

## Curriculum Vitae

### **KRISTINA D. (CRABTREE) MENA**

Associate Professor of Environmental Sciences  
School of Public Health  
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#### **EDUCATION**

- Postdoctoral Fellow, Food Animal Health and Management Center, Kansas State University, Manhattan, KS, 1997-1998
- Ph.D., Department of Soil, Water and Environmental Science, The University of Arizona, Tucson, AZ, 1993-1996
- M.S.P.H., Department of Environmental and Occupational Health, University of South Florida, Tampa, FL, 1991-1993
- B.A., Department of Biology, Franklin College of Indiana, Franklin, IN, 1987-1991

#### **APPOINTMENTS**

- Associate Professor of Environmental Sciences, School of Public Health, The University of Texas Health Science Center at Houston, El Paso Regional Campus, El Paso, TX, 2009-present
- Assistant Professor of Environmental Sciences, School of Public Health, The University of Texas Health Science Center at Houston, El Paso Regional Campus, El Paso, TX, 2001-2009
- Adjunct Faculty in Biology, The University of Texas at El Paso, El Paso, TX, 2004-present
- Adjunct Faculty in Chemistry and Environmental Science & Engineering, The University of Texas at El Paso, El Paso, TX, 2001-present
- Full-time Faculty, Division of Business and Science, Eastern New Mexico University-Roswell, Roswell, NM, 2000-2001
- Postdoctoral Fellow, Kansas State University, Food Animal Health and Management Center, Manhattan, KS, 1997-1998
- Adjunct Faculty, Arizona Department of Corrections & Department of Environmental Science and Emergency Services, Pima Community College, Tucson, AZ, 1996-1997
- Research Assistant, The University of Arizona, Department of Soil, Water and Environmental Science, Tucson, AZ, 1994-1996
- Research Technician, Polar Equipment, Inc., Santa Clara, CA, 1995
- Research Technician, American Water Works Service Company, Inc., St. Louis, MO, 1995
- Research Assistant, The University of Arizona, Department of Soil, Water and Environmental Science, Tucson, AZ, 1993-1994
- Research Assistant, University of South Florida, Department of Environmental and Occupational Health, Tampa, FL, 1992-1993
- Research Assistant, University of South Florida, Department of Community and Family Health, Tampa, FL, 1991-1992

- Winter Intern, Eli Lilly & Company, Department of Infectious Disease Research, Indianapolis, IN, 1990 and 1991

## **FELLOWSHIPS**

- Post-Doctoral Fellowship, Kansas State University, 1997-1998
- American Association for the Advancement of Science, Science and Engineering Fellowship, 1996

## **HONORS AND AWARDS**

- Selected for Who's Who Among Executives and Professionals, 2008-2009 Honors Edition
- Selected to create podcast, MicrobeWorld Radio, American Society for Microbiology (2007)
- Keynote Speaker, Annual Symposium, The Groundwater Foundation (2006)
- American Academy of Microbiology Colloquium, American Society for Microbiology (2006)
- Elected Vice Chair, Public Interest Advisory Forum, American Water Works Association (2006)
- National Drinking Water Advisory Council nominee, United States Environmental Protection Agency (2006)
- Recognition at Faculty Honors Convocation, The University of Texas Health Science Center at Houston (2005)
- National Drinking Water Advisory Council nominee, United States Environmental Protection Agency (2005)
- Outstanding Young Investigator, University of Texas Health Science Center at Houston, (2005)
- Best Paper Award, American Water Works Association, Water Science & Research Division (2005)
- Honors Convocation, The University of Texas Health Science Center at Houston (2005)
- Published International Interview, International Water Association (2005)
- Microbiology Delegation, People to People Ambassador Programs to South Africa (2005)
- Keynote Speaker, The New Mexico Regional Honors Institute (2000)
- Environmental Science & Engineering Fellowship, United States Environmental Protection Agency, American Association for the Advancement of Science (1996)
- Sigma Xi Travel Award (1995)
- The University of Arizona Student Showcase, Second Place (1994)
- Arizona Branch Student Presentation Travel Award, American Society for Microbiology (1994)
- National English Honor Society, Sigma Tau Delta (1991)

## **RESEARCH - Interests**

- Quantitative Microbial Risk Assessment
- Water Quality
- Food Safety

## **RESEARCH - Publications**

### **Submitted Peer-Reviewed Journal Articles (\*student)**

1. Magana-Ordorica, D., M. Soto-Beltran, **K.D. Mena**, B. Valdez, J. Leon-Felix and C. Chaidez. Effect of physicochemical parameters on the presence of *Cryptosporidium* and *Giardia* from marine recreational waters. (Submitted to *Journal of Water and Health*)
2. Sifuentes\*, L.Y., **K.D. Mena** and G.D. Di Giovanni. Host cell capture-quantitative sequence detection of potentially infectious viruses. (Submitted to *Applied & Environmental Microbiology*)
3. Cardenas, V.M., Z.D. Mulla, **K. Mena**, J. Jaime, E. Leyva and J.C. Magana. Risk of west nile virus and use of water from canals for flood irrigation of residential yards: a case-control study in El Paso, Texas, USA. (Submitted to *Journal of the American Mosquito Control Association*)
4. Cardenas, V.M., H.M. El-Zimaity, L.A. Fischbach, Z.Z. Nurgalieva, A.R. Opekun, A. Campos, L. Guerrero, **K.D. Mena** and D.Y. Graham. Risk factors of atrophic gastritis by extent and location of atrophy in a sample of adults in the US-Mexico border. (Submitted to *Gaceta Medica de Mexico*)

