 Moving Beyond the Classic Foodborne Pathogens to Quantify the Total Public Health Burden of Using Antibiotics in Food Animals. 4th International Conference on Responsible Use of Antibiotics in Animals. The Hague, the Netherlands.
- 10/04/16 Why Consumers Should Care About Antibiotics in Animal Production. Panel Discussion with Applegate Farms. New York City, NY.
- 11/03/16 Antibiotic Use in Livestock Production Through a One-Health View. One-Health Day. Washington, DC.

UNIVERSITY SERVICE

- 2016-Presnt. Member – Research Committee (GWU)
- 2015-Presnt. Member – Appointments, Promotion and Tenure Committee (School-wide; GWU)
- 2015-Presnt. Member – Appointments, Promotion and Tenure Committee (EOH Department; GWU)
- 2014-Presnt. *Consultant* – Science and Engineering Hall Architectural Plans (GWU)
- 2013-2016 *Chair* – Research Committee (GWU)
- 2013-2015 *Member* – Genomics Institute Director Search Committee (GWU)
- 2013-Presnt. *Member* – Environmental and Occupational Health Curriculum Committee (GWU)
- 2013-2014 *Member* – Transition Advisory Committee (GWU)
- 2012-2013 *Member* – PUBH 6001 Revision Subcommittee (GWU)
- 2012-2103 *Member* – Research Committee (GWU)

PROFESSIONAL SOCIETIES

- Current *Member* – American Public Health Association
- Current *Member* – European Society of Clinical Microbiology and Infectious Diseases
- Current *Member* – American Society for Microbiology
- Current *Member* – Alliance for the Prudent Use of Antibiotics
- Current *Member* – Infectious Disease Society of America

EDITORIAL SERVICE

Periodic	<i>Ad hoc Reviewer</i> – AIDS Research and Human Retroviruses, BMC Infectious Diseases, Clinical Microbiology and Infection, Emerging Infectious Diseases, Environmental Health Perspectives, Environmental Research, Genome Research, International Journal of Food Microbiology, Journal of Antimicrobial Chemotherapy, Journal of Bacteriology, Journal of Clinical Microbiology, Journal of Infectious Diseases, MBio, PLoS Pathogens, PLoS ONE, and Sexually Transmitted Infections.
2015	<i>Ad hoc Reviewer</i> – NIDDK Collaborative Interdisciplinary Team Science in NIDDK Research Areas (ZDK1)
2014-16	<i>Ad hoc Reviewer</i> – NIAID Clinical Research and Field Studies (CRFS)
2013	<i>Ad hoc Reviewer</i> – Sir Henry Wellcome Postdoctoral Fellowships Applications. The Wellcome Trust
2012	<i>Ad hoc Reviewer</i> – Danish Council for Independent Research, Medical Sciences Division
2012	<i>Ad hoc Reviewer</i> – The Canada Foundation for Innovation (CFI)
2012	<i>Ad hoc Reviewer</i> – NIAID Clinical Trial Teleconference Review

PROFESSIONAL SERVICE

TGen Institutional Service

2012	<i>Co-Chair</i> – Retreat Planning Committee (TGen)
2012	<i>Member</i> – Committee on Academic Position Descriptions (TGen)
2012	<i>Mentor</i> – Helios Scholars Program (TGen)
2009-2010	<i>Beta tester</i> – Bio4D LIMS system (TGen)

Graduate Student Service

2005-2006	<i>Vice President</i> – Social and Cultural Affairs, Johns Hopkins School of Public Health Student Assembly
2004-2005	<i>Representative</i> – Johns Hopkins School of Public Health Student Assembly

