

Curriculum Vitae - 2003
James Martin Barbaree, Ph.D.
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Education

Ph.D., Bacteriology; **M.S.**, Microbiology; **B.S.**, Zoology

Current University Position

Chair, Full Professor (Microbiology), Biological Sciences Dept., College of Sciences and Mathematics, Assoc. Dir. for Auburn University Detection and Food Safety Center, and Adjunct Professor, Pathobiology Dept., College of Veterinary Medicine, Auburn University, Auburn, Alabama

Current Responsibilities

Administer duties of the Chair of the Biological Sciences Dept.
Administer and participate as Associate Director, Center for Detection and Food Safety
Teaching: Clinical and Pathogenic Microbiology, General Microbiology, Thesis/Dissertation Research, & Special Problems in Microbiology
Research: Primary focus on development of a microchip for detection of pathogens
Committees: Various departmental and university committees

Courses Taught During Career

Bacterial Physiology, Biochemistry, Biological Science, Cell Biology, Clinical & Pathogenic Microbiology, Food Microbiology, General Biology, General Microbiology, Environmental and Applied Microbiology, Microbiology for Engineers, Microbiology for Nurses, Microbiological Methods, Physical Science, Thesis, Dissertation, & Special Problems Research

Workshops Given

- ? *Legionella*/Legionnaires=Disease Outbreaks
- ? Polymerase Chain Reaction (PCR) & Pulsed-Field-Gel-Electrophoresis (PFGE)
- ? Handling Pathogens in a Laboratory
- ? Freeze-drying Biological Reagents and Cultures

Management Experience

- ? Balanced the budget for the Dept. of Biological Sciences
- ? Currently chairperson for the Biological Sciences Department (36 faculty plus staff) & Assoc. Director for the Detection and Food Safety Center, Auburn University
- ? Held supervisory positions at the Centers for Disease Control and Prevention (CDC) for 20 years; left with voluntary early military retirement as Scientist-Director grade 06 (equivalent to Army full colonel rank) in the U.S. Public Health Service
- \$ Supervised CDC departments with >12 employees with ranks up through Ph.D.
- ? Former president of the Southeastern Branch of the American Society for Microbiology (SEB-ASM)
- ? Organized and chaired 1 international and 3 domestic scientific meetings, chaired award committees and presented various scientific awards
- ? Completed 10 training courses in management

Additional Professional Experience

- ? Chair of Search committee (4 times) for hiring faculty in department
- ? Expert witness in cases resulting in >\$60 million settlements (*Legionella*/Legionnaires=Disease, *Escherichia coli* O157:H7, *Shigella*, and other Clinical Microbiology related litigation)
- ? Chaired Food Safety Symposium
- ? Manager of Microbiology portion of an international vaccine study
- ? Manager of proficiency testing program in Microbiology and Immunology to test clinical laboratories on proficiency in Clinical Microbiology
- ? Branch chief of Cryobiology preservation laboratory for biologics
- ? Manager of laboratory for epidemic investigations
- ? Researcher in classical and molecular techniques
- ? American Society for Microbiology Foundation Lecturer (1989-1990)
- ? World Health Organization Consultant to China (1985)
- ? Reviewer of grant proposals (EPA/NSF & VA)
- ? Invited international lecturer (France, Canada, China, Australia, and New Zealand)
- ? Consultant to industry
- ? Panel member for formulating parameters for use of pyrolysis mass spectrophotometry to detect pathogens released in biological warfare
- ? CDC liaison to Virgin Islands for assistance to the Commissioner of Health concerning the risks for Legionnaires=Disease due to cooling towers on St. Thomas island (1990)
- ? Guest lecturer to other universities and civic groups
- ? Vice chair of pastor-staff relations committee at Sardis Methodist Church (current)

