

April 21, 2004

CURRICULUM VITAE

JOSHUA RICHARD HAYES

EDUCATION

Doctorate of Philosophy, Department of Cell Biology and Molecular Genetics,
University of Maryland, 2004
Bachelor of Science, Medical Technology: Georgia State University, Atlanta, GA, 1995-1997
Bachelor of Science, Applied Biology: Georgia Institute of Technology, Atlanta, GA, 1991-1995

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society for Microbiology, 1995-present
American Society of Clinical Laboratory Pathologists, 1995-present

TEACHING AND ACADEMIC WORK EXPERIENCE

Teaching Assistant, Introduction to Microbiology Laboratory, Department of Cell Biology and Molecular Genetics, University of Maryland, 1997 - 1998
Laboratory Coordinator, Pathogenic Microbiology Laboratory, Department of Cell Biology and Molecular Genetics, University of Maryland, 1999
Student Intern, Joint Institute for Food Safety and Applied Nutrition (JIFSAN), 1999 - 2000
Research Assistant, Department of Cell Biology and Molecular Genetics, University of Maryland (with Dr. S.W. Joseph), 1998-2001
Teaching Assistant, Pathogenic Microbiology Laboratory, Department of Cell Biology and Molecular Genetics, University of Maryland, 2000, 2001
Contract Microbiologist, U.S. Food and Drug Administration, Center for Veterinary Medicine, Laurel, MD, 2000, 2001
Oak Ridge Associated Universities Fellow, Center for Veterinary Medicine, U. S. Food and Drug Administration, Laurel, MD, 2001-present.
Co-Instructor, NARMS FoodNet Training Course, Center for Veterinary Medicine, U. S. Food and Drug Administration, 2002.

HONORS AND AWARDS

Summer Support Award, Department of Cell Biology and Molecular Genetics, University of Maryland, Summer 1999, 2000
College Travel Award to 101st American Society for Microbiology General Meeting, University of Maryland, 2001
Corporate Partner Student Travel Grant Award to 102nd American Society for Microbiology General Meeting, American Society for Microbiology, 2002
Best Poster Presentation, Washington, DC Branch Meeting of the American Society for Microbiology, American Society for Microbiology, 2002

PUBLICATIONS

1. **Hayes, J.R.**, L.E. Carr, E.T. Mallinson, L.W. Douglass, and S.W. Joseph. 2000. Characterization of the Contribution of Water Activity and Moisture Content to Population Distribution of *Salmonella* spp. in Commercial Poultry Houses. *Poultry Science*. 79:1557-1561.
2. **Hayes, J.R.**, A.C. McIntosh, S. Qaiyumi, J.A. Johnson, L.L. English, L.E. Carr, D.D. Wagner, and S.W. Joseph. 2001. High-Frequency Recovery of Quinupristin-Dalfopristin-Resistant *Enterococcus faecium* Isolates from the Poultry Production Environment. *Journal of Clinical Microbiology*. 39:2298-2299.

3. Joseph, S.W., **J.R. Hayes**, L.L. English, L.E. Carr, and D.D. Wagner. 2001. Implications of Multiple Antimicrobial Resistant Enterococci Associated with the Poultry Environment. *Food Additives and Contaminants*. 18:1118-1123.
4. Simjee, S., D.G. White, P.F. McDermott, D.D. Wagner, M.J. Zervos, S.M. Donabedian, L.L. English, **J.R. Hayes**, and R.D. Walker. 2002. Characterization of Tn1546 in Vancomycin-Resistant *Enterococcus faecium* Isolated from Canine Urinary Tract Infections: Evidence of Gene Exchange between Human and Animal Enterococci. *Journal of Clinical Microbiology*. 40:4659-4665.
5. Simjee, S., D.G. White, J. Meng, D.D. Wagner, S. Qaiyumi, S. Zhao, **J.R. Hayes**, P.F. McDermott. 2002. Prevalence of Streptogramin Resistance Genes among *Enterococcus* Isolates Recovered from Retail Meats in the Greater Washington DC area. *Journal of Antimicrobial Chemotherapy*. 50:877-882.
6. **Hayes, J.R.**, L.L. English, P.J. Carter, T.A. Proescholdt, K.Y. Lee, D.D. Wagner, and D.G. White. 2003. Prevalence and Antimicrobial Resistance of *Enterococcus* Species Isolated from Retail Meats. *Applied Environmental Microbiology*. 69:7153-7160.