EXTERNAL ACTIVITIES

01/07-Prsnt.	<i>Scientific Advisor</i> – Johns Hopkins University Center for a Livable Future, Baltimore, MD
02/10-Prsnt.	<i>Scientific Advisor</i> – Division of Pathogen Genomics, Translational Genomics Research Institute (TGen), Flagstaff, AZ
02/10-Prsnt.	<i>Founding Director</i> – Center for Microbiomics and Human Health, Translational Genomics Research Institute (TGen), Flagstaff, AZ
02/10-Prsnt.	<i>Founding Director</i> – Center for Food Microbiology and Environmental Health, Translational Genomics Research Institute (TGen), Flagstaff, AZ

TEACHING EXPERIENCE

Courses Taught

2016	<i>Instructor</i> – Health and Environment, George Washington University
2015-16	<i>Course developer and instructor</i> – EOH Culminating Experience Course, George Washington University
2014-16	<i>Course developer and co-instructor</i> – Public Health Genomics, George Washington University
2013-15	<i>Course developer and sole instructor</i> – Communicating Science for Public Health (formerly known as, Effective, Evidence-Based Public Health Communications), George Washington University
2013-16	<i>Guest Lecturer</i> – The Biologic Basis of Disease in Public Health, George Washington University
2013-16	<i>Guest Lecturer</i> – Applied Environmental Health Microbiology, George Washington University
2013-15	<i>Course developer and team instructor</i> – The Biologic Basis of Disease in Public Health (online version), George Washington University
2014-15	<i>Guest Lecturer</i> – EOH Problem Solving, George Washington University
2013-15	<i>Guest Lecturer</i> – Health and the Environment (undergraduate), George Washington University
2013	<i>Guest Lecturer</i> – Sustainable Energy and Environmental Health, George Washington University
2012	<i>Guest Lecturer</i> – Public Health Microbiology and Biodefense, George Washington University
2011	<i>Guest Lecturer</i> – Industrial Agricultural Impacts, College of Veterinary Medicine and Biomedical Sciences, Texas A&M.
2008-2012	<i>Guest Lecturer</i> – Infectious Diseases, Department of Biology, Northern Arizona University.
2009, 11, 13	<i>Guest Lecturer</i> – Microbial Ecology, Department of Biology, Northern Arizona University.
1997	<i>Laboratory Instructor</i> – Immunology Laboratory, Department of Biology, Northern Arizona University.
1997	<i>Laboratory Instructor</i> – Environmental Microbiology Laboratory, Department of Biology, Northern Arizona University.
1997	<i>Laboratory Instructor</i> – Biology of Microorganisms Laboratory, Department of Biology, Northern Arizona University.

Students and traineesPost-doctoral

2013-2016	<i>Gregory Davis, MPH, PhD</i> – George Washington University
2014-2015	<i>Guohua Liu, PhD</i> – George Washington University

Doctoral

2009-2013	<i>Jennifer Ginther, PhD</i> – Doctor of Biology, Northern Arizona University (Committee Member)
2009-2013	<i>Adam Wymore, PhD</i> – Doctor of Biology, Northern Arizona University (Committee Member)

2007-2008 *Leo Kenefic, PhD* – Doctor of Biology, Northern Arizona University (Committee Member)

Masters

2014-Present. *Alex Lan* – Masters of Public Health, George Washington University (CE Advisor)

2015-2016 *Meghan Christian* – Masters of Public Health, George Washington University (CE Advisor)

2014-2016 *Abbey Woolverton* – Masters of Public Health, George Washington University (Research Advisor)

2014-2016 *Nicholas Porter* – Masters of Public Health, George Washington University (Academic Advisor)

2013-2016 *Philip Bermel* – Masters of Public Health, George Washington University (Academic Advisor)

2014 *Jack Sternal* – Masters of Public Health, George Washington University (Research Advisor)

2013-2014 *Molly Sadowsky* – Masters of Public Health, George Washington University (Research Advisor)

2014-2015 *Karen Brletic-Williams* – Masters of Public Health, George Washington University (CE Advisor)

2013-2015 *Theresa Scheuermann* – Masters of Public Health, George Washington University (CE Advisor)

2013-2014 *Sarah Zerbonne* – Masters of Public Health, George Washington University (Academic Advisor)

2012-2013 *Elias (Salam) Abdul, MD* – Masters of Public Health, George Washington University (CE Advisor)

2010-2011 *Lauren Buck* – Master of Arts in Sustainable Communities, Northern Arizona University (Committee Chair)

Interns and mentored research

2012-2013 *Heidi Grande* – Undergraduate research intern, Translational Genomics Research Institute and Northern Arizona University (Mentor)

2011-2013 *Brett Weaver* – Research intern, Translational Genomics Research Institute and Northern Arizona University (Mentor)

2011-2012 *Kara Waits* – Research intern, Translational Genomics Research Institute and Northern Arizona University (Mentor)

2011-2013 *Owain Moss* – Research intern, Translational Genomics Research Institute and Northern Arizona University (Co-Mentor)

2011-2012 *Elysse Marcuccella* – Research intern, Translational Genomics Research Institute and Northern Arizona University (Co-Mentor)

2010-2013 *Michael Dwan* – Research intern, Translational Genomics Research Institute and Northern Arizona University (Co-Mentor)

2010-2012 *Joseph Horwinski* – Undergraduate research intern, Translational Genomics Research Institute and Northern Arizona University (Mentor)

2012 *Michelle Ruiter* – Research intern, Translational Genomics Research Institute (Mentor)

2012	<i>Richard Bigler</i> – Helios intern, Translational Genomics Research Institute (Mentor)
2011	<i>Katerina Soldanova</i> – Helios intern, Translational Genomics Research Institute (Mentor)
2010	<i>Lauren Buck</i> – Helios intern, Translational Genomics Research Institute (Mentor)
2009	<i>Bridget McDermott</i> – Helios intern, Translational Genomics Research Institute (Mentor)
2008	<i>Richard Lester</i> – Helios intern, Translational Genomics Research Institute (Mentor)

PUBLIC HEALTH PRACTICE PORTFOLIO

Briefings, Testimonies, and Consultations

Regional

11/19/13 *Invited Testimony* – *Public Health Risks of Antibiotic Use in Food-Animal Production*. Maryland State Assembly, Annapolis, MA. Unpaid.

National

05/30/14 *Invited Speaker* – *Antibiotic Resistance: Why the Trans-Atlantic Trade and Investment Partnership Must Protect Public Health*. Congressional Briefing, Washington, DC. Unpaid.

04/04/14 *Invited Speaker* – The United States President’s Council of Advisors on Science and Technology (PCAST). Washington, DC. Unpaid.

2013-2015 *Member* – National Advisory Committee on Microbiological Criteria for Foods (NACMCF). Unpaid.

03/09/13 *Invited Testimony* – Animal Drug User Fee Act (ADUFA), Energy and Commerce Committee, US House of Representatives, Washington, DC. Unpaid.

03/08/12 *Invited Speaker* – US Congressional Briefing on Antimicrobial Resistance. Washington DC. Unpaid.

03/08/12 *Invited Speaker* – US Congressional Briefing on Antimicrobial Resistance. Washington DC. Unpaid.

04/14/10 *Invited Speaker* – US House Briefing on Antimicrobial Resistance and Human Health. Washington DC. Unpaid.

12/02/09 *Invited Speaker* – US House Briefing on Antimicrobial Resistance and Costs to the Health System. Washington, DC. Unpaid.

07/13/09 *Invited Testimony* – US House Committee on Antimicrobial Drug Use on Farms. Washington, DC. Unpaid.

07/07/05 *Invited Speaker* – US House Briefing on Industrial Animal Production and Public Health. Washington, DC. Unpaid.

International

2009-prsnt. *Research and Surveillance Partner* – Statens Serum Institute (SSI; Danish equivalent to the US Center for Disease Control and Prevention). Unpaid.

2010-2013 *External Partner* – Center for Genomic Epidemiology, the National Food Institute of Denmark.
Unpaid.