Chronologic Work History

Employer/Dates	Title/Duties
Auburn University	Visiting Asst Prof. 1991-1992, Assoc. Prof. 1992 - 1999, Full Prof. 1999-2002; teaching, advising and research; Chair, Dept. Biol. Sciences, 2002 to date
Centers for Disease Control & Prevention (CDC) (1985 to Oct., '91) Atlanta, Ga.	Chief, Respiratory Diseases Epidemic Investigations Laboratory (Capt./06 rank, US Public Health Service Commissioned Corps) Duties/Appointments: -Management of laboratory for legionellosis and pertussis epidemic investigations and research -Research on molecular and classical microbiologic techniques for rapid antigen detection, bacterial isolation and identification, disinfection and serologic procedures -Interaction with epidemiologists and outside personnel on clinical and environmental issues -Preclinical and clinical pertussis vaccine trial studies -Adjunct Professor, Georgia Tech -Part-time Instructor, DeKalb College
CDC (1982-1985)	Title: Chief, Environmental Control Laboratory, Field Investigations Laboratory Sect., Div. of Bacterial Diseases Section, (Cmdr./05, USPHS); responsible mainly for research on <i>Legionella</i> and laboratory support of legionellosis epidemic investigations.
CDC (1975-1982)	Chief, Product Services Branch, Biologic Products Division (Cmdr./05 in USPHS); responsible primarily for cryobiology research and preservation of biologic products at the CDC
CDC (1971-1975)	Asst. Chief, Proficiency Testing Section, Licensure and Proficiency Testing Division (Lt. Cmdr./04, USPHS); responsible for planning and preparing of Microbiology and Immunology Proficiency Testing samples and evaluating results from clinical laboratories.
University of West Florida, Pensacola, Florida (1969-1971)	Assistant Professor, taught Biochemistry, Cell Biology, and General Microbiology; Consultant to Pen Bay Labs; Clinical Microbiologist at Sacred Heart Hospital summers
Employer/Dates	Title/Duties

United States Army, Medical Service Corps, Ft. Bliss, Texas (1967-1969)	Chief of Clinical Microbiology and Immunology Laboratory, William Beaumont General Hospital (03-Army Captain)
University of Texas, El Paso, Texas (1968)	Lecturer (part-time); taught Microbiology for Engineers
University of Georgia, Athens, Georgia (1964-1967)	Teaching Assistant; taught General Bacteriology Laboratories
University of Southern Mississippi, Hattiesburg, Mississippi (1963-1964)	Instructor; taught General Biology, Zoology, and Bacteriology
University of Southern Mississippi, Hattiesburg Mississippi (1963)	Teaching Assistant; taught Biology and Bacteriology Laboratories
Mississippi Game and Fish Commission (1962)	Biologist Assistant; sampled rivers and lakes for assessment of of pollution

Awards/Honors

P. R. Edwards Award (presented by the Southeastern Branch of the American Society for Microbiology) for achievements and contributions in Microbiology (1999)

Co-principal Investigator on research project chosen as one of the pinnacles of excellence for AU (1999)

Distinguished Alumni Lecturer at the University of Georgia Microbiology Department (1996)

ASM Recognition of Service for service on the ASM National Branch Organizations Committee (1995)

J.C. Feeley Award given by the American Society for Microbiology-Southeastern Branch (ASM-SEB) for outstanding service and accomplishments in Environmental Microbiology and Occupational Health (1993)

United States Public Health Service (USPHS) Unit Citation Award at the CDC (1991)

CDC Don Mackel Memorial Award for best combination laboratory-epidemic paper at the annual CDC Epidemic Intelligence Service conference (1990)

USPHS Commissioned Corps Outstanding Service Medal (1989)

CDC Don Mackel Memorial Award (1988- received the award twice)

Outstanding Leadership Plaque for term as President of the ASM-SEB (1985-1986)

USPHS Special Achievement Group Award at the CDC (1978)

USPHS Commendation Medal at the CDC (1978)

Personal Description

Birth date: 6/23/40; U.S. Citizenship; Description: 6' 2" tall, 230 lbs.; wife, 2 sons, and a daughter

Educational Background

Ph.D. (Bacteriology, 1967) - Emphasis in Bacterial Physiology, U. of Georgia, Athens, Georgia;
Dr. W.J. Payne - Mentor

M.S. (Microbiology, 1964) - Minor in Zoology, U. of Southern Mississippi, Hattiesburg, Miss.,
Dr. B.Q. Ward - Mentor

B.S. (Zoology, 1963) - minor in Microbiology, U. of Southern Mississippi, Hattiesburg, Miss.,

Professional Societies

American Society for Microbiology (ASM)

ASM Southeastern Branch (SEB)

Sigma Xi

Alabama Academy of Science

American Association of University Professors

Military Officer's Association of America

University Committee Memberships

AU Patent Committee (2000 to date)