**Peer-Reviewed Journal Articles** (\*student, \*\*corresponding, \*\*\*high impact)

1. Cardenas, V., **K.D. Mena**, M. Ortiz, S. Karri, E. Variyam, C. Barton Behravesh, K.F. Snowden, A. Flisser, J.R. Bristol, L.F. Mayberry, Y.R. Ortega, Y. Fukuda, A. Campos and D.Y. Graham. Hyperendemic *H. pylori* and Tapeworm Infections in a US-Mexico Border Population. Accepted by *Public Health Reports*.
2. Travis\*, P.B., K.J. Goodman, K.M. O'Rourke, F.D. Groves, D. Sinha, J.S. Nicholas, J. VanDerslice, D. Lackland and **K.D. Mena**. The association of drinking water quality and sewage disposal with *Helicobacter pylori* incidence in infants: the potential role of water-borne transmission. (Accepted by *Journal of Water and Health*)
3. Flores\*, C., L.C. Mota, C.F. Green, **K.D. Mena**, H.G. Balcazar and S.G. Gibbs. Evaluation of respiratory symptoms and their possible association with residential indoor bioaerosol concentrations and other environmental influences. (Accepted by *Journal of Environmental Health*)
4. Mota\*, A., **K.D. Mena**, M. Soto-Beltran, P.M. Tarwater and C. Chaidez. 2009. Risk assessment of *Giardia* and *Cryptosporidium* in water irrigating fresh produce in Mexico. *Journal of Food Protection* 72(10):2184-2188.
5. **Mena, K.D.** and C.P. Gerba. 2009. Risk assessment of *Pseudomonas aeruginosa* in water. *Reviews in Environmental Contamination and Toxicology* 201:71-115.
6. Corella-Barud, V., **K.D. Mena**\*\* , S.G. Gibbs, P.L. Gurian and A. Barud. 2009. Evaluation of neighborhood treatment systems for potable water supply. *International Journal of Environmental Health Research* 19(1):49-58.
7. **Mena, K.D.** and C.P. Gerba. 2009. Waterborne adenovirus. *Reviews in Environmental Contamination and Toxicology* 198:133-167.
8. Bristow\*, Z., **K.D. Mena**, S.G. Gibbs, P.L. Gurian, Z.M. Mulla and T.L. Byrd. 2008. Risk assessment of heterotrophic plate count (HPC) bacteria in potable water sources. *Texas Public Health Journal* 60(4):9-13.

9. **Mena, K.D.**, L.C. Mota, M.C. Meckes, C.F. Green, W.W. Hurd and S.G. Gibbs. 2008. Quantitative microbial risk assessment of a drinking water-wastewater cross-connection simulation. *Journal of Environmental Engineering & Science* 7:525-530.
10. Carrasco\*, L., **K.D. Mena**, L. Mota, M. Ortiz, J.R. Bristol, L. Mayberry, C.E. Barton, S.G. Gibbs and V.M. Cardenas. 2008. Prevalence of potential domestic fecal contamination along the U.S.-Mexico border. *Letters in Applied Microbiology* 46:682-687.
11. Barton\*, C.E., L.F. Mayberry, J.R. Bristol, V.M. Cardenas, **K.D. Mena**, J. Martínez-Ocaña, A. Flisser and K.F. Snowden. 2008. Population-based binational survey of taeniasis presents unexpected findings on the U.S. side of the Texas-Mexico border. *Annals of Tropical Medicine and Parasitology* 102(4):325-333.
12. **Mena, K.D.** and S.D. Pillai. 2008. Developing quantitative risk-based microbial standards for fresh produce. *Journal of Water and Health* 6(3):359-364.
13. Reynolds\*\*\*, K.A., **K.D. Mena** and C.P. Gerba. 2008. Risk of waterborne illness via drinking water in the United States. *Reviews in Environmental Contamination and Toxicology* 192(4):117-158. (Selected by Institute of Medicine as basis for Global Issues in Water Sanitation and Health Forum on Microbial Threats, 2008)
14. Vela Acosta, M.S., D. Sosa\*, M. Sanderson and **K.D. Mena**. 2007. Population growth: adequate predictor of water demand in south Texas? *Texas Public Health Association Journal* 60(1):8-12.
15. Ortega, Y.R., M.P. Torres and **K.D. Mena**. 2007. Prevalence of *Neospora caninum* in three dairy farms in Georgia and two in Texas. *Veterinary Parasitology* 144(3-4):353-355.
16. Ryu, H., A. Alum, **K.D. Mena** and M. Abbaszadegan. 2007. Assessment of the risk of infection by *Cryptosporidium* and *Giardia* in non-potable reclaimed water. *Water Science and Technology* 55(1-2):283-290.
17. Gurian, P.L., G. Camacho, J-Y. Park, S. Cook and **K.D. Mena**. 2006. Evaluating in home water purification methods for communities in Texas on the border with Mexico. *Rev Panam Salud Publica/Pan American Journal of Public Health* 20(6):403-406.
18. Gibbs, S.G., C.F. Green, P.M. Tarwater, L.C. Mota, **K.D. Mena** and P.V. Scarpino. 2006. Isolation of antibiotic-resistant bacteria from the air plume downwind of a swine confined or concentrated animal feeding operation. *Environmental Health Perspectives* 114(7):1-6.
19. O'Rourke, K.M., M.E. Roddy, D. Williams and **K. Mena**. 2005. Predictors of early postpartum vitamin use among women of Mexican origin: implications for healthcare provider recommendations. *Ethnicity & Disease* 16(1):194-200.
20. Roddy, M.E., K.M. O'Rourke and **K. Mena**. 2005. Factors associated with increased risk for acute unintentional childhood poisoning among children living on the U.S.-Mexico border. *International Quarterly of Community Health Education* 23(4):295-309.