POSTER PRESENTATIONS

1. **Hayes, J.R.**, L.E. Carr, E.T. Mallinson, R.A. Morales, and S.W. Joseph. 1999. Determination of the Effect of Water Activity on the Recovery of *Salmonella* spp. in Commercial Poultry Houses. 20th Southern Poultry Science Society Annual Meeting, Atlanta, GA. *Poultry Science* 78 (Supplement 1) P. 9
2. **Hayes, J.R.**, D.D. Wagner, L.L. English, L.E. Carr, S.W. Joseph. 2000. Detection of Multiresistant Enterococci in the Poultry Environment. Abstract 8. 21st Southern Poultry Science Society Annual Meeting, Atlanta, GA, P. 3.
3. English, L.L., **J.R. Hayes**, D.G. White, S.W. Joseph, L.E. Carr and D. D. Wagner. 2000. Antibiotic Susceptibility Profiles of *Enterococcus* Isolates from the Poultry Production Environment. Abstract J16, 2000 FDA Science Forum – FDA and the Science of Safety: New Perspectives, Washington, DC, P. 73.
4. Simjee S., D.G. White, P.F. McDermott, D.D. Wagner, **J.R. Hayes**, and J. Meng. 2000. Prevalence of Streptogramin Resistance Genes among *Enterococcus faecium* Isolates Recovered from Retail Meats in the Greater Washington DC Area. Abstract D15, 1st International Symposium Resistant Gram-Positive Infections, San Antonio, TX.
5. **Hayes, J.R.**, D.D. Wagner, L.L. English, L.E. Carr, and S.W. Joseph. 2001. Antimicrobial Resistance Profiling of *Enterococcus faecium* from Commercial Poultry Production Environments. Abstract Z-47, 101st ASM General Meeting, Orlando, FL, P. 748.
6. Wagner, D.D., **J.R. Hayes**, and J. Meng. 2001. Antibiotic Resistance Profiles of *Enterococcus* spp. Isolated from Retail Meat. Abstract A-72, 101st ASM General Meeting, Orlando, FL, P. 18.
7. Simjee, S., D.G. White, P.F. McDermott, D.D. Wagner, **J.R. Hayes**, M.J. Zervos, S.M. Donabedian, L.L. English, and R.D. Walker. 2002. Characterization of a High-Level Vancomycin Resistance Transposon Tn1546 from a Canine *Enterococcus faecium* isolate from Michigan Indistinguishable from Tn1546 Commonly Isolated from Human VRE Infections in the USA. Abstract V12, 2002 FDA Science Forum – Building a Multidisciplinary Foundation, Washington, DC, P. 129.
8. **Hayes, J.R.**, S.D. McDermott, R. Reimschuessel, and D.D. Wagner. 2002. Antimicrobial Resistance Profiling of *Enterococcus* spp. from Retail Fish Filets in the Metropolitan Washington, D.C. Area. Abstract B1, 2002 FDA Science Forum – Building a Multidisciplinary Foundation, Washington, DC, P. 43.
9. **Hayes, J.R.**, L.L. English, P.J. Carter, T. Proescholdt, D.D. Wagner, and D.G. White. 2002. Prevalence and Antimicrobial Susceptibility Patterns of *Enterococcus* spp. Isolated from Retail Meats. Abstract P83, 102nd ASM General Meeting, Salt Lake City, UT, P. 377.
10. Wagner, D.D., **J.R. Hayes**, and K. Pierce. 2002. Prevalence and Antibiotic Resistance Profiles of *Enterococcus* spp. Isolated from Animal Feed Commodities. Abstract A25, 102nd ASM General Meeting, Salt Lake City, UT, P. 5.

11. Simjee, S., D.G. White, P.F. McDermott, D.D. Wagner, **J.R. Hayes**, M. Zervos, S. Donabedian, L. English, and R.D. Walker. 2002. Possible Transfer of the High-Level Vancomycin Resistance Transposon (Tn1546) from a Human to a Canine Enterococcal Isolate. Abstract Z40, 102nd ASM General Meeting, Salt Lake City, UT, P. 514.
12. **Hayes, J.R.**, L.L. English, P.J. Carter, T. Proescholdt, D.D. Wagner, and D.G. White. 2002. Prevalence and Quinupristin-Dalfopristin Susceptibility Profiling of *Enterococcus faecium* Isolated from Retail Meats. Abstract P22, 2002 Conference on Antimicrobial Resistance, Bethesda, MD, P. 46.
13. **Hayes, J.R.**, L.L. English, P.J. Carter, T. Proescholdt, D.D. Wagner, and D.G. White. 2003. Prevalence of High-level Aminoglycoside Resistance among *Enterococcus* spp. Isolated from Retail Meats. Abstract P21, 2003 Conference on Antimicrobial Resistance, Bethesda, MD, P. 43.
14. **Hayes, J.R.**, D.D. Wagner, L.L. English, L.E. Carr, and S.W. Joseph. 2003. Relative Absence of Known Streptogramin Resistance Determinants among *Enterococcus faecium* from U.S. Poultry Production Environment. Abstract C2-84, 43rd ICAAC, Chicago, IL, P. 115.
15. **Hayes, J.R.**, D.D. Wagner, L.L. English, L.E. Carr, and S.W. Joseph. 2003. Relative Absence of Known Streptogramin Resistance Determinants among *Enterococcus faecium* from U.S. Poultry Production Environment. Abstract M21.1, 2003 Annual Meeting of the Society for Risk Analysis, Baltimore, MD, P. 75.

PRESENTATIONS

1. **Hayes, J.R.**, L.E. Carr, E.T. Mallinson, R.A. Morales, and S.W. Joseph. Determination of the effect of water activity on the recovery of *Salmonella* spp. in commercial poultry houses. 20th Southern Poultry Science Society Annual Meeting, Atlanta, GA, January 1999.
2. **Hayes, J.R.**, D.D. Wagner, L.L. English, L.E. Carr, S.W. Joseph. Detection of multiresistant enterococci in the poultry environment. 21st Southern Poultry Science Society Annual Meeting, Atlanta, GA, January 2000.
3. Joseph, S.W., **J.R. Hayes**, L.E. Carr, L.L. English, D.D. Wagner. Association of multiple drug resistant enterococci with poultry. Risk Assessment and Communication for Food Safety, Central Science Laboratory, York, UK, June 2000.
4. **Hayes, J.R.** Overview of "Surveillance of poultry and other stock for carriage of multiresistant *Enterococcus*". JIFSAN Advisory Council, University of Maryland University College, College Park, MD, February 2002.
5. Carr, L.E. and **J.R. Hayes**. "Examination of Antibiotic Resistant *Enterococcus* spp. from the Mid-Atlantic Poultry Production Environment". JIFSAN/CFSAN Staff College Seminar, CFSAN, College Park, MD, June 2002.