AU Patent Policy Committee (2000-2001 – Committee completed manual/guidelines and submitted document to the VPR for use at AU)

COSAM Planning and Assessment Committee (2000)

AU Medical Clinic Committee (1993-1996)

Various departmental committees (1992-2002)

AU Biosafety Committee (1993-1995)

Graduate Student Committees – currently serving on 7 committees

Other Committee Memberships and Offices

Branch Councilor for SEB-ASM (1995-1998)

American Society for Microbiology (ASM) Branch Organizations Committee (1987-1995)

Alternate Branch Councilor SEB-ASM (1992-1994)

Chairman, SEB-ASM Nominating Committee (1992)
 Chairman, International Meeting on *Legionella*
 National Committee for Clinical Laboratory Standards (NCCLS):
 Delegate for the Centers for Disease Control (1986 to 1990)
 Subcommittee member for standards regarding volumetric measurements (1980-1985)
 Subcommittee member for standards regarding Transportation of Clinical Specimens
 (1977-1978)
 President, SEB-ASM (1985-1986)
 CDC Liaison to the Environmental Protection Agency Drinking Water Subcommittee, Toxic
 Substances, Science Advisory Board (1986)
 Chairman, ASM-SEB P.R. Edwards Award Committee (1975, 1986)
 Chairman, SEB-ASM E.O. King Award Committee (1980-1982, 1984)
 Vice-chairman for Local Arrangements of ASM Meeting in Atlanta (1982)
 SEB-ASM Policy Committee (1978)
 Program Advisory Committee for 2nd International Symposium on *Legionella* (1985)

Scholarships and Fellowships

University of Georgia graduate teaching assistantship (1964-1967)
 ASM President's Fellowship (1965)
 University of Southern Mississippi (USM) football scholarship (3-year letterman) (1958-1962)
 (1958 & 1962 teams were number 1 small college championship teams - then Miss.
 Southern College & became USM in 1963)
 USM graduate teaching assistantship (1963)

Postgraduate Professional Training Courses

The Seven Habits of Effective People
 Leadership Fundamentals
 Principles and Practices of Supervision, Part I
 Principles and Practices of Supervision, Part II
 Contracts Course for Program Officials
 Supervisory Skills Seminar
 Successful Middle Management Seminar
 Contemporary Issues in Public Health Management
 Dealing with Problem Employees
 Workshop on Sexual Harassment
 Laboratory Methods in Medical Parasitology - Intestinal
 Parasites
 Laboratory Methods in Medical Parasitology - Blood Parasites
 Laboratory Methods in Medical Mycobacteriology
 Applications of Polymerase Chain Reaction Technology
 Computer Fundamentals
 Usage of the Computer
 Statistics I
 Statistics II
 Epidemic Intelligence Service Course

Lifestyle Seminar
 Leak Detection
 Evaporative Methods
 Freeze-drying
 BASIC Language
 I/O Systems
 Medical Devices - Good Manufacturing Practices

Publications

Olsen, E., S. Pathirana, T. Samoylova, **J.M. Barbaree**, B. Chin, W.C. Neely, and V. Vodyanoy. 2003. Specific and selective biosensors for *Salmonella* and their detection in the environment. J. Microbiol. Methods, *In Press*.

Cernosek, R.W., B.A. Chin, **J.M. Barbaree**, V. Vodyanoy, D.E. Conner, and Y-H.P. Hsieh. 2001. A rapid biosensing system for detecting food-borne pathogens. *Sensors Expo*, pp. 113-116.

Yan, W., V. Vodyanoy, **J.M. Barbaree**, C.A. Bailey, B. Fiebor, and B.A. Chin. 2002. A reusable and high performance biosensor for *Salmonella typhimurium*. *Proc. IEEE*, 2781. (Published proceedings)

Wilder, T.D., **J.M. Barbaree**, K.S. Macklen, and R.A. Norton. 2000. Differences in the pathogenicity of various bacterial isolates used in an induction model for gangrenous dermatitis. *Avian Dis. Journal*.

Pathirana, S.T., **J. Barbaree**, B.A. Chin, M.G. Hartwell, W.C. Neely, and V. Voeyanoy. 2000. Rapid and sensitive biosensor for *Salmonella*. *Biosensors and Bioelectronics* **15**:135-141.