21. Chaidez, C., M. Soto, P. Gortares and **K. Mena**. 2005. Occurrence of *Cryptosporidium* and *Giardia* in irrigation water and its impact on the fresh produce industry. *International Journal of Environmental Health Research* 15(5):339-345.
22. **Mena\*\*\*, K.D.**, C.P. Gerba, C.N. Haas and J.B. Rose. 2003. Risk assessment of waterborne coxsackievirus. *Journal of the American Water Works Association* 95(7):122-131. (Earned Best Paper Award JAWWA 2005)
23. **Mena, K.D.** Microbial waterborne disease: are we at risk? 2002. *Water Conditioning & Purification* 44(4):38-41.
24. **Crabtree, K.D.**, C.P. Gerba, J.B. Rose and C.N. Haas. 1997. Waterborne adenovirus: a risk assessment. *Water Science and Technology* 35:1-6.
25. Gerba, C.P., J.B. Rose, C.N. Haas and **K.D. Crabtree**. 1996. Waterborne rotavirus: a risk assessment. *Water Research* 30:2929-2940.
26. **Crabtree, K.D.**, R.H. Ruskin, S.B. Shaw and J.B. Rose. 1996. The detection of *Cryptosporidium* oocysts and *Giardia* cysts in cistern water in the U.S. Virgin Islands. *Water Research* 30:208-216.

#### Peer-Reviewed Reports

1. Reynolds, K.A. and **K.D. Mena**. 2009. Quantitative Microbial Risk Assessment of Waterborne Disease. In: Global Issues in Water, Sanitation, and Health: Workshop Summary. E.R. Choffnes and A. Mack, Rapporteurs. Forum on Microbial Threats, Board on Global Health, Institute of Medicine, ISBN: 0-309-13873-6. National Academies Press, Washington, DC, pp. 201-222.
2. Di Giovanni, G. and **K.D. Mena**. 2007. Optimization of Host Cell Capture and Quantitative Polymerase Chain Reaction (HCC-qPCR) for the Rapid Detection of Potentially Infectious Viruses in Water, American Water Works Association Research Foundation (AwwaRF), Project Report No. 2992, Denver, CO.

#### Peer-Reviewed Book Chapters and Conference Proceedings

1. Gerba, C.P. and **K.D. Mena**. 2007. Risk assessment of waterborne adenoviruses. In: Proceedings of the 2007 World Congress on Ozone and Ultraviolet Technologies. International Ultraviolet Association, Los Angeles, California.
2. **Mena, K.D.** Waterborne viruses: assessing the risks. 2007. In: Human Viruses in Water, A. Bosch, Ed. Elsevier LTD, London.
3. **Mena, K.D.** 2006. Produce quality and foodborne disease: assessing water's role. In: Microbial Hazard Identification in Fresh Fruits and Vegetables. J.A. James, Ed. John Wiley & Sons, Inc., Hoboken, NJ.
4. **Mena, K.D.** 2006. Risk assessment of parasites in food. In: Foodborne Parasites. Y. Ortega, Ed. Kluwer Academic/Plenum Publishers, New York, NY.
5. **Mena, K.D.**, J.B. Rose and C.P. Gerba. 2004. Addressing food safety issues quantitatively: a risk assessment approach. In: Pre-Harvest and Post-Harvest Food

Safety: Contemporary Issues and Future Directions. R.C. Beier, S.D. Pillai, T.D. Phillips and R.L. Ziprin, Eds. Blackwell Publishing, Ames, IA.

6. **Mena, K.D.** 2002. Environmental exposure to viruses: a human health risk assessment methodology. In: The Encyclopedia of Environmental Microbiology. John Wiley & Sons, Inc., New York, NY.
7. **Crabtree, K.D.**, C.P. Gerba, J.B. Rose and C.N. Haas. 1995. Risk assessment of waterborne rotavirus and coxsackievirus. In: Proceedings of the 1995 Water Quality and Technology Conference. American Water Works Association, New Orleans, LA, pp. 789-807.

#### **Other Conference Proceedings & Published Abstracts**

1. Di Giovanni, G.D., L.Y. Sifuentes and **K.D. Mena**. 2007. Host cell capture quantitative PCR detection of viruses. Proceedings of the American Water Works Association Water Quality Technology Conference, [on CD-ROM]. American Water Works Association, Denver, Colorado.
2. Gurian, P., V. Martinez, **K. Mena**, S. Cook, V. Corella-Barud, A. Barud and J. Graham. 2006. Water supply solutions for peri-urban areas: El Paso-Ciudad Juarez as a laboratory. Abstract to the American Water Works Association Annual Conference and Exposition.
3. Roddy, M., K. O'Rourke and **K. Mena**. 2004. Risk factors associated with increased risk for unintentional childhood poisoning among children living on the U.S./Mexico border. Abstracts of the 37th Annual Meeting of the Society for Epidemiologic Research, Salt Lake City, UT, June 15-18. *American Journal of Epidemiology* 159(11).
4. Roddy, M., K. O'Rourke and **K. Mena**. 2004. Risk factors associated with increased risk for unintentional childhood poisoning among children living on the U.S./Mexico border. Abstracts of the Society for Perinatal and Pediatric Epidemiology. *Journal of the Society for Paediatric and Perinatal Epidemiology*.
5. Goodman, K.J., K. O'Rourke, R.S. Day, C. Wang, **K. Mena**, A. Campos and J.M. de la Rosa. 2003. *Helicobacter pylori* infection rates in the first three years of life: U.S.-Mexico cohort study. *American Journal of Epidemiology* 157(11):S47.
6. **Mena, K.D.**, Editor of Conference Proceedings. 1999. The Road Less Traveled: Understanding & Addressing Groundwater Risks. Proceedings of the 15<sup>th</sup> Annual Groundwater Foundation Fall Symposium. Atlanta, GA.
7. **Mena, K.D.**, C.P. Gerba, C.N. Haas and J.B. Rose. 1999. Waterborne disease: are we at risk? A risk assessment exercise using waterborne coxsackievirus. In: The Road Less Traveled: Understanding & Addressing Groundwater Risks. Proceedings of the 15<sup>th</sup> Annual Groundwater Foundation Fall Symposium. Atlanta, GA, pp. 56-64.
8. Sargeant, J.M., J.R. Gillespie, R.D. Oberst, D.J. Hafer and **K.D. Mena**. 1998. Dynamics of *Escherichia coli* O157:H7 infection in range animals. In: Abstracts of the 79<sup>th</sup> Annual Meeting of the Conference of Research Workers in Animal Diseases. Chicago, IL.

9. Mosier, D.A. and **K.D. Crabtree**. 1998. Infectious waterborne diseases. In: Proceedings of the 60<sup>th</sup> Annual Conference for Veterinarians. College of Veterinary Medicine, Kansas State University, Manhattan, KS.
10. **Crabtree, K.D.**, R.H. Ruskin, S.B. Shaw and J.B. Rose. 1993. The detection of *Cryptosporidium* oocysts and *Giardia* cysts in cistern water in the U.S. Virgin Islands. In: Abstracts of the 93<sup>rd</sup> General Meeting of the American Society for Microbiology. American Society for Microbiology, Atlanta, GA.
11. **Crabtree, K.D.**, R.H. Ruskin, S.B. Shaw and J.B. Rose. 1993. The detection of *Cryptosporidium* oocysts and *Giardia* cysts in cistern water in the U.S. Virgin Islands. In: Proceedings of the 1993 Conference on Water Quality in the Western Hemisphere, Abstract No. 23. San Juan, PR.

### **RESEARCH – Invited Presentations**

1. Risk Assessment Approaches for Food Safety. International Conference on New Horizons in Biotechnology. Trivandrum, India. November 26-29, 2007. (Unable to Attend)
2. Assessment of Microbial Exposures from Water: Appropriate Strategies for Risk-Based Protection of Public Health. International Society of Exposure Analysis Annual Conference. Durham/Research Triangle Park, NC. October 14-18, 2007.
3. Waterborne and Foodborne Disease: Are We At Risk? Our Changing World Lecture Series, The University of Texas at El Paso Center for Lifelong Learning. El Paso, TX. April 2007.
4. Waterborne Pathogens: An Overview of the Threat. The Groundwater Foundation Annual Symposium. **Keynote Speaker**. East Lansing, MI. November 2006.
5. University of Wisconsin-Madison, School of Medicine and Public Health, Department of Population Health Sciences. Madison, WI. February 2006.
6. Foodborne and Waterborne Disease: Are We At Risk? Texas Department of State Health Services El Paso, TX. January 2006.
7. Developing Risk-based Microbial Standards for Irrigation Water. International Society of Exposure Analysis Annual Meeting. Tucson, AZ. October 2005.
8. Healthy Beaches and Microbes: How Quantitative Microbial Risk Assessment Can Assist in the Closure Decision Process. Clean Beaches Council, 2005 Sustainable Beaches Conference. St. Petersburg, FL. October 2005. (Dr. John Lisle, U.S. Geological Survey, presented on my behalf due to scheduling conflict with above presentation).
9. Groundwater Vulnerability: A Public Health Perspective. 20<sup>th</sup> Annual Groundwater Foundation Conference. Washington, D.C. November 2004.
10. Parasitic Foodborne Disease: Assessing the Risks. University of Georgia, Center for Food Safety Food Safety Workshop: Parasites in Meats and Fresh Produce. Griffin, GA. July 2004.
11. Panel of Epidemiological Bi-National Studies of Enteric Infectious Disease in the El Paso Norte Region. United States-Mexico Border Health Association, 62<sup>nd</sup> Annual Meeting. Autonomous University of Ciudad Juarez, Institute of Biomedical Sciences. Ciudad Juarez, Chihuahua, Mexico. June 2004.
12. Public Health on the Border: The Paso del Norte Region. SCERP Watershed Vulnerability Project, Experts Panel Workshop, New Mexico State University. Las Cruces, NM. October 2003.
13. Food Quality and Foodborne Disease: Assessing Water's Role. International Association for Food Protection, 90th Annual Meeting. New Orleans, LA. August 2003.

14. Parasitic Foodborne Disease: Assessing the Risks. University of Georgia, Center for Food Safety Food Safety Workshop: Parasites in Meats and Fresh Produce. Griffin, GA. July 2003.
15. Microbial Waterborne Disease: Are We At Risk? The University of Texas Health Science Center at Houston, School of Public Health, Brownsville Campus. Brownsville, TX. June 2003.
16. Microbial Waterborne Disease: Are We At Risk? Ciclo de Conferencias Sobre Contaminacion del Agua, Universidad Autonoma de Sinaloa. Culiacan, Sinaloa, Mexico. March 2003.
17. HACCP: How Are Consumers Currently Protected? Centro de Investigacion en Alimentacion y Desarrollo, A.C. Fisiologia y Tecnologia Poscosecha de Frutas, Hortalizas y Granos. Culiacan, Sinaloa, Mexico. February 2003.
18. Microbial Waterborne Disease: Are We At Risk? Army & Air Force Exchange Service Grünstadt, Germany. August 2002.
19. Parasitic Foodborne Disease: Are We At Risk? University of Georgia, Center for Food Safety, Parasitic Food Safety Workshop. Griffin, GA. July 2002.
20. Waterborne Disease: Are We At Risk? New Mexico State University, Biology Seminar Series. Las Cruces, NM. March 2002.
21. Environmental Science and Engineering Ph.D. Program, The University of Texas at El Paso. El Paso, TX. October 2001.
22. Waterborne Disease: Are We At Risk? The New Mexico Regional Honors Institute, Dona Ana Branch Community College. Las Cruces, NM. October 2000.
23. Waterborne Disease: Are We At Risk? 15th Annual Groundwater Foundation Fall Symposium. Atlanta, GA. November 1999.
24. Waterborne Disease: Are We At Risk? The National Food Safety and Toxicology Center, Michigan State University. Lansing, MI. December 1998.
25. Detecting *Escherichia coli* O157:H7 Using Cultural and Molecular Methodologies. National Cattlemen's Beef Association, Kansas State University. Manhattan, KS. August 1998.
26. Risk Assessment of Waterborne Coxsackievirus and Rotavirus. American Society for Microbiology, Workshop Faculty. Miami, FL. May 1997.

#### **RESEARCH – Other Presentations**

1. *Helicobacter pylori*, Protozoa, Helminths and Household Hygiene in a Binational Sample of a US-Mexico Border Population. Oral Presentation by V.M. Cardenas. 136<sup>th</sup> APHA Annual Meeting and Exposition, San Diego, CA, October 2008.
2. Cross-sectional Analysis of *Helicobacter pylori* Infection and Growth in a Cohort of Children in the US/Mexico Border. Poster Presentation by V.M. Cardenas. 136<sup>th</sup> APHA Annual Meeting and Exposition, San Diego, CA, October 2008.
3. *Helicobacter pylori*, Protozoa, Helminths and Household Hygiene in a Binational Sample of a US-Mexico Border Population. Poster Presentation by V.M. Cardenas. US-Mexico Forum on Infectious Disease, El Paso, TX, April 2008.
4. Risk Assessment of Waterborne Adenoviruses. Oral Presentation by C.P. Gerba. World Congress on Ozone and Ultraviolet Technologies, International Ultraviolet Association, Los Angeles, CA, August 2007.
5. Evaluation of Respiratory Symptoms and their Possible Association with Residential Indoor Bioaerosol Concentrations and other Environmental Influences. Poster Presentation by C.M. Flores, student. Society for Advancement of Chicanos and Native Americans in Science, Research Exposition 2007, The University of Texas at El Paso. El Paso, TX. April 2007.

6. Prevalence of *Neospora caninum* in Three Dairy Farms in Georgia and Two in Texas. Poster Presentation by Y.R. Ortega. Center for Food Safety Annual Meeting, University of Georgia, Atlanta, GA. February 2007.
7. Bioaerosols: An Introduction and Overview of Some Current Research. Oral Presentation by S.G. Gibbs. Department of Botany and Microbiology Symposium, Faculty of Science, Cairo University. Dokki, Giza, Egypt. November 2006.
8. Bioaerosol Migration from Confined Animal Feeding Operations. Oral Presentation by S.G. Gibbs. Air Pollution Department Symposium. National Research Centre. Dokki, Giza, Egypt. November 2006.
9. Risk Factors Associated with Increased Risk for Unintentional Poisoning Among Children Living on the U.S./Mexico Border. Poster Presentation. Society for Epidemiologic Research, 37<sup>th</sup> Annual Meeting. Salt Lake City, UT. June 2004.
10. Risk Factors Associated with Increased Risk for Unintentional Poisoning Among Children Living on the U.S./Mexico Border. Poster Presentation. Society for Perinatal and Pediatric Epidemiology. Salt Lake City, UT. June 2004.
11. Factors Associated with Acute Unintentional Childhood Poisonings Among Children Living on the U.S.-Mexico Border. Poster Presentation. Center for Border Health Research, Paso del Norte Health Foundation, El Paso, TX. November 2003.
12. Factors Associated with Increased Risk of Poisoning Among Children Living on the U.S./Mexico Border. Poster Presentation. American Public Health Association, 131<sup>st</sup> Annual Meeting. San Francisco, CA. November 2003.
13. *Helicobacter pylori* Infection Rates in the First Three Years of Life: U.S.-Mexico Cohort Study. Presentation. Society for Epidemiologic Research, 36th Annual Meeting. Atlanta, GA. June 2003.
14. Quantitative Risk-based Microbial Standards for Irrigation Water Quality. Poster. Presentation. American Society for Microbiology, 103rd General Meeting. Washington, D.C. May 2003.
15. Evaluation of Models Used in Assessing the Public Health Impact Microorganisms in Water. Seminar Speaker with Dr. Melchor Ortiz. The University of Texas Health Science Center at Houston, School of Public Health, El Paso Campus. El Paso, TX. October 2002.
16. Speaker. The University of Texas Health Science Center at Houston, School of Public Health, El Paso Campus. El Paso, TX. August 2000.
17. Waterborne Adenovirus: A Risk Assessment. Speaker. International Association on Water Quality Health-Related Water Microbiology. Mallorca, Spain. October 1996.
18. Proposed Plan of Analyses of Archived Water Samples: Which Viruses Are Threatening Our Health? Fellowship Presentation. 1996 AAAS/EPA Summer Fellow Presentations, Environmental Science & Engineering Fellowship American Association for the Advancement of Science/United States Environmental Protection Agency. Washington, D.C. August 1996.
19. American Society for Microbiology, 35th Annual Arizona Branch. Tucson, AZ. February 1996.
20. Risk Assessment of Waterborne Rotavirus and Coxsackievirus. Water Quality Technology Conference Enhancing Water Quality: Source to Tap. New Orleans, LA. November 1995.
21. American Society for Microbiology, 33rd Annual Arizona Branch. Tempe, AZ. April 1994.
22. Speaker. Arizona Environmental Studies Conference. Flagstaff, AZ. March 1994.
23. The Detection of *Cryptosporidium* Oocysts and *Giardia* Cysts in Cistern Water in the U.S. Virgin Islands. Poster Presentation. American Society for Microbiology, 93<sup>rd</sup> General Meeting. Atlanta, GA. May 1993.

24. The Detection of *Cryptosporidium* Oocysts and *Giardia* Cysts in Cistern Water in the U.S. Virgin Islands. Conference on Water Quality in the Western Hemisphere. San Juan, PR. April 1993.
25. Speaker. American Society for Microbiology, Florida Branch. Orlando, FL. February 1993.
26. Speaker. Suncoast Biotech Conference. Tampa, FL. October 1992.

## **RESEARCH – Funding**

### **Current Projects**

Principal Investigator, *Quantitative Microbial Risk Model - Astronauts and Microbes: Building a Quantitative Microbial Risk Assessment Framework*, National Aeronautics and Space Administration, (Total cost: \$64,871; Percent effort: 90%), Project period: 03/01/08-09/30/08. RENEWAL PAPERWORK UNDERWAY with start date of 10/01/08 – 09/30/09

### **RESEARCH – Previously Funded Projects**

Principal Investigator, *Quantitative Microbial Risk Model*, National Aeronautics and Space Administration, (Total cost: \$25,542; Percent effort: 36%), Project period: 03/01/07-02/29/08.

Collaborator (Centro de Investigación en Alimentación y Desarrollo A.C., Sinaloa, MX), *Microbial Risk Assessment Using the Source Tracking Methodologies during the Pre- and Post-Harvest of Bell Pepper*, National Council of Science and Technology and National Department of Agriculture, (Total cost: \$70,000; Percent effort: 0% - funds not available for U.S. investigator), Project period: 01/01/06-08/31/07.

Collaborator (Centro de Investigación en Alimentación y Desarrollo A.C., Sinaloa, MX), *Microbial Risk Assessment of the Water from Beaches of the State of Sinaloa Using Microbial Source Tracking Methodologies*, National Council of Science and Technology and National Commission of Water, (Total cost: \$60,000; Percent effort: 0% - funds not available for U.S. investigator), Project period: 01/01/05-08/31/06.

Principal Investigator, *Water Consumption Along the Border: Determining Water Intake and Source Patterns Within a U.S.-Mexico Border Population*, Center for Border Health Research, Paso del Norte Health Foundation, (Total cost: \$73,283; Percent effort: 5%), Project period: 09/01/04-12/31/06.

Principal Investigator, *Optimization of Host Cell Capture and Quantitative Polymerase Chain Reaction (HCC-qPCR) for the Rapid Detection of Potentially Infectious Viruses in Water*, American Water Works Association Research Foundation, (Total cost: \$183,533; Percent effort: 11%), Project period: 02/01/04-02/28/07.

Co-Principal Investigator, *The Paso del Norte Gastro Intestinal Study*, Center for Border Health Research, Paso del Norte Health Foundation, (Total cost: \$75,000; Percent effort: 0% - limited funds for salary support per agency guidelines), Project period: 11/01/03-09/01/04.

Principal Investigator, *Declining Vitamin Use Among Postpartum Mexican-American Women: An Educational Intervention*, March of Dimes, (Total cost: \$215,000; Percent effort: 0% - funds not available for salary support), Project period: 06/01/02-05/31/04.

Co-Principal Investigator, *Project SPLASH in Peri-urban Communities of Ciudad Juarez*, Johnson & Johnson, (Total cost: \$39,997; Percent effort: 0% - funds not available for salary support), Project period: 04/01/03-10/01/03.

Co-Principal Investigator, *Helicobacter pylori Infection in Children on the U.S.-Mexico Border*, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, (Total cost: \$366,839; Percent effort: 10%), Project period: 09/01/02-08/31/04 and 05/01/05-04/30/06.

Principal Investigator, *Childhood Poisonings: A Pilot Study to Determine Factors Associated with Increased Risk Among U.S.-Mexico Border Children*, Center for Border Health Research, Paso del Norte Health Foundation, (Total cost: \$74,999; Percent effort: 7%), Project period: 10/01/01-04/01/03.

### **SERVICE – University of Texas Health Science Center at Houston School of Public Health**

- Member, Infectious Disease Research & Teaching Program Planning Committee (2008)
- Member, Faculty Council Regional Campus Subcommittee (2007)
- Member, Faculty Council (2006-2007)
- Faculty Advisor, Student Governance Organization (2006-2007)
- Foundations Course Unit Leader, Environmental and Occupational Health Division (2006)
- Member, Research Strategic Planning Subcommittee, Environmental and Occupational Health Division (2005)
- Member, Admissions Committee (2005-2007)
- Member, The University of Texas School of Public Health/The University of Texas at El Paso Joint Committee for Cooperative Programs in Public Health (2005-2006)
- Member, Six-Year Review Committee (2005)
- Member, Academic Program Review Subcommittee Chair, Environmental and Occupational Health Division (2005)
- Member, Academic Program Review Committee, Environmental and Occupational Health Division (2004-2006)
- Member, Committee regarding Core Course Objectives, Environmental Sciences Discipline (2003-2004)
- Member, Faculty Affairs Committee (2002-2004)
- Member, Student Research Funds Review Committee (2002-2005)
- Member, Committee on the Joint Environmental Health M.P.H. (2002-2005)
- Member, Educational Enhancement Committee, Environmental Sciences Discipline (2002)
- Member, Interim Curriculum Committee, Environmental Sciences Discipline (2002)
- Member, Environmental Sciences Faculty Search Committees (two) (2001-2002)

### **SERVICE – Local Community**

- Texas Tech University Health Science Center, Paul L. Foster School of Medicine, Society, Community and the Individual (SCI) Curriculum Subcommittee Chairperson for Environmental and Occupational Health, El Paso, Texas (2008 – present)
- Texas Tech University Health Science Center, Paul L. Foster School of Medicine, Planning Committee for Student Immersion Experience, El Paso, Texas (2008 – present)

- Texas Tech University Health Science Center, Paul L. Foster School of Medicine, Society, Community and the Individual (SCI) Curriculum Committee, El Paso, Texas (2008 – present)
- Texas Department of State Health Services, Presentation, El Paso, TX (2006)
- PBS Documentary “Planet H2O” website questionnaire (2005)
- Local radio show regarding research and public health issues, El Paso, TX (2005)
- El Paso Lion’s Club, Presentation, El Paso, TX (2005)
- Delta Delta Delta El Paso Alumnae Chapter President, El Paso, TX (2005-2008)
- Community Advisory Board, Texas Tech University Health Sciences Center, El Paso, TX (2004)
- PBS&J, Consultant regarding environmental health (community) issues, Houston, TX (2003-2006)
- Junior League of El Paso, El Paso, TX (2002-present)
- Environmental Health Coalition, El Paso, TX (2001-present)
- Delta Delta Delta El Paso Alumnae Chapter, El Paso, TX (2001-present)
- El Paso County Commissioners Court, El Paso, TX (2001)
- Unity Center/Reach 2000 Board Member, Roswell, NM (2000-2001)
- Delta Delta Delta Roswell Alumnae Chapter Vice President, Roswell, NM (1999-2001)
- Reach 2000 - Healthier Communities Project, Roswell, NM (1999)
- Las Lianas Auxiliary of Assistance League, Chaves County, NM (1999)
- Department of Health, Public Health Division, Roswell, NM (1999)
- Community Cares, Roswell, NM (1999)
- Border Health Office, Advisory Council, Las Cruces, NM (1999)
- Turning Point Tri-County Partnership, Chaves County, NM (1999)  
Occupational Health Subcommittee Chairperson (1999)
- Assessment and Planning Excellence through Community Partners for Health, Roswell, NM (1999)

## **SERVICE – Academic Community**

### **Grant Review Panels**

- Grant Proposal Reviewer, United States Environmental Protection Agency (2005-present)
- Grant Proposal Reviewer, Pilot Project Research Training Program of the Southwest Center for Occupational Safety and Health (2003-present)
- Grant Proposal Reviewer, National Research Initiative Competitive Grants Program, United States Department of Agriculture (1998-present)

### **Advisory Boards**

- Water Environment Research Foundation, Two Project Subcommittees (2003-present)
- Southwest Center for Environmental Research and Policy, Expert Panel (2003)
- The Groundwater Foundation (1999-present)

### **Editorial Positions**

Editorial Board Member (since 2002): *International Journal of Environmental Health Research*

Manuscript Reviewer: *American Journal of Tropical Medicine and Hygiene, Critical Reviews in Environmental Science and Technology, Environmental Science & Technology, International Journal of Environmental Health Research, Journal of Water and Health, Letters in Applied*

*Microbiology, Water Research, Wilderness and Environmental Medicine, University of Mauritius Research Journal, Journal of Applied Microbiology, Ecological Indicators, Zoonoses and Public Health*

### **Other Review Positions**

- Academic Reviewer, Acorn GLP Consulting (2006)
- Reviewer, John Wiley & Sons, Inc. (2006)
- Curriculum Reviewer, Water Resources Research Center, The University of Arizona (1997)

### **SERVICE – Professional Organizations**

#### **Memberships**

- American Society for Microbiology
- American Water Works Association
- Society for Risk Analysis
- Association of Environmental Engineering and Science Professors
- The Groundwater Foundation
- International Water Association
- International Society of Exposure Analysis

#### **Committees**

- Member, The Groundwater Foundation, Pathogenic Contamination Prevention Committee, Pathogen Project: Pathogens in Drinking Water (2006-present)
- Member, The Groundwater Foundation, Board of Directors (2005-present)
- Member, The Groundwater Foundation, Executive Committee (2004-present)
- Vice Chair, Public Interest Advisory Forum, American Water Works Association (2003-2006; Member, 2003-present)
- Member, Society for Risk Analysis, Food and Water Specialty Group (2003 - present)
- Member, The Groundwater Foundation, Technical Advisory Committee (2000-2005)
- Member, The Groundwater Foundation, Executive Committee (1999)

### **SERVICE – Other**

- National Aeronautics and Space Administration, Johnson Space Center, Houston, TX (2006-present)
- Milwaukee Water Works, Milwaukee, WI (2005-present)
- Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA (2005)
- United States Environmental Protection Agency, Washington, D.C. (2004-present)
- PBS&J, Houston, TX (2003-2006)
- GRAM, Incorporated, Albuquerque, NM (2003-2004)
- Army & Air Force Exchange Service, Grünstadt, Germany (2002-2003)
- Dairy Producers of New Mexico, Roswell, NM (2000-2001)
- Solid Waste Bureau, New Mexico Environment Department, Santa Fe, NM (1999-present)
- The Groundwater Foundation, Proceedings of the 15th Annual Groundwater Foundation Fall Symposium, Lincoln, NE (1999-2000)
- The Clorox Company, Pleasanton, CA (1998)
- EA Engineering, Science, and Technology, Inc., Silver Spring, MD (1996-1997)

## TEACHING/MENTORING

### **The University of Texas Health Science Center at Houston – Graduate Courses**

#### *Courses (Primary Instructor/Co-Instructor)*

- Overview of Environmental Health (PH 2110 ITV, 4 credit hours 2001-2003, 3 credit hours 2005-present) – MPH core course in environmental health sciences; Introduction to the principles of environmental health, 2001-2003 and 2005-2008 (co-instructor)
- Environmental Health Risk Assessment (PH 2498 ITV, 2 credit hours) – Examination of the risk assessment process to address environmental hazards, 2008 (co-instructor)
- Site Visits in Environmental Health (PH 2498 ITV, 2 credit hours) – Exploration of occupational settings that address public health/environmental issues, 2008 (co-instructor)
- Research Proposal Writing (PH 2498, 3 credit hours) – Overview of the fundamentals of writing research proposals, 2008
- Environmental Microbiology (PH 2498, 3 credit hours) – Examination of the interdisciplinary issues related to environmental microbiology with an emphasis on public health, 2007
- Risk Assessment and Environmental Health, (PH 2498, 3 credit hours) – Application of the risk assessment process in addressing public health problems, 2003
- Practicum (PH 9997, varying credit hours) – Hands-on public health experience for students, 2002-2003, 2006
- Individual Study in Environmental Science (PH 2499, varying credit hours) – Hands-on research experience for students (laboratory and paper studies), 2001-present
- Thesis Research (PH 9998, varying credit hours) – 2001-present

#### *Courses (Lecturer)*

- Public Health Microbiology (PH 2280, ITV, 3 credit hours) – Examination of pathogens of public health concern, 2005-present
- Public Health in the Movies (PH 3998, 2 credit hours) – Discussion of public health issues and perspectives presented in the theater, 2005
- Epidemiology Proposal Development (PH 2720, ITV 2004-2007, online 2008, 3 credit hours) – Examination and application of the process of proposal writing, 2004-present
- Recognition of Environmental and Occupational Hazards (PH 2130, ITV, 2 credit hours) – Overview of hazards in the environment, 2008
- Man's Impact on the Environment (PHW 2120 L, online, 3 credit hours) – Overview of environmental health issues, 2008

### **Eastern New Mexico University-Roswell – Undergraduate Courses**

#### *Courses (Primary Instructor)*

- Biology (2 sections/semester, 3 credit hours) – Overview of the fundamentals of biology, 2000-2001
- Biology Laboratory (2 sections/semester, 3 credit hours) – Hands-on weekly experiments related to biology, 2000-2001
- Microbiology (1 section/semester, 3 credit hours) – Discussion of the various types of microorganisms, with an emphasis on their impact on human health; Course designed for nursing students, 2000-2001
- Microbiology Laboratory (1 section/semester, 3 credit hours) – Hands-on weekly experiments related to microbiology; Course designed for nursing students, 2000-2001
- Cell Biology (1 section/semester, 3 credit hours) – Examination of the structure, life cycle, and function of cells, 2000-2001
- Genetics (1 section/semester, 2 credit hours) – Examination of inheritance, 2001

### **Arizona Department of Corrections – Mens' Facility (Pima Community College)**

#### *Courses (Primary Instructor)*

- Environmental Microbiology/Lab – Discussion of the fundamentals of environmental microbiology with an emphasis on water treatment, 1996-1997

### **The University of Arizona – Graduate/Undergraduate Courses**

#### *Courses (Lecturer)*

- Environmental Microbiology – Overview of the principles of environmental microbiology from an agricultural perspective, 1994-1997
- Environmental Biotechnology – Discussion of technology used in agriculture and medicine, 1994-1997
- Watershed Management – Examination of how people and agriculture may influence water, 1994-1997

#### *Courses (Teaching Assistant)*

- Environmental Microbiology Laboratory – Hands-on experiments related to environmental microbiology, 1994

### **STUDENTS – Current**

#### **MPH and MS First/Thesis Advisor**

Hendrik De Heer, MPH student  
Kairav R. Shah, MPH student  
Ulysses J. Urquidi, MPH student

#### **Other MPH and MS Student Committees**

John Alvarez, MPH student  
Elke Cumming, MPH student  
Ramu Gudigantala, MPH student  
Hardik G. Jani, MPH student  
Leslie Platz, MPH student  
Fernando V. Sanchez, MPH student  
Janet Strachan, MPH student  
Angela Thompson, MPH student  
Roberto Trevizo, MPH student

### **STUDENTS – Graduated**

#### **Doctoral Student Dissertation Advisor**

Jacqueline D. Smith, PhD, Revising the National Ambient Air Quality Standards: The Integration of Science and Policy, 2006 graduation

#### **MPH and MS First/Thesis Advisor**

Gina I. Meza, MPH, Utilization and Awareness of Support and Custodial Services Among Older Adults in El Paso, Texas, 2003 graduation

Sylvia F. Sustersick, MPH, Acculturation and Poisoning Risk in Low-Income Households in a U.S. - Mexico Border Population, 2003 graduation

Celina Beltran, MPH, Water Quality Indices in a U.S.-Mexico Border Community: Implications for a Human Health Risk Assessment, 2004 graduation

Zuzanne G. Martinez, MPH, Risk Assessment of Heterotrophic Plate Count (HPC) Bacteria in Potable Water Sources, 2004 graduation

Ariana V. Arciero, MPH, The Importance of Dietary Folate: An Analysis of Dietary Folic Acid Intake Among Mexico-Born Versus U.S.-Born Women, 2005 graduation

Yolanda L. Posada, MPH, Prevalence, Predictors and Health Consequences of Food Insecurity and Hunger in Migrant and Seasonal Farm Workers in the Paso Del Norte Border Region, 2005 graduation

Arthur Alvarado, MPH, Health Beliefs of Foodservice Workers and Adherence to Food Safety Regulations to Prevent Foodborne Illness, 2006 graduation

Laura Y. Sifuentes, MPH, Evaluating Methodologies for Detection and Enumeration of Enteric Viruses and *Cryptosporidium parvum*, 2007 graduation

Kelcey D. Anderson, MPH, Drinking Water Quality Perception Along the U.S.-Mexico Border, 2007 graduation

Carissa M. Flores, MPH, Evaluation of Residential Bioaerosol Concentrations and their Related Health Effects, 2007 graduation

Flor A. Puentes, MPH, *Helicobacter pylori* Infection and the Effect On Growth in a Cohort of Children in the US/Mexico Border, 2008 graduation

#### **Other MPH and MS Student Committees**

Yvonne Vasquez, MPH, Antibiotic Susceptibility Patterns of Urinary Tract Pathogens in El Paso, Texas, 2002 graduation

Salina M. Torres, MPH, Do Research Subjects Who Provide Stool Samples for Stool Antigen Testing Differ from those Who Do Not on *Helicobacter pylori* Risk Factors?, 2003 graduation

Valerie Cortez, MPH, Antimicrobial Resistance Patterns of Systemic Pathogens in a Public and Private Hospital in Ciudad Juarez, Mexico, 2005 graduation

Enedina Sosa, MPH (Brownsville), Water Usage Trends and Future Water Planning Strategies in Region M, 2006 graduation

#### **STUDENTS – Graduated (Other Institutions)**

Joseph D. Carreon, MS, Risk of Infection by *Campylobacter*, *Salmonella*, and Norwalk Virus: A Novel Application of Quantitative Microbial Risk Assessment, 2003 graduation, Department of Epidemiology and Biostatistics, The University of Arizona

Alain Mota, MS, Risk Assessment of *Giardia* and *Cryptosporidium* in Irrigation Water from the Culiacan River, 2004 graduation, Interdisciplinary Studies, University of Texas – El Paso