

LIST OF EXTENDING KNOWLEDGE

1. 1991 Atwill, E.R. Potomac horse fever in New York state. Eighth Annual Equine Practitioner's Conference, Ithaca, New York.
2. 1993 Atwill, E.R., H.O. Mohammed, J.W. Lopez, and E.J. Dubovi. Epidemiologic studies on equine monocytic ehrlichiosis. Centennial Poster Session. School of Veterinary Medicine, Cornell University.
3. 1995 Atwill, E.R. Invited speaker. Cryptosporidiosis: what are the issues and concerns? Spring Beef Cattle Seminar, Contra Costa-Alameda County Cattlemen's Association in association with Contra Costa County Farm Bureau and UC Cooperative Extension. Concord, California. March 8.
4. 1995 Atwill, E.R. Invited speaker. Environmental animal health and medical ecology. USDA CSREES Review of the Livestock Disease Research Laboratory Program, School of Veterinary Medicine, UC Davis, California. April 19.
5. 1995 Atwill, E.R. Invited speaker. Assessing the risk of surface water contamination of *Cryptosporidium parvum* from beef cattle production: implications for land use restrictions. Managing Hardwood Rangelands to Maintain and Enhance Water Quality: Annual Beef and Range Field Day, Sierra Foothill Research and Extension Center, UC Cooperative Extension. Browns Valley, California. April 20.
6. 1995 Atwill, E.R. Livestock production and non-point source microbial contamination. Presentation given to Chancellor Larry M. Vanderhoef and company, VMTRC, Tulare, California. May 16.
7. 1995 Atwill, E.R. *Cryptosporidium* in livestock: facts, fiction and the road from here. *Cryptosporidium* and Water Quality Conference, Veterinary Medicine Extension, UC Davis, California. June 7.
8. 1995 Atwill, E.R. Invited speaker. Water quality assessment (How to track down the water bugs - *Cryptosporidium*). Workshop on Applications of State-Of-The-Art Biotechnology Techniques and Instrumentation for Forensic, Food Safety and Quality Applications, UC Biotechnology Program, UC Davis. June 13-14.
9. 1995 Atwill, E.R. Invited speaker. Cow-calf production, protozoal parasites, *Salmonella* and *E. coli* O157:H7. Water & Environmental Quality Committee and Cattle Health Committee, California Cattlemen's Association Mid-Year Meeting. Sacramento, California. July 6. (2 presentations)
10. 1995 Atwill, E.R. Invited speaker. Livestock production and water-borne zoonotic diseases: studies in progress. Water Quality Subcommittee, San Francisco Bay Area Resource Council, Livermore, California. September 20.
11. 1995 Atwill, E.R. Invited speaker. *Cryptosporidium parvum*: livestock, water and the value of diagnostic tests. Pre-harvest Food Safety Training Program for Regional APHIS and CDFA Veterinary Medical Officers, UC Davis, California. September 27.
12. 1995 Atwill, E.R. Invited speaker. Assessing the link between rangeland cattle and the risk of water-borne *Cryptosporidium parvum* infection in humans. Tulare County Director's Meeting (UC Cooperative Extension, Tulare Cattlemen's Association officers's, Sheriff's Office), Visalia, California. October 10.
13. 1995 Atwill, E.R. Invited speaker. *Cryptosporidium*, cattle and public health. Tulare/ Kings County Veterinary Medical Association, Visalia, California. November 16.
14. 1995 Atwill, E.R. Invited speaker. Livestock production and non-point source microbial contamination. Amador County, UC Cooperative Extension. Jackson, California. November 28.

EXTENDING KNOWLEDGE (continued)

15. 1995 Atwill, E.R. Update on the statewide cow-calf *Cryptosporidium* project. Beef Range Workgroup, 79th Annual California Cattlemen's Association Convention. Monterey, California. November 29.
16. 1995 Atwill, E.R. Invited speaker. Cow-calf production, protozoal parasites and watershed management. Water & Environmental Quality Committee and Cattle Health Committee, 79th Annual California Cattlemen's Association Convention. Monterey, California. November 30. (2 presentations)
17. 1995 Atwill, E.R. Livestock production and non-point source microbial contamination. Presentation given to Dr. Crabbes, Regional Director, South Central Region, UC Cooperative Extension. VMTRC, Tulare, California. December 1.
18. 1996 Atwill, E.R. Invited speaker. Zoonotic diseases: the myths and the science behind *Cryptosporidium parvum*, *E. coli* O157:H7 and Hanta virus infections. Rotary Club, Visalia, California. January 9.
19. 1996 Atwill, E.R. Invited speaker. Cow-calf production, protozoal parasites and watershed management. Rangeland Water Quality Management Plan Workshop for Ranchers. San Andreas, California. January 18.
20. 1996 Atwill, E.R. Invited speaker. Veterinary Medical Extension Program in Environmental Animal Health and Medical Ecology. Presentation given to Dr. W.R. Gomes, Vice President, Division of Agriculture and Natural Resources, University of California. UC Davis, California. January 24.
21. 1996 Atwill, E.R. Invited speaker. Cow-calf production, *Cryptosporidium* and *Giardia*, and water quality. 44th Annual Oakdale Livestock Forum for Ranchers. Oakdale, California. February 27.
22. 1996 Atwill, E.R. Environmental Health Research Update. 5th Annual Beef Cattle Health Symposium. Tulare, California. March 2.
23. 1996 Atwill, E.R. Calf health and water quality concerns related to *Cryptosporidium* infection in cow-calf herds. Annual Beef Cattle Health Symposium. Montague, California. March 7.
24. 1996 Atwill, E.R. Invited speaker. Horses, *Cryptosporidium* and water quality. Spring meeting of the Western Unit of the High Sierra Packers Association. Fresno, California. April 1.
25. 1996 Atwill, E.R. Invited speaker. Source protection and the dynamics of *Cryptosporidium* and *Giardia* infection in cattle, horses and wild pigs. Source Water Quality Committee, Annual Conference of the California-Nevada Section of the American Water Works Association. Redding, California. April 11.
26. 1996 Atwill, E.R. Invited speaker. *Cryptosporidium* in the environment. Annual Spring Conference of California-Oregon-Idaho-Nevada Cooperative Extension Specialists and Farm Advisors. Reno, Nevada. May 22.
27. 1996 Atwill, E.R. Invited speaker. Sources of *Cryptosporidium* on the watershed. Source Water Protection and Treatment Optimization Workshop. California Department of Health Services, Drinking Water Field Operations Branch, San Diego Office. San Diego, California. June 17.
28. 1996 Atwill, E.R. Invited speaker. *Cryptosporidium*, livestock and water. Public Health Medicine Section, 133rd Annual Meeting of the American Veterinary Medical Association. Louisville, Kentucky. July 23.
29. 1996 Atwill, E.R. Invited speaker. *Cryptosporidium* in animal waste and wastewater. 5th Annual Dairy Waste Management Workshop. Chino, California. October 23.
30. 1996 Atwill, E.R. Invited speaker. Practitioner's Update on *Cryptosporidium* in Horses, Beef and Dairy Cattle. 9th Annual Fall Symposium On Advances In Clinical Veterinary Medicine. School of Veterinary Medicine, University of California. Davis, California. November 9.

EXTENDING KNOWLEDGE (continued)

31. 1996 Atwill, E.R. Invited speaker. Minimizing non-point source protozoal contamination through watershed management. Natural Resources Continuing Conference, Division of Agriculture and Natural Resources. Visalia, California. November 19-20.
32. 1996 Atwill, E.R. Invited speaker. Update on the Program on Environmental Animal Health and Medical Ecology; Cow-calf production, water quality and microbial pathogens. Water & Environmental Quality Committee and Cattle Health Committee, 80th Annual California Cattlemen's Association Convention. Burlingame, California. December 5. (2 presentations)
33. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium parvum*: calf diarrhea and water quality issues. South Valley Dairy Day, UC Cooperative Extension. Tulare, California. January 16.
34. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium parvum*: animal health and water quality. Winter Animal Health Forum, UC Cooperative Extension. Orland, California. January 24.
35. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium parvum*: animal health and water quality. Winter Animal Health Forum, UC Cooperative Extension. Cottonwood, California. January 25.
36. 1997 Atwill, E.R. Invited speaker. Waterborne and foodborne pathogens in California cow-calf herds. Veterinary Medical Officer Training. Sacramento, California. February 19.
37. 1997 Atwill, E.R. Livestock and water quality update. 6th Annual Beef Cattle Health Symposium. Tulare, California. March 1.
38. 1997 Atwill, E.R. Invited speaker and panel discussion member. Medical ecology of *Cryptosporidium parvum* infection in beef cattle and its ramifications for source water quality. International Symposium on Waterborne *Cryptosporidium*. Newport Beach, California. March 2-5. (1 presentation and panel discussion member)
39. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium*: facts you need to know. Beef Quality Assurance Program, San Joaquin & Stanislaus County. Stockton, California. March 8.
40. 1997 Atwill, E.R. Invited speaker. Update on *Cryptosporidium* in California livestock. Backcountry Horsemen of California Rendezvous. Tulare, California. March 14-16. (2 presentations).
41. 1997 Atwill, E.R. Invited speaker. Source water protection for *Cryptosporidium parvum*. Alameda County Resource Conservation District. Sunol, California. March 17.
42. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium*, cattle, and water quality. San Joaquin Experimental Range Field Day, California State University, Fresno. San Joaquin Experimental Range, California. April 5.
43. 1997 Atwill, E.R. Invited speaker. Protozoal parasites, livestock and water. Spring meeting of the Western Unit of the High Sierra Packers Association. Fresno, California. April 7. (presentation and limited distribution item)
44. 1997 Atwill, E.R. Invited speaker. Update on *Cryptosporidium* and *Giardia* in animals. Source Water Quality Committee, Annual Conference of the California-Nevada Section of the American Water Works Association. San Jose, California. April 10.
45. 1997 Atwill, E.R. Invited speaker. Water quality and fecalborne pathogens. California Association of Resource Conservation Districts-Area IX. San Joaquin Experimental Range, California. April 11. (presentation and limited distribution item)
46. 1997 Atwill, E.R. Invited speaker. The situation of cryptosporidiosis in the United States. International Workshop on Cryptosporidiosis: a Public and Animal Health Problem. Universidad Autónoma Metropolitana-Xochimilco, Mexico City. April 23.
47. 1997 Atwill, E.R. Invited speaker. Protozoal parasites, livestock and water. Spring Meeting of the Sonoma-Marin Cattlemen's Association. Santa Rosa, California. June 1.

EXTENDING KNOWLEDGE (continued)

48. 1997 Atwill, E.R. Veterinary Medical Extension Program in Environmental Animal Health and Medical Ecology. Presentation given to Robert Grey, Provost of University of California, Davis. VMTRC, Tulare, California. August 7.
49. 1997 Atwill, E.R. Applied Environmental Production Issues. Presentation given to a Chinese agricultural business delegation, VMTRC, Tulare, California. September 2.
50. 1997 Atwill, E.R. Invited speaker. Livestock production, waterborne zoonotic disease, and the search for the smoking gun. Riparian and Watershed Management in the Interior Northwest: an Interdisciplinary Perspective. Organized by the Society for Range Management, Wildlife Society, American Fisheries Society, Society of American Foresters, and Blue Mountains Natural Resources Institute. La Grande, Oregon. September 10-12.
51. 1997 Atwill, E.R. Invited speaker. *Cryptosporidium*, California cattle, and water quality. 14th Annual Meeting of the Northern California American Society for Microbiology. Concord, California. November 22.
52. 1997 Atwill, E.R. Update on *Cryptosporidium*, California cattle, and water quality. Range Beef Workgroup and Water & Environmental Quality Committee, 81st Annual Convention of the California Cattlemen's Association. Reno, Nevada. December 3-4. (2 presentations)
53. 1997 Atwill, E.R. *Cryptosporidium parvum* in dairy wastewater and its implication for water quality. Workshop: dairy wastewater and public health concerns. Escondido, California, December 10.
54. 1997 Atwill, E.R. *Cryptosporidium parvum* in dairy wastewater and its implications for water quality. Workshop: dairy wastewater and public health concerns. Ontario, California. December 11.
55. 1998 Atwill, E.R. Invited speaker. Risk assessment model: assessing the link between rangeland cattle and waterborne *Cryptosporidium parvum* infection in humans. California Food Agency Team. United States Department of Agriculture, California Department of Health Services, and University of California. January 8.
56. 1998 Atwill, E.R. Invited speaker. Rangeland cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. Cattlemen's update: research on the road. School of Veterinary Medicine, University of Nevada and Cooperative Extension. Ely, Nevada. January 12.
57. 1998 Atwill, E.R. Invited speaker. Rangeland cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. Cattlemen's update: research on the road. School of Veterinary Medicine, University of Nevada and Cooperative Extension. Elko, Nevada. January 13.
58. 1998 Atwill, E.R. Invited speaker. Rangeland cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. Cattlemen's update: research on the road. School of Veterinary Medicine, University of Nevada and Cooperative Extension. Winnemucca, Nevada. January 14.
59. 1998 Atwill, E.R. Invited speaker. Rangeland cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. Cattlemen's update: research on the road. School of Veterinary Medicine, University of Nevada and Cooperative Extension. Fallon, Nevada. January 15.
60. 1998 Atwill, E.R. Invited speaker. Rangeland cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. Cattlemen's update: research on the road. School of Veterinary Medicine, University of Nevada and Cooperative Extension. Minden/Gardnerville, Nevada. January 16.
61. 1998 Atwill, E.R. Invited speaker. Addressing water quality concerns from *Cryptosporidium parvum* in dairy wastewater. Orange County Water District. January 29.

EXTENDING KNOWLEDGE (continued)

62. 1998 Barry, S. and E.R. Atwill. Invited speakers. Application of a Hazard Analysis and Critical Control Point Program for minimizing bovine-derived *C. parvum* contamination of Bay Area watersheds. Central Coast Cattle Symposium. King City, California. February 5.
63. 1998 Atwill, E.R. Invited speaker. *Cryptosporidium* and calf diarrhea. Central Coast Cattle Symposium. King City, California. February 5.
64. 1998 Atwill, E.R. Invited speaker. Epidemiology of *Cryptosporidium parvum* and *Giardia duodenalis* in beef cattle. Continuing Education Program for the Tulare/Kings county chapter of the California Association for Medical Laboratory Technology. Visalia, California. February 22.
65. 1998 Atwill, E.R. Invited speaker. *E. coli* O157:H7 in beef cattle herds. 46th Annual Oakdale Livestock Forum. Oakdale, California. February 24.
66. 1998 Atwill, E.R. Livestock and water quality update. 7th Annual Beef Cattle Health Symposium. Tulare, California. March 7.
67. 1998 Atwill, E.R. Invited speaker. Water quality, livestock production, and the vitality of California's rural economies. Rural Health and Public Policy: California's Challenges. California Wellness Foundation, Office of the Vice President, University of California. Sacramento, California. March 12.
68. 1998 Atwill, E.R. Invited speaker. Waterborne microbial pathogens and California's equine industry. San Ramon Valley Horsemen's Association. Alamo, California. March 13. (presentation and 3 limited distribution items)
69. 1998 Atwill, E.R. Invited speaker. Epidemiology of *Cryptosporidium parvum* in dairy cattle from central México. Facultad de Medicina Veterinaria and Zootecnia, La Universidad Autónoma del Estado de México. Toluca, México. March 18.
70. 1998 Atwill, E.R. Invited speaker. *Cryptosporidium parvum* and water. El agua en la Cuenca de México, sus problemas históricos y propuestas de solución, III Seminario Internacional de Investigadores de Xochimilco. Xochimilco, México City, México. March 20.
71. 1998 Atwill, E.R. Invited speaker. Livestock production systems and waterborne zoonotic pathogens. Source Water Protection Workshop-Part II, Association of California Water Agencies. Sacramento, California. April 23. (presentation and 2 limited distribution items)
72. 1998 Atwill, E.R. Invited speaker. *Cryptosporidium parvum* research update. Annual Spring Conference of California-Oregon-Idaho-Nevada Cooperative Extension Specialists and Farm Advisors. Nevada City, California. May 12.
73. 1998 Atwill, E.R. Invited speaker. Waterborne zoonotic diseases. Urban runoff pathogen workshop (1) and Drinking water pathogen workshop (2). Sacramento, California. May 20. (2 presentations)
74. 1998 Atwill, E.R. Invited speaker. Epidemiology of *Cryptosporidium parvum* and *Giardia duodenalis* in beef cattle. 5th Annual Continuing Education Seminar, Topics In Clinical Diagnostic Medicine, California Veterinary Diagnostic Laboratory System. Fresno, California. June 6.
75. 1998 Atwill, E.R. Invited Speaker. Cattle and the risk of waterborne *Cryptosporidium parvum* infection in humans. 31st Annual Conference of the American Association of Bovine Practitioners. Spokane, Washington. September 24-26.
76. 1998 Atwill, E.R. Invited speaker. Update on waterborne pathogens. Calaveras and Tuolumne County Cattleman's Association. San Andreas, California. October 9.
77. 1998 Atwill, E.R. Invited speaker. Environmental aspects of food safety. Food Safety for the 21st Century Symposium. California State Polytechnic University, San Luis Obispo and UC Cooperative Extension, San Luis Obispo County. October 12.

EXTENDING KNOWLEDGE (continued)

78. 1998 Atwill, E.R. Invited speaker. Domestic animal sources of *Cryptosporidium parvum*. Source Water Protection Symposium: A Focus on Waterborne Pathogens. American Water Works Association, in conjunction with International Water Services Association, United States Department of Agriculture, and United States Environmental Protection Agency. San Francisco, California. October 28-31.
79. 1998 Atwill, E.R. Invited speaker. California livestock production systems and the risk of waterborne zoonotic pathogens. Environmental Engineering Fall Seminar Series, University of California. Berkeley, California. November 13.
80. 1998 Atwill, E.R. Invited speaker. Zooanthropotic concerns of exposing livestock to biosolids. Land Application of Biosolids Workshop. University of California Cooperative Extension. San Luis Obispo, California. November 14.
81. 1998 Atwill, E.R. Research and regulatory update on cattle and the risk of waterborne zoonotic pathogens. Annual Meeting of the California Beef Council. San Diego, California. November 19.
82. 1998 Research and regulatory update on cattle and the risk of waterborne zoonotic pathogens. Water and Environmental Quality Committee, 82nd Annual Convention of the California Cattlemen's Association. South Lake Tahoe, California. December 2.
83. 1998 Atwill, E.R. Invited speaker. Veterinary public health concerns regarding biosolids application to agricultural lands. Kern County Biosolids Ordinance Committee. Bakersfield, California. December 3.
84. 1999 Atwill, E.R. Invited speaker. California livestock production systems and the risk of waterborne zoonotic pathogens. Alberta Agriculture, Food, and Rural Development. Edmonton, Alberta, Canada. January 11.
85. 1999 Atwill, E.R. Invited speaker. Is livestock manure a risk to public health? Banff Pork Seminar: Risk Factors to Profit and Growth. Banff, Alberta, Canada. January 14.
86. 1999 Atwill, E.R. Invited speaker. Horses and the occurrence of waterborne pathogens. 21st Lake Tahoe Equine Conference. Incline Village, Nevada. January 22.
87. 1999 Atwill, E.R. Invited speaker. Cattle and waterborne *Cryptosporidium parvum*. Kern County Cattlemen's Association. Bakersfield, California. February 2.
88. 1999 Nader, G.A., K.W. Tate, M.J. Connor, B. Allen-Diaz, E.R. Atwill. Evaluation of buffer zones to attenuate nutrient and sediment transport from hill-slope pastures. Statewide Conference, Division of Agriculture and Natural Resources, University of California. February 9 (poster)
89. 1999 Rulofson, F.C. and E.R. Atwill. Incidence of *Cryptosporidium parvum* and *Giardia* in beef calves raised on pastures with treated wastewater. Statewide Conference, Division of Agriculture and Natural Resources, University of California. February 9 (poster)
90. 1999 Tate, K.W., E.R. Atwill, N.K. McDougald, M.R. George. A rapid method for estimating livestock manure deposition on rangeland watersheds. Statewide Conference, Division of Agriculture and Natural Resources, University of California. February 9 (poster)
91. 1999 Atwill, E.R. Invited speaker. Nutrient and pathogen impacts on water quality. Ranch Water Quality Short Course, Natural Resource Conservation District, USDA. Clovis, California. February 17. (presentation and limited distribution item)
92. 1999 Atwill, E.R. Invited speaker. *Cryptosporidium* and water quality. Food and Water Safety Symposium, American Association of Bovine Practitioners & Midwest American Society of Animal Science and American Dairy Science Association. Des Moines, Iowa. March 15.
93. 1999 Atwill, E.R. Update: *Cryptosporidium* and *Giardia* pathogen surveys. 8th Annual Beef Cattle Health Symposium, University of California Cooperative Extension. Paso Robles, California. March 6.

EXTENDING KNOWLEDGE (continued)

94. 1999 Atwill, E.R. Invited speaker. How to live with *Giardia*. High Sierra Nevada Unit, Backcountry Horsemen of California. Tulare, California. March 17.
95. 1999 E.R. Atwill. Invited speaker. Prevalence of pathogens on rangelands. Beef and Range Field Day, Sierra Foothill Research and Extension Center, University of California. Brown Valley, California. April 22.
96. 1999 E.R. Atwill. Invited speaker. Microbial risks to source waters from livestock systems and wildlife. American Water Works Association Annual Conference. Chicago, Illinois. June 22.
97. 1999 E.R. Atwill. Invited speaker. Applying research results to on-the-ground water quality efforts. Workshop on the Relationship of Livestock and Water Quality. UC Cooperative Extension and the Natural Resource Conservation District. South Lake Tahoe, California. August 10.
98. 1999 E.R. Atwill. Invited panelist. Ecosystem health education: do we need a revolution in university education? 3rd International Congress on Ecosystem Health. Sacramento, California. August 15-18.
99. 1999 Atwill, E.R. Statistical methods for estimating loading rates at the watershed scale for microbial pathogens (*Cryptosporidium parvum*) from animal agricultural sources. 7th Annual Non-point Source Monitoring Workshop, Non-Point Source Pollution Control Program, U.S. Environmental Protection Agency. Morro Bay, California. September 14.
100. 1999 E.R. Atwill. Invited speaker and workshop participant. Workshop on Overland Migration of *Cryptosporidium*. Urban Watershed Management Branch, U.S. Environmental Protection Agency. Edison, New Jersey. September 21-23.
101. 1999 E.R. Atwill. Invited speaker. *Cryptosporidium*: are we at risk? & Workshop on keeping *Cryptosporidium* out of our water. Cal Poly Field Day and Bull Sale, California Polytechnic State University, San Luis Obispo, California. October 4. (lecture and workshop).
102. 1999 E.R. Atwill. Invited speaker. Kern County Supervisor Meeting regarding: Ordinance for Land Application of Biosolids. Bakersfield, California. October 5.
103. 1999 E.R. Atwill. Invited speaker. Understanding the context of waterborne microbial risks attributable to livestock waste. National Land Grant Initiative on Animal Waste Initiative: Promoting Environmental Stewardship. Kansas City, Missouri. October 17-19.
104. 1999 E.R. Atwill. Veterinary Medical Extension Program in Environmental Animal Health and Medical Ecology. Presentation given to Program Leaders of the Division of Agriculture and Natural Resources, University of California. VMTRC, Tulare, California. October 15.
105. 1999 E.R. Atwill. Invited speaker. Beef cattle production and water quality. Santa Barbara Cattlemen's Association. Buellton, California. November 10
106. 1999 E.R. Atwill. 1999 Update on Research and Outreach. California Beef Council. San Diego, California. November 11.
107. 1999 E.R. Atwill. Invited speaker. Update on Cryptosporidia. Fall Dairy Seminar, Veterinary Medicine Extension. Tulare, California. November 17.
108. 1999 E.R. Atwill. Invited speaker. Environmental and Water Quality Committee, 83rd Annual Convention of the California Cattlemen's Association. Santa Barbara, California. December 9.
109. 1999 E.R. Atwill. Invited speaker. Wildlife-Livestock interactions regarding Cryptosporidia. Section 15 BLM Grazing Advisory Committee. Bakersfield, California. December 23.
110. 2000 E.R. Atwill. Annual update on the Warner Ranch Cryptosporidial Project. Vista Irrigation District. Vista, California. March 1.

EXTENDING KNOWLEDGE (continued)

111. 2000 E.R. Atwill. Invited speaker. Program in Environmental Animal Health and Medical Ecology. Dean's Advisory Council, School of Veterinary Medicine, University of California, Davis. March 15.
112. 2000 E.R. Atwill. Invited speaker. Pathogens in the Environment, Ecology, Manure and Food. Animal Industries Coordinating Conference, Division of Agriculture and Natural Resources. Davis, California. March 21.
113. 2000 E.R. Atwill. Invited speaker. Molecular Fingerprinting: Applications to Animal Agriculture and Infectious Diseases. Animal Industries Coordinating Conference, Division of Agriculture and Natural Resources. Davis, California. March 21.
114. 2000 E.R. Atwill. Invited speaker. Management systems for reducing the risk of microbial pathogens in California's water resources. Rangeland Watershed Program, Division of Agriculture and Natural Resources, University of California. April 18-19.
115. 2000 E.R. Atwill. Invited speaker. Horses, waterborne pathogens, and possible management solutions. Santa Barbara County Water Agency, Hope Ranch, and the general public. Santa Barbara, California. July 26.
116. 2000 E.R. Atwill. Invited speaker. Risk factors for cellulitis in California broiler flocks. Poultry Health Symposium, UC Cooperative Extension. Modesto, California. August 8, 2000.
117. 2000 E.R. Atwill. Invited speaker. Animal agriculture and water quality: the real poop. Point Reyes Station, California. August 25.
118. 2000 E.R. Atwill. Invited speaker. Epidemiology of and potential beneficial management practices for bovine cryptosporidiosis. 104th Annual Meeting of the United States Animal Health Association. Birmingham, Alabama. October 23-24.
119. 2000 E.R. Atwill. Invited speaker. Fate and transport of rangeland pathogens. California Section, Society for Range Management, San Joaquin Experimental Range, O' Neals, California. November 4.
120. 2000 E.R. Atwill. Invited speaker. Cattle, *Cryptosporidium parvum*, and water quality. 84th Annual Convention of the California Cattlemen's Association. Reno, Nevada. December 2.
121. 2000 E.R. Atwill. Invited speaker. Livestock and waterborne pathogens. Kaweah-Tule Watershed Management Council. Visalia, California. December 15.
122. 2001 E.R. Atwill. Invited speaker. Horse manure and waterborne pathogens. Ohio Valley Equestrian Trials Symposium. Kentucky Horse Council. Louisville, Kentucky. February 10-11.
123. 2001 E.R. Atwill. Invited speaker. Stock use and waterborne pathogens. Back Country Horsemen of California 2001 Rendezvous. Madera, California. March 10-11. (2 presentations)
124. 2001 E.R. Atwill. Invited speaker. Does your horse pose a risk to human health and the environment? Western States Horse Summit. Sacramento, California. May 31.
125. 2001 E.R. Atwill. Invited speaker. Engineering vegetative buffer strips for removal of amphixenotic *Cryptosporidium parvum* from runoff of dairies and grazed agricultural land. International Life Sciences Institute North America Symposium Series on Food Microbiology, in conjunction with the International Association for Food Protection 88th Annual Meeting. Minneapolis, Minnesota. August 5-8.
126. 2001 E.R. Atwill. Invited speaker. Playing the blame game. Animal Agriculture Media Training, Division of Agriculture and Natural Resources, University of California. VMTRC, Tulare, California. October 3.
127. 2001 E.R. Atwill. Invited speaker. Environmental animal health and medical ecology. Division of Agriculture and Natural Resources, University of California. UC Davis, California. October 16.

EXTENDING KNOWLEDGE (continued)

128. 2001 E.R. Atwill. Invited speaker. Dairy production systems and the risk of waterborne zoonoses; Dairy production systems and the risk of *C. parvum* contamination. Academy of Dairy Consultants. Rancho Santa Fe, California. October 20. 2 presentations.
129. 2001 E.R. Atwill. Invited speaker. Environmental health and medical ecology. University Extension, UC Davis. November 8.
130. 2001 E.R. Atwill. Invited speaker. Beef cattle production systems and the risk of *C. parvum* contamination. University Extension, UC Davis. November 8.
131. 2001 E.R. Atwill. Invited speaker. Dairy production systems and the risk of *C. parvum* contamination. University Extension, UC Davis. November 8.
132. 2001 E.R. Atwill. Invited speaker. Efficacy of vegetated buffer strips for removal of *Cryptosporidium parvum* from agricultural runoff and wildlife habitat. University Extension, UC Davis. November 8.
133. 2001 E.R. Atwill. Invited speaker. Molecular fingerprinting: applications to microbial water quality. University Extension, UC Davis. November 8.
134. 2001 E.R. Atwill. Invited speaker. Statistical methods for estimating watershed loading rates of microbial pathogens from agricultural and wildlife sources. University Extension, UC Davis. November 8.
135. 2002 E.R. Atwill. 2001 Beef Research. Commodity Review, Center for Food Animal Health School of Veterinary Medicine, UC Davis. January 31.
136. 2002 E.R. Atwill. Waterborne pathogenic protozoa in certain domestic and wildlife species in California. 20th Vertebrate Pest Conference. Reno, Nevada. March 4-7.
137. 2002 E.R. Atwill. Invited speaker. *Cryptosporidium parvum*: epidemiology in cattle production systems. 1st Annual Oregon Veterinary Conference. Oregon State University. Corvallis, Oregon. March 9.
138. 2002 E.R. Atwill. Invited speaker. *Cryptosporidium parvum*: environmental transport and mitigation measures. 1st Annual Oregon Veterinary Conference. Oregon State University. Corvallis, Oregon. March 9.
139. 2002 E.R. Atwill. Invited speaker. *Cryptosporidium parvum*: control strategies and addressing regulatory concerns. 1st Annual Oregon Veterinary Conference. Oregon State University. Corvallis, Oregon. March 9.
140. 2002 E.R. Atwill. Invited speaker. Program in Environmental Animal Health and Medical Ecology. Natural Resource Coordinating Conference, University of California. Sacramento, California. April 2.
141. 2002 E.R. Atwill. Invited speaker. Beef cattle production and waterborne *Cryptosporidium parvum*. Academy of Veterinary Consultants. Kansas City, Missouri. April 6.
142. 2002 E.R. Atwill. Invited speaker. Optimization and design criteria of vegetative buffer strips for removal of waterborne *Cryptosporidium parvum* from animal agricultural runoff. Annual Meeting of Principal Investigators, Initiative for Future Agricultural and Food Systems, Cooperative State Research, Extension, and Education Service, United States Department of Agriculture. Kansas City, Missouri. May 14-15.
143. 2002 E.R. Atwill. Invited speaker. Microbial risks to source water: livestock production systems and wildlife. Cool, California. June 15.
144. 2002 E.R. Atwill. Invited speaker. Program in Environmental Animal Health and Medical Ecology. Consul, Science & Technology, British Consulate-General, San Francisco. VMTRC, Tulare, California. September 26.
145. 2002 E.R. Atwill. Invited workshop participant. Developing an action plan for communicating national research information to equestrian trail users and land managers. 2002 National Trials Symposium. Florida. November 10.

EXTENDING KNOWLEDGE (continued)

146. 2002 E.R. Atwill. Invited speaker. Waterborne *Cryptosporidium parvum* and cow-calf production. Coquille, Oregon. December 11.
147. 2002 E.R. Atwill. Invited speaker. Livestock and water quality: how do we know they are the problem. Cows and Creeks: Managing for Healthier Watersheds. Extension Service, Oregon State University. Prineville, Oregon. December 13.
148. 2003 E.R. Atwill. Invited speaker. Rising above brownian motion: Veterinarian's role in improving water quality. Seminar for the Department of Population Medicine and Diagnostic Sciences. College of Veterinary Medicine, Cornell University. March 4.
149. 2003 E.R. Atwill. Invited speaker. Addressing the issue of waterborne pathogens from horses and mules in the backcountry. Backcountry Horsemen of California 2003 Rendezvous. Turlock, California. March 15-16. (2 presentations)
150. 2003 E.R. Atwill. Invited speaker and panel member. Bacterial monitoring 101: A primer. Indicator monitoring and Assessment Training Workshop. State Water Resources Control Board, State of California. Sacramento, California. April 2.
151. 2003 E.R. Atwill. Invited speaker. Pathogen loading from wildlife. Beef & Range Field Day. Sierra Foothill Research and Extension Center, University of California. April 17.
152. 2003 E.R. Atwill. Influence of waterways on pathogen movement at preharvest. Legislative Forum: Epidemiologic Research in Food Safety Issues. United States Department of Agriculture. Washington, DC. May 22.
153. 2003 Atwill, E.R., M. Das Graças Cabral Pereira, L. Herra-Alonso, C. Elmi, W.P. Epperson, D.M. Grotelueschen, B. Smith, B. Hoar. Prevalence and distribution of genotypes of *Cryptosporidium parvum* in United States feedlot cattle. Microorganisms in Drinking Water Workshop, National Center for Environmental Research, United States Environmental Protection Agency. Cincinnati, Ohio. August 5-7.
154. 2003 Atwill, E.R. Invited Speaker. Warner Ranch integrated *Cryptosporidium parvum* assessment and grazing management plan. Vista Irrigation District, Vista, California. December 10.
155. 2004 E.R. Atwill. 2003 Beef Research. Commodity Review, Center for Food Animal Health School of Veterinary Medicine, UC Davis. January 30.
156. 2004 Atwill, E.R. Invited Speaker. Beneficial management practices for waterborne pathogens. Pathogens in the Environment, United States Department of Agriculture. Kansas City, Missouri. February 23-25
157. 2004 Atwill, E.R. Invited Speaker. Livestock production and waterborne pathogens. Solano County Library Lecture Series. Fairfield, California. April 28.
158. 2004 Atwill, E.R. Invited Speaker. Livestock production and the risk of waterborne zoonoses. Living with Livestock: Environment and Change. Winnipeg, Manitoba, Canada. October 5-7.
159. 2005 Atwill, E.R. Introduction to waterborne pathogens from livestock and wildlife on California rangeland. 58th Annual Meeting for the Society for Range Management. Fort Worth, Texas. February 5-11.
160. 2005 Atwill, E.R., K.W. Tate, T. Harter. Matching vegetated buffer widths to environmental loading rates of *Cryptosporidium parvum* from livestock. 58th Annual Meeting for the Society for Range Management. Fort Worth, Texas. February 5-11.
161. 2005 Atwill, E.R. Invited Speaker. Addressing concerns of microbial water quality on California rangelands. Rangeland Water Quality Conference, Division of Agriculture and Natural Resources, University of California. Woodland, California. February 23-24.
162. 2005 Atwill, E.R., K.W. Tate, T. Harter. Invited Speaker. Managing pathogens with vegetated buffers. Rangeland Water Quality Conference, Division of Agriculture and Natural Resources, University of California. Woodland, California. February 23-24.

EXTENDING KNOWLEDGE (continued)

163. 2005 Atwill, E.R. Invited Speaker. Packstock, picket pins, and *Cryptosporidium* parasites in Tuolumne Meadows. Rendezvous 2005: Backcountry Horsemen of California. Tulare, California. March 12.
164. 2005 Atwill, E.R. Invited Speaker. Pathogens and indicator bacteria: management implications for reducing microbial levels in dairy runoff along Tomales Bay and its tributaries. Point Reyes Station, California. October 19.
165. 2005 Atwill, E.R. Invited Speaker. Pathogens and indicator bacteria: management implications for reducing microbial levels in dairy runoff along coastal California. Crescent City, California. October 25.
166. 2005 Atwill, E.R. Invited Speaker. Pathogens and indicator bacteria: management implications for reducing microbial levels in dairy runoff along coastal California. Ferndale, California. October 26.
167. 2006 Atwill, E.R. Invited Speaker. Pond microbe assessment. Circle J-Norris Ranch Field Science Weekend. Tulare County Office of Education. Springville, CA. January 28.
168. 2006 Atwill, E.R., K.W. Tate, T. Harter, M.C.G. Pereira, L. Hou, N.K. McDougald. Efficacy of vegetated buffers for reducing waterborne pathogens. National Water Conference, CSREES-USDA. San Antonio, Texas. February 5-9.
169. 2006 Microbial pollutants of water quality concern from animal agriculture. UC-ANR Surface Water Quality Workshop. Woodland, CA. April 27.
170. 2006 Atwill, E.R. Invited Speaker. Writing a successful USDA NRICGP grant. Panel chair and speaker. UC Davis. September 18.
171. 2006 Atwill, E.R. and D.J. Lewis. Monitoring bacterial sources and transport in five Northern California estuaries. Santa Rosa, California. September 19.
172. 2006 Atwill, E.R. BMPs to reduce microbial contamination from rangeland and irrigated pastures. Development of a Central Valley Drinking Water Policy Public Workshop. Rancho Cordova, CA. October 3.
173. 2006 Atwill, E.R. Invited Speaker. UC animal-related research regarding *E. coli* O157:H7 contamination of leafy green vegetables in the Salinas region. Salinas, CA. October 27.
174. 2006 Atwill, E.R. A quick brief on a UC study regarding *E. coli* O157:H7 contamination of leafy green vegetables in the Salinas region. San Benito County Cattleman's Association Annual Meeting. November 2.
175. 2006 Atwill, E.R. Invited Speaker. Characterizing the risk of *E. coli* contamination from animal agriculture and wildlife. *E. coli* O157:H7 in lettuce and leafy greens: strategies for developing an intervention assessment model. Asilomar, California. November 13-15.
176. 2006 Atwill, E.R. Invited Speaker. CCA update: microbial water quality. California Cattleman's Association Annual Meeting. November 16. (2 presentations).
177. 2006 Atwill, E.R. Invited Speaker. Update on pathogen studies. Annual Rangeland Water Quality Workshop. University of California, Davis. December 11-13.
178. 2006 Atwill, E.R. Invited Speaker. Pathogens in animal manure, should we be concerned. Education Webcast Series. Livestock and Poultry Environmental Learning Center, University of Nebraska. December 15.
179. 2007 Atwill, E.R. and D.J. Lewis. From chip, to creek, to estuary. Tomales Bay Shellfish Technical Advisory Committee. Point Reyes Station, California. January 16.
180. 2007 Atwill, E.R. Invited Speaker. Addressing water and food safety issues from pathogenic *E. coli* in livestock. SLO/SB Counties Agricultural Watershed Coalition. Guadalupe, California. January 30.
181. 2007 Atwill, E.R. Invited Speaker. Addressing water and food safety issues from pathogenic *E. coli* in livestock. SLO/SB Counties Agricultural Watershed Coalition. Morro Bay, California. January 30.

EXTENDING KNOWLEDGE (continued)

182. 2007 Atwill, E.R. Invited Speaker. Beef cattle, rangeland water quality, and pathogenic *E. coli*. Monterey Cattleman's Association. King City, California. February 9.
183. 2007 Atwill, E.R. Invited Speaker. Pathogens-background, standards, and what is tested. 55th Annual Oakdale Livestock Forum. Oakdale, California. February 27.
184. 2007 Atwill, E.R and K.W. Tate. Invited Speakers. *E. coli* outbreak: potential impacts on livestock grazing. California Farm Bureau Federation. Sacramento, California. February 28.
185. 2007 Atwill, E.R. Invited Speaker. Pathogens: background, standards, and what is tested. Rangeland Water Quality Meeting. Willows, California. March 5.
186. 2007 Atwill, E.R. Invited Speaker. Wildlife and livestock, rangeland water quality, and pathogenic *E. coli*. Regional Growers and Processors. Salinas, California. March 13.
187. 2007 Atwill, E.R. Invited Speaker. Addressing water and food safety issues from pathogenic *E. coli*. Natural Resource Coordinating Conference. Monterey, California. March 15.
188. 2007 Atwill, E.R. Invited Speaker. Row crops and rangeland: what do we really know? Central Coast Ag Task Force. Salinas, California. April 16.
189. 2007 Atwill, E.R. Invited Speaker. Minimizing environmental dissemination of *E. coli* from animal agriculture and free ranging wildlife in California. Sacramento Valley Livestock-Crop Interface and Food-borne Illness Prevention Meeting. Woodland, California. April 18.
190. 2007 Tate, K.W. and E.R. Atwill. Invited Speaker. Vegetative buffers and wetlands to filter *E. coli* and other pollutants in runoff from pasture and rangelands. Beef and Range Field Day. Sierra Foothill Research and Extension Center. Browns Valley, California. April 19.
191. 2007 Atwill, E.R. Invited Speaker. What we know about wildlife and water quality practices. Coordinated Management of Water Quality Protection and Food Safety Initiatives in California Vegetable Production Conference. San Luis Obispo, California. April 23-25.
192. 2007 Atwill, E.R. Invited Speaker. Buffer strips for pathogen removal. Veterinary Perspectives on Pathogen Control in Animal Manure. Cornell University, Ithaca, New York. May 8.
193. 2007 Atwill, E.R. Invited Speaker. Update on *E. coli* in produce. Midyear California Cattlemen's Association meeting. Rohnert Park, California. June 28. 2 presentations.
194. 2007 Atwill, E.R. Update on *E. coli* issues in livestock and produce. Town hall meeting of local ranchers and growers in Monterey County. King City, California. August 7.
195. 2007 Atwill, E.R. Invited Speaker. Update on *E. coli* issues in livestock and produce. Fall Yolo County Cattlemen's Association and Woolgrowers Meeting. Esparto, California. August 23.
196. 2007 Atwill, E.R. *E. coli* O157:H7 in the Salinas produce growing region. Salinas River Channel Coalition. Salinas, California. Aug 28.
197. 2007 Atwill, E.R. Invited Speaker. Food safety concerns in California speciality crops. USDA CSREES. Modesto, California. August 29.
198. 2007 Atwill, E.R. Invited Speaker. Repercussions, consequences, and the evolving GAPs following the California 2006 outbreak of *E. coli* O157:H7 in spinach. Joint CSU - UC Agriculture and Natural Resources Administrators Meeting. Sacramento, California. September 7.
199. 2007 Atwill, E.R. Invited Speaker. Food safety repercussions following the 2006 spinach outbreak. Society for Environmental Journalists. Stanford, California. September 8.
200. 2007 Atwill, E.R. Invited Speaker. *E. coli* impact on animal agriculture. CDFA (AHB) Statewide Meeting. Sacramento, California. September 20.
201. 2007 Atwill, E.R. Invited Speaker. Role of vegetated buffers in improving microbial water quality. President Dynes tour. Sierra Foothill Research and Extension Center, California. September 21.
202. 2007 Atwill, E.R. Invited Speaker. Environmental dissemination of pathogens. Bernice Barbour Foundation Board Meeting. UC Davis, California. October 29.

EXTENDING KNOWLEDGE (continued)

203. 2007 Atwill, E.R. Invited Speaker. Update on *E. coli* issues in livestock and produce. Fall San Benito County Cattlemen's Association Meeting. Tres Pinos, California. November 1.
204. 2007 Atwill, E.R. Invited Speaker. Update on WIFSS program. Briefing for California Senator Maldonado. UC Davis, California. November 6.
205. 2007 Atwill, E.R. Invited Speaker. Update on *E. coli* issues in livestock and produce. California Cattlemen's Association Annual Convention. Reno, Nevada. November 8.
206. 2007 Atwill, E.R. Invited Speaker. Wild animals and possible implications for food safety. Plant Diseases Seminar. UC Cooperative Extension. Salinas, California. November 13.
207. 2007 Atwill, E.R. Invited Speaker. Research, training, and outreach update. California Farm Bureau Federation. Sacramento, California. November 14.
208. 2007 Atwill, E.R. Invited Panel Member. Food safety and the environment: Popeye versus Bambi. California Water Policy Conference. Los Angeles, California. November 15.
209. 2008 Atwill, E.R. Invited Speaker. Current partnerships for coordinated management: research, outreach, funding, and oversight. Symposium on Coordinated Management of Water Quality Practices and Food Safety Practices in Cool Season Vegetable Production. USDA-CSREES National Water Conference. Sparks, Nevada. February 3-7.
210. 2008 Atwill, E.R. Invited Speaker. Bacterial indicators and pathogens. Upper Feather River Watershed Management Meeting. Quincy, California. February 26.
211. 2008 Atwill, E.R. Invited Speaker. Understanding pathogens of concern, their prevalence, and survival on rangelands. Rangeland Water Quality Meeting, UCCE Solano County. Woodland, California. March 6.
212. 2008 Atwill, E.R. Invited Plenary Speaker. Implications of wildlife in *E. coli* outbreaks associated with leafy green produce. 23rd Vertebrate Pest Conference. San Diego, California. March 17-20.
213. 2008 Atwill, E.R. Invited Speaker. The research-extension continuum in action: rangeland water quality. Building Working Relationships in ANR. UC Davis, California. May 21.
214. 2008 Atwill, E.R. Bacteria transport in five Northern California estuaries. Regional Water Quality Control Board. Santa Rosa, California. May 28.
215. 2008 Atwill, E.R. Invited Speaker. Updates on *E. coli* and Delta project. Midyear meeting. California Cattlemen's Association. Sacramento, California. June 26.
216. 2008 Atwill, E.R. WIFSS programmatic review. Congressional and State Legislative Briefing Meeting. Davis, California. June 27.
217. 2008 Atwill, E.R. Invited Panelist. Leafy greens: emerging pathogen issues in manure. Pacific Southwest Organic Residuals Symposium. UC Davis. September 30 - October 2.
218. 2008 Atwill, E.R. Invited Speaker. ANR responds to California's food safety challenges. UC President's Advisory Committee on Agriculture and Natural Resources. Berkeley, California. October 7.
219. 2008 Atwill, E.R. Invited Speaker. WIFSS and the Western Center for Food Safety. Center for Food Safety and Applied Nutrition, FDA. College Park, Maryland. November 14. Two presentations.
220. 2008 Atwill, E.R. Invited Speaker. WIFSS and the Western Center for Food Safety. 2nd Annual Meeting of the FDA Centers of Excellence. Oakbrook, Illinois. December 2.
221. 2009 Atwill, E.R. Ambient conditions and monitoring for livestock associated pathogens and indicators in California waterways. Water Quality, Range, Pasture, and Livestock Management Workshop. Woodland, California. January 24.
222. 2009 Atwill, E.R. Ambient conditions and monitoring for livestock associated pathogens and indicators in California waterways. Water Quality, Range, Pasture, and Livestock Management Workshop. Stockton, California. January 29.

EXTENDING KNOWLEDGE (continued)

223. 2009 Atwill, E.R. Addressing California's food safety and security needs at the Western Institute for Food Safety and Security. UC Davis, California. January 29. Briefing for the Centers for Disease Control and Prevention.
224. 2009 Atwill, E.R. Invited Speaker. Waterborne pathogens and indicators in California waterways. San Louis Obispo Cattleman's Association. Paso Robles, California. February 19.
225. 2009 Atwill, E.R. Invited Speaker. Current issues about pathogens and rangeland water quality. Annual Beef Day and Trade Show, California State University, Chico. Chico, California. February 21.
226. 2009 Atwill, E.R. Invited Speaker. Review the mission of the Western Institute for Food Safety and Security. FDA Advisory Board, Western Center for Food Safety. College Park, Maryland. March 4.
227. 2009 Atwill, E.R. Invited Speaker. Water quality pathogen concerns associated with livestock, range, and irrigated pasture. Monterey County Cooperative Extension. Salinas, California. March 18.
228. 2009 Atwill, E.R. Invited Speaker. Pre-harvest food safety: animal and plants intertwined. Defining Our Future—Putting Science to Work in an Inter-Connected World. Division of Agriculture and Natural Resources, University of California. Sacramento, California. April 27-30.
229. 2009 Atwill, E.R. Invited Speaker. California's water resources: a veterinarian's role in reducing waterborne pathogens. Dean's Advisory Council. UC Davis. April 30.
230. 2009 Atwill, E.R. Invited Speaker. Epidemiologic approaches to waterborne and foodborne zoonotic disease. Dublin, Ireland. June 3. 1 workshop and 1 presentation.
231. 2009 Atwill, E.R. Invited Speaker. Veterinary medicine and preharvest food safety. 105th Anniversary of Chinese Modern Veterinary Education, Jilin University. Changchun City, China. August 17.
232. 2009 Atwill, E.R. Invited Speaker. Medical ecology of foodborne pathogens in animal agriculture. 105th Anniversary of Chinese Modern Veterinary Education, Jilin University. Changchun City, China. August 17.
233. 2009 Atwill, E.R. Updates and Projects: Western Center for Food Safety. 3rd Annual FDA Center of Excellence Meeting, Oxford, Mississippi. August 31-September 1.
234. 2009 Atwill, E.R. Invited Speaker. Ramifications of *E. coli* O157:H7 on sheep grazing. 149th Annual meeting of the California Wool Growers Association. Bakersfield, California. September 11-12.
235. 2009 Atwill, E.R. Invited Speaker. How safe is your food: tackling California's food safety challenges. School of Veterinary Medicine Alumni Association. UC Davis, California. September 24.
236. 2009 Atwill, E.R. Western Center for Food Safety research projects. Western Institute for Food Safety and Security. UC Davis, California. December 2.
237. 2010 Atwill, E.R. Invited Speaker. Farm worker exposure to zoonotic *Cryptosporidium parvum*. Western Center for Agricultural Health and Safety. UC Davis, California. March 1.
238. 2010 Atwill, E.R. Invited Speaker. Annual Update on the Western Center for Food Safety. Western Institute for Food Safety and Security, UC Davis, California. March 30.
239. 2010 Atwill, E.R. Invited Speaker. Water quality and Food Safety. Washington Advisory Council. UC Davis, California. April 2.
240. 2010 Atwill, E.R. Invited Speaker. Indicator bacteria, waterborne pathogens, and practices to reduce their impacts to water quality. Grazing Livestock and Water Quality: Options and Solutions for California Rangelands, Marin County UC Cooperative Extension. Petaluma, California. April 27.

EXTENDING KNOWLEDGE (continued)

241. 2010 Atwill, E.R. Western Center for Food Safety Update. Food and Drug Administration. College Park, Maryland. May 4-5.
242. 2010 Atwill, E.R. Invited Speaker. Animals and Food Safety. Hartnell College. Salinas, California. May 10.
243. 2010 Atwill, E.R. Invited Speaker. *E. coli* O157:H7 outbreaks in California's leafy green industry. National Synthesis Workshop: Pathogens in Rural and Agricultural Watersheds. Cornell University, Ithaca, New York. May 16-21.
244. 2010 Atwill, E.R. Environmental loading of *Cryptosporidium* spp. from Belding's ground squirrels and packstock in Yosemite National Park. International Conference on Diseases of Nature Communicable to Man. Fairbanks, Alaska. August 8-10.
245. 2010 Atwill, E.R. Update on the UC Davis Western Center for Food Safety. 4th Annual Centers of Excellence Director's Meeting. University of Maryland, College Park, Maryland. September 7.
246. 2010 Atwill, E.R. Epidemiology and BMPs for waterborne zoonotic pathogens. Bodega Marine Lab, Bodega Bay, California. September 15.
247. 2010 Atwill, E.R. Invited Speaker. Epidemiologic analysis and risk management practices for reducing *E. coli* in irrigation source water supplies and distribution systems. 2010 Fresh Summit: Produce Marketing Association. Orlando, Florida. October 15-17.
248. 2010 Atwill, E.R. Updates and Projects: Western Center for Food Safety. Annual FDA Site Visit, UC Davis, California. December 9.
249. 2011 Atwill, E.R. Invited Speaker. Preharvest food safety in the California produce industry. Annual Statewide Conference of the California Association of Standards and Agricultural Professionals. Santa Rosa, California. January 16.
250. 2011 Atwill, E.R. Invited Speaker. Irrigation water and produce food safety. Washington Tree Fruit Research Commission and Northwest Horticultural Council. Yakima, Washington. January 26 and 27. Two seminars.
251. 2011 Atwill, E.R. Invited Speaker. Livestock, range management, and waterborne pathogens. Tuolumne County Range Water Forum. Sonora, California. February 15.
252. 2011 Atwill, E.R. Invited Speaker. Interface of environmental quality and food safety: *E. coli* O157 in California's leafy green industry. Environmental Science, Policy, and Management Colloquium. UC Berkeley, California. March 14.
253. 2011 Atwill, E.R. Invited Speaker. Livestock, range management, and waterborne pathogens. Department of Animal Science, California Polytechnic State University, San Luis Obispo, California. April 8.
254. 2011 Atwill, E.R. Update on the Western Institute for Food Safety and Security. Western Institute for Food Safety and Security, UC Davis, California. May 4.
255. 2011 Atwill, E.R. Invited Speaker. Mining Industry Data, panel speaker. 2nd Annual Conference, Center for Produce Safety. Orlando, Florida. June 27-28.
256. 2011 Atwill, E.R. Invited Speaker. Livestock, range management, and waterborne pathogens. Central Coast Regional Water Quality Control Board. San Luis Obispo, California. July 20.
257. 2011 Atwill, E.R. Rhesus macaques pathogen research. Central Zoo Authority, Government of India, New Delhi, India. August 29.
258. 2011 Atwill, E.R. Invited Speaker. Update on interaction between wildlife and produce food safety. Food safety and water quality focus group. California EPA. Sacramento, California. October 6.
259. 2011 Atwill, E.R. Invited Speaker. Co-management for California's agricultural systems: balancing food safety, natural and human resources, with economic viability. Sustainable Food Systems Conference, Division of Agriculture and Natural Resources, UC Davis. October 11-13.

EXTENDING KNOWLEDGE (continued)

260. 2011 Atwill, E.R. Invited Speaker. Animal waste, the environment, and food safety. International Symposium on Major Emergent Animal Diseases, Public Health, and Food Safety. Chengdu, China. October 21-25.
261. 2011 Atwill, E.R. China-U.S. Center for Food Safety Research and Training. Heping Campus, Jilin University, Changchun, China. November 3.
262. 2011 Atwill, E.R. Veterinary medicine, food science, and preharvest food safety. College of Food Science and Technology, Northwest A&F University, Yangling, China. November 5.
263. 2011 Atwill, E.R. Chair and Speaker. Interaction between produce food safety, irrigation water quality, and wildlife conservation. 2011 Yangling International Agri-Science Forum. Northwest A & F University, Yangling, China. November 5.
264. 2012 Atwill, E.R. Invited Speaker. Domestic and international food safety programs at Western Institute for Food Safety and Security. Chinese Academy of Sciences delegation visit. UC Davis, California. January 11.
265. 2012 Atwill, E.R. Invited Speaker. Managing livestock to deliver safe water to society. Managing rangelands for multiple ecosystem services. 1st Rangeland Science Symposium. UC Davis, California. January 19.
266. 2012 Atwill, E.R. Invited Speaker. WIFSS programs: veterinary public health, food safety, and animal agriculture in California. Briefing for Representative John Garamendi, 10th District. School of Veterinary Medicine, UC Davis, California. January 30.
267. 2012 Atwill, E.R., M. Jay-Russell, X. Li, E. Vivas, C. Kilonzo, R. Mandrell. Methodological and epidemiological concerns when comparing microbial food safety risks from wildlife, livestock, and companion animals. 25th Vertebrate Pest Conference. Monterey, California. March 5-8. Presenter and Session Chair.
268. 2012 Atwill, E.R. WIFSS programs: veterinary public health, food safety, and animal agriculture in California. Briefing for Congressman Dan Lungren. School of Veterinary Medicine, UC Davis, California. March 26
269. 2012 Atwill, E.R. WIFSS programs: veterinary public health, food safety, and animal agriculture in California. Briefing for Senator Feinstein. School of Veterinary Medicine, UC Davis, California. April 2.
270. 2012 Atwill, E.R. Domestic and international food safety programs. Center for Disease Control, Guangzhou, China. May 7.
271. 2012 Atwill, E.R. Protozoal parasites: *Cryptosporidium* and *Giardia*. Pearl Laboratory Animal Science & Technology Company, Ltd., Southern Medical University. Dongguan, China. May 8.
272. 2012 Atwill, E.R. Irrigation water. ER 321 Produce Farm Investigation Course. Food and Drug Administration. Monterey, California. June 18.
273. 2012 Atwill, E.R. Invited Speaker. Epidemiologic analysis and risk management practices for reducing *E. coli* in irrigation water. Produce Research Symposium, Center for Produce Safety. University of California, Davis, California. June 27.
274. 2012 Atwill, E.R. Irrigation water. ER 321 Produce Farm Investigation Course. Food and Drug Administration. Monterey, California. July 16.
275. 2012 Atwill, E.R. *E. coli* O157:H7 and the California sheep industry. 152nd Annual Conference, California Wool Growers Association. UC Davis, California. August 3.
276. 2012 Atwill, E.R. Annual review of the Western Center for Food Safety. 6th Annual Centers of Excellence Director's Meeting. Center for Food Safety and Applied Nutrition, Food and Drug Administration. College Park, Maryland. September 13-14.
277. 2012 Atwill, E.R. Domestic and international food safety programs Western Institute for Food Safety & Security. China-US Center for Food Safety Research and Training. Davis, California. October 29-31.

EXTENDING KNOWLEDGE (continued)

278. 2012 Atwill, E.R. WIFSS program update. External advisory board meeting. School of Veterinary Medicine, UC Davis, California. Dec 6.
279. 2013 Atwill, E.R. Irrigation water. ER 321 Produce Farm Investigation Course. Food and Drug Administration. Homestead, Florida. January 14.
280. 2013 Atwill, E.R. Invited Speaker. Managing rangeland watersheds for agricultural production, water quality, and food safety. 2nd Rangeland Science Symposium, UC Davis, California. January 24.
281. 2013 Atwill, E.R. Irrigation water. ER 321 Produce Farm Investigation Course. Food and Drug Administration. Balm, Florida. March 4.
282. 2013 Atwill, E.R. Food safety updates on sheep grazing on crop stubble. California Farm Bureau Federation. Sacramento, California. March 13.
283. 2013 Atwill, E.R. *E. coli* O157:H7 research related to livestock, wildlife, and leafy green production on the central coast, California. UCCE Monterey and San Luis Obispo County. Templeton, California. March 18.
284. 2013 Atwill, E.R. Invited Speaker. Domestic and international food safety programs. Songyuan Office of Food Safety. Songyuan City, China.. March 25.
285. 2013 Atwill, E.R. Invited Speaker. Domestic and international food safety programs. Jilin Province Office of Food Safety and Jilin College of Industry and Commerce. Changchun City, China. March 26. (2 presentations)
286. 2013 Atwill, E.R. Invited Speaker. International collaborative opportunities for food safety research. Jilin University, Heping Campus. Changchun City, China. March 27.
287. 2013 Atwill, E.R. Moderator. Positioning the California dairy industry for long-term sustainability. ANR Statewide Conference. Ontario, California. April 9-11.
288. 2013 Atwill, E.R. Invited speaker. Academic planning process: the School of Veterinary Medicine example. ANR Statewide Conference. Ontario, California. April 9-11.
289. 2013 Atwill, E.R. Invited speaker. WIFSS and UCCE *E. coli* O157:H7 research on livestock, wildlife, and leafy green production on the central coast, California. Monterey County Cattlemen's Association Annual Spring Meeting. King City, California. April 12.
290. 2013 Atwill, E.R. Food safety and water quality programs at WIFSS. Bogor Agricultural University. Bogor, Indonesia. May 17. (2 presentations)
291. 2013 Atwill, E.R. Irrigation water. ER 321 Produce Farm Investigation Course. Food and Drug Administration. Monterey, California. June 10.
292. 2013 Atwill, E.R. Invited speaker. Waterborne and foodborne research at WIFSS. Zhuhai Centers for Disease Control and Prevention, Zhuhai, China. July 15.
293. 2013 Atwill, E.R. Invited panel speaker. Putting knowledge to action. 2013 Co-Management Forum: Farm Food Safety & Conservation Network. Watsonville, California. August 21.
294. 2013 Atwill, E.R. Produce food safety and the role of wildlife as the pathogen source. Veterinary Research and Development Center, Southern Region. Nakon Sri Thammarat, Thailand. September 16.
295. 2013 Atwill, E.R. Invited speaker. Food and waterborne disease programs at WIFSS. Council of Deans and Vice Chancellor's. School of Veterinary Medicine, University of California, Davis. October 8, 2013.
296. 2013 Atwill, E.R. Invited speaker/debater. Opportunities and threats to widespread adoption of bacterial standards for irrigation water. Food Safety, Security and Defense: Focus on Food and Water. Lincoln, Nebraska. October 20-23.
297. 2013 Atwill, E.R. Invited speaker. Food safety and water quality: key components of sustainable agricultural systems. Food & Health: University College Dublin visit. UC Davis, California. October 30.

EXTENDING KNOWLEDGE (continued)

- 298. 2013 Atwill, E.R. Invited speaker. Domestic and international food safety programs at WIFSS. International Veterinary Consortium for China. UC Davis, California. November 8.
- 299. 2013 Atwill, E.R. Invited speaker. Assessment of microbial contamination in the environment via animal waste and water safety. Conference on Animal Waste Pathogens and Environmental Concerns in California. UC Davis, California. December 2.