Kerr, J.G., S.E. Maslanka, C.L. Hatheway, G. Williams, **J.M. Barbaree**, L.A. Carson, J.M. Miller and B. Swaminathan. 1999. Molecular subtyping of *Clostridium perfringens* using pulsed-field gel electrophoresis. *J. Clin. Microbiol.* **37**:2209-2214.

Meitz, A.K., **J.M. Barbaree**, R.F. Breiman, R.A. Charles, J.D. Millar, B.G. Shelton, L.S. Staples, and L.E. Witherell. 1998. *Legionellosis Position Statement and Position Paper*. American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE), Atlanta, Georgia.

Bader, J.A., P.H. Klesius, **J.M. Barbaree**, M.A. Connolly, and C.A. Shoemaker. Genomic subtyping of *Edwardsiella ictaluri* isolated from diseased channel catfish by arbitrarily primed polymerase chain reaction. 1998. *J. Aquatic Animal Health* **10**:22-27.

Oyarzabal, O.A., I.V. Wesley, **J.M. Barbaree**, L.H. Lauerman, and D.E. Conner. 1997. Specific detection of *Campylobacter lari* by PCR. *J. Microbiol. Methods* **29**:97-102.

Oyarzabal, O.A., I.V. Wesley, K. Harmon, L. Schroeder-Tucker, **J.M. Barbaree**, L.H. Lauerman, S. Backert, and D.E. Conner. 1997. Specific identification of *Campylobacter fetus* by PCR targeting variable regions of the 16S rRNA. *J. of Vet. Microbiology* **58**:61-71.

- Oyarzabal, O.A., I.V. Wesley, **J.M. Barbaree**, L.H. Lauerman, and D.E. Conner. 1997. Specific detection of *Campylobacter lari* by PCR. *J. Microbiol. Methods* **29**:97-102.
- Oyarzabal, O.A., J. Shireman, D.E. Conner, **J.M. Barbaree**, S. Berkert, and I.V. Wesley. 1997. Genomic variation of *Arcobacter skirrowii* determined by pulsed-field-gel electrophoresis. *J. Ala. Acad. Sci.* **68**:145.
- Kerr, J.G., **J.M. Barbaree**, and A.E. Smith. 1997. Use of PCR to detect *Escherichia coli* O157:H7 and enterohemorrhagic *E. coli* in bovine feces. *J. Ala. Acad. Sci.* **68**:150.
- Oyarzabal, O.A., D.E. Conner, **J.M. Barbaree**, and I.V. Wesley. 1997. Specific identification of the human and veterinary pathogen *Campylobacter fetus* by DNA amplification. *Highlights of Alabama Agriculture Research* **44**:5.
- Freije, M.R. 1996. **J. Barbaree** (ed.). *Legionella Control in Health Care Facilities*. HR Information Resources, Indianapolis, Indiana. (Book)
- Tyndall, R.L., E.S. Lehman, E.K. Bowman, D.K. Milton, and **J.M. Barbaree**. 1995. Home humidifiers as a potential source of exposure to microbial pathogens, endotoxins, and allergens. *Indoor Air* **5**:171-177.
- Fields, B.S., **J.M. Barbaree**, W.T. Martin, W.E. Morrill, and G.N. Sanden. 1994. *Procedures for the Recovery of Legionella from the Environment*. U.S. Dept. Health and Human Services, CDC publication, Atlanta, Georgia. (Lab Manual)
- Cassiday, P.K., G.N. Sanden, C.T. Kane, S. M-Boupp, and **J.M. Barbaree**. 1994. Viability of *Bordetella pertussis* in four suspending solutions at three temperatures. *J. Clin. Microbiol.* **32**:1550-1553.
- Barbaree, J.M.**, R.F. Breiman, and A.P. Dufour (eds.). 1993. *Legionella, Current Status and Emerging Perspectives*. ASM, Washington, D.C. (Book)
- Barbaree, J.M.** 1993. Selecting a subtyping technique for use in investigations of legionellosis epidemics. *In Legionella, Current Status and Emerging Perspectives*, pp. 169-172. ASM, Washington, D.C.
- Breiman, R.F. and **J.M. Barbaree**. 1993. Ten years of progress in *Legionella* research: Summary of the fourth international symposium on *Legionella*, pp. 301-302. *In Legionella, Current Status and Emerging Perspectives*, ASM, Washington, D.C.
- Marston, B.J., J.F. Plouffe, R.F. Breiman, T.M. File, R.F. Benson, M. Moyenudden, W.L. Thacker, K. Wong, S. Skelton, B. Hackman, S.J. Salstrom, **J.M. Barbaree**, and the Community-based Pneumonia Study Group. 1993. Preliminary findings of a community-based pneumonia incidence study. *In Legionella, Current Status and Emerging Perspectives*, pp. 36-37. ASM, Washington, D.C.

Mamolen, M., R.F. Breiman, **J.M. Barbaree**, R.A. Gunn, K.M. Stone, J.S. Spika, D.T. Dennis, S.H. Mao, and R.L. Vogt. 1993. Use of multiple molecular subtyping techniques to investigate a Legionnaires' Disease outbreak due to identical strains at two tourist lodges. *J. Clin. Microbiol.* **31**:2584-2588.

Sanden, G.N., P.K. Cassiday, and **J.M. Barbaree**. 1993. Rapid immunodot technique for identifying *Bordetella pertussis*. *J. Clin. Microbiol.* **31**:170-172.

Mahoney, F.J., C.W. Hoge, T.A. Farley, **J.M. Barbaree**, R.F. Breiman, R.F. Benson, and L.M. McFarland. 1992. Community wide outbreak of Legionnaires' disease associated with a grocery store mist machine. *J. Infect. Dis.* **165**:736-739.

Sanden, G.N., W.E. Morrill, B.S. Fields, R.F. Breiman, and **J.M. Barbaree**. 1992. Incubation of water samples containing amoebae improves detection of legionellae by the culture method. *Appl. Environ. Microbiol.* **58**:2001-2004.

Sanden, G.N., B.S. Fields, **J.M. Barbaree**, W.E. Morrill, and J.C. Feeley. 1992. Bactericidal activities of tri- and penta-iodinated resins against *Legionella pneumophila*. *Wat. Res.* **26**:365-370.

Barbaree, J.M. 1991. Legionnaires' disease: Factors affecting the transmission of *Legionella* species from aerosol-emitting equipment to people. *ASHRAE Journal* **33**:38-42.

CDC publication. 1990. Legionnaires' disease outbreak associated with a grocery store mist machine - Louisiana, 1989. *MMWR* **39**: 108-110.

Fields, B.S., T.A. Nerad, T.K. Sawyer, C.H. King, **J.M. Barbaree**, W.T. Martin, W.E. Morrill, and G.N. Sanden. 1990. Characterization of an axenic strain of *Hartmanella vermiformis* obtained from an investigation of nosocomial legionellosis. *J. Protozool.* **37**:581-583.

Fields, B.S., **J.M. Barbaree**, G.N. Sanden, and W.E. Morrill. 1990. Virulence of a strain of *Legionella anisa* associated with Pontiac Fever. *Infect. Immun.* **58**:3139-3142.

Morrill, W.E., **J.M. Barbaree**, B.S. Fields, G.N. Sanden, and W.T. Martin. 1990. Increased recovery of *Legionella micdadei* and *Legionella bozemanii* on buffered charcoal yeast extract agar supplemented with albumin. *J. Clin. Microbiol.* **28**:616-618.

Fields, B.S., G.N. Sanden, **J.M. Barbaree**, W.E. Morrill, R.M. Wadowsky, E.H. White, and J.C. Feeley. 1989. Intracellular multiplication of *Legionella pneumophila* in amoebae isolated from hospital hot water tanks. *Cur. Microbiol.* **18**:131-138.

Sanden, G.N., B.S. Fields, **J.M. Barbaree**, J.C. Feeley, and R.C. Good. 1989. Viability of *Legionella pneumophila* in chlorine-free water at elevated temperatures. *Cur. Microbiol.* **18**:61-65.

- Morrill, W.E., **J.M. Barbaree**, B.S. Fields, G.N. Sanden, and W.T. Martin. 1988. Effects of transport temperature and medium on recovery of *Bordetella pertussis* from nasopharyngeal swabs. *J. Clin. Microbiol.* **26**:1814-1817.
- Barbaree, J.M.**, W.E. Morrill, B.S. Fields, W.T. Martin, and G.N. Sanden. 1988. Detection and recovery of *Legionella* in water. *Toxicity Assessment* **3**:479-485.
- Barbaree, J.M.**, W.T. Martin, and R.M. McKinney. 1987. Comparison of monoclonal antibody typing of *Legionella pneumophila* serogroup 1 by IFA and a simple dot blot procedure. *IN: Colloque Legionella*, Faculte de Medicine Alexis Carrel, Lyon, France, pp. 51-55.
- Barbaree, J.M.**, G.W. Gorman, W.T. Martin, B.S. Fields, and W.E. Morrill. 1987. Protocol for sampling environmental sites for legionellae. *Appl. Environ. Microbiol.* **53**:1454-1458.
- Friedman, S., K. Spitalny, **J. Barbaree**, Y. Faur, and R.M. McKinney. 1987. Pontiac Fever associated with a cooling tower. *A.J.P.H.* **77**:568-572.
- Barbaree, J.M.**, B.S. Fields, J.C. Feeley, G.W. Gorman, and W.T. Martin. 1986. Isolation of protozoa from water associated with a legionellosis outbreak and demonstration of intracellular multiplication of *Legionella pneumophila*. *Appl. Environ. Microbiol.* **51**:422-424.
- Barbaree, J.M.** 1986. Perspectives on the ecology and control of *Legionella*. *IN: Proc. Internat. Symp. on Water-related Health Issues*, American Water Resources Assoc., pp. 51-55.
- Fields, B.S., **J.M. Barbaree**, E.B. Shotts, J.C. Feeley, W. E. Morrill, G.N. Sanden, and M.J. Dykstra. 1986. Comparison of guinea pig and protozoans models for determining virulence of *Legionella* species. *Infect. Immun.* **53**:553-559.
- Markowitz, L.E., N.A. Hynes, P. Cruz, E. Campos, **J.M. Barbaree**, B.D. Plikaytis, D. Mosier, A. F. Kaufmann. 1985. Tick-borne Tularemia: an outbreak of lymphadenopathy in children. *JAMA* **254**:2922-2925.
- Barbaree, J.M.**, A. Sanchez, and G.N. Sanden. 1985. Problems in Freeze-drying: II. Cross-contamination during lyophilization. *Dev. Indust. Microbiol.* **26**:407-409.
- Garbe, P.L., B.J. Davis, J. Weisfeld, L.E. Markowitz, P. Miner, F. Garrity, **J.M. Barbaree**, R.K. McKinney, B.J. Plikaytis, A.W. Hightower, and A.L. Reingold. 1985. Legionnaires' Disease: epidemiologic demonstration of cooling towers as a source, Providence Rhode Island. *J.A.M.A.* **254**:551-554.
- Barbaree, J.M.**, A. Sanchez, and G.N. Sanden. 1985. Problems in Freeze-drying: I. Stability in glass-sealed and rubber-stoppered vials. *Dev. Indust. Microbiol.* **26**:397-405.
- Mangione, E.J., R.S. Remis, K.A. Tait, H.B. McGee, G.W. Gorman, B.B. Wentworth, P.A. Baron, A.W. Hightower, **J.M. Barbaree**, and C.V. Broome. 1985. An outbreak of Pontiac Fever related to whirlpool use, Michigan, 1982. *J.A.M.A.* **253**:535-539.

- Towns, M.L., **J.M. Barbaree**, J.C. Feeley, and E.O. Hill. 1984. Comparison of the rapid tube test, paper chromatography, and gas liquid chromatography for the detection of hippurate hydrolysis by *Legionella* species, pp. 91-93. *IN: C. Thornsberry, A. Balows, J.C. Feeley, and W. Jakubowski (eds.), Legionella.* ASM, Washington, D.C.
- Jones, E.E., P.J. Checko, A.F. Dalton, C.B. Cope, **J.M. Barbaree**, G.C. Klein, W.T. Martin, and C.V. Broome. 1984. Nosocomial Legionnaires' disease associated with exposure to respiratory therapy equipment, pp. 225-227. *IN: C. Thornsberry, A. Balows, J.C. Feeley, and W. Jakubowski (eds.), Legionella.* ASM, Washington, D.C.
- Martin, W.T., **J.M. Barbaree**, J.C. Feeley. 1984. Detection and quantitation of *Legionella pneumophila* by immune autoradiography, pp. 299-300. *IN: C. Thornsberry, A. Balows, J.C. Feeley, and W. Jakubowski (eds.), Legionella.* ASM, Washington, D.C.
- Barbaree, J.M.**, A. Sanchez, and G.N. Sanden. 1983. Differences in the tolerance of *Legionella* species to sodium chloride. *Cur. Microbiol.* **9**:1-5.
- Barbaree, J.M.** and A. Sanchez. 1982. Cross contamination during lyophilization. *Cryobiol.* **19**:443-447.
- Barbaree, J.M.**, F. Thompson, and S.J. Smith. 1982. Use of thermal stability studies to compare *Bacteroides fragilis* lyophilized in skim milk and polyvinylpyrrolidone solutions. *Cryobiol.* **19**:92-98.
- Barbaree, J.M.** and S.J. Smith. 1981. Loss of vacuum in rubber-stoppered vials stored in a liquid nitrogen vapor phase freezer. *Cryobiol.* **18**:528-531.
- Pine, L., H. Gross, G.B. Malcolm, J.H. Greene, **J.M. Barbaree**, W.K. Harrell, M.T. Suggs, S.O. Blumer, L. Kaufman, L. Ajello, S.J. Smith, and J.C. May. 1981. Evaluation of candidate international reference reagents and a microimmunodiffusion test for the identification of precipitins to H and M antigens of histoplasmin. *J. Biol. Stand.* **9**:513-530.
- Pine, L., S.J. Smith, H. Gross, **J.M. Barbaree**, G.B. Malcolm. 1979. Study of thermal stability of H and M antigens of lyophilized histoplasmin. *Proc. VII Congress ISHAM*, pp. 126-129.
- Schable, C.A., **J.M. Barbaree**, W.W. Bond, B.L. Murphy, K.R. Berquist, M.S. Favero, and J.E. Maynard. 1979. Stability of a reference panel of lyophilized hepatitis B antigens and antibodies. *J. Biol. Stand.* **7**:293-299.
- Barbaree, J.M.** 1977. Lyophilization of biological reagents. *IN: "American Vacuum Society Short Course on Freeze-drying."* AVS publication.
- Barbaree, J.M.**, J. Habas, P. Rossing, and J.D. Dobbins. 1977. Comparative statistical study of the Cornwall, LKB, and Micromedic dispensers. *Appl. and Environ. Microbiol.* **34**:484-487.
- Barbaree, J.M.** 1977. Methods for determining favorable conditions for freeze-drying biological

reference materials. *Dev. Biol. Stand.* **36**:335-341.

Hall, C.T. and **J.M. Barbaree**. 1974. *Enterobacter agglomerans*. *IN*: "Technical Instruction Service Education Manual," American Society for Clinical Pathologists publication.

Barbaree, J.M. and W.J. Decker. 1971. Studies on a fast-migrating bisalbumin. *Biochem. Med.* **5**:181-187.

Barbaree, J.M. 1970. Denitrifying bacteria in the soil of the El Verde Rain Forest. *IN*: "Tropical Rain Forest" (annual publication from the Atomic Nuclear Center in Puerto Rico).

Barbaree, J.M. and W.J. Payne. 1968. Products of denitrification by a bacterium as revealed by gas chromatography. *Marine Biology* **1**:136-139.

Abstracts/Presentations at Scientific Meetings

Naylor, J., J.M. Barbaree, V. Vodyanoy, and W.C. Neely. 2002. A rapid and sensitive quartz crystal microbalance for the detection of *Legionella pneumophila*. ASM, Salt Lake City, UT.

Yan, T., V. Vodyanoy, J.M. Barbaree, C. Bailey, B. Fiebor, and B. Chin. 2002. A reusable and high-performance biosensor for *Salmonella typhimurium*. Proc. IEEE 2781, Orlando, FL.

Fiebor, B., C. Bailey, Y. Tang, W. Yen, B.A. Chin, V. Vodyanoy, and J. Barbaree. 2001. SPIE Conference.

Zeigler, S.D., J. Pruckler, J.M. Barbaree, and B.S. Fields. 2001. Detection of N-Acyl homoserine lactone expression in *Legionella pneumophila*. American Society for Microbiologists annual meeting in Orlando, Florida.

Barbaree, J.M. 2001. The integration of acoustic wave technology to rapidly detect pathogens. SEB ASM, Birmingham, AL.

Chen, H. and J.M. Barbaree. 2001. Differences in detection of fimbriated and non-fimbriated strains of *Salmonella typhimurium*. SEB ASM, Birmingham, AL.

Vodyanoy, V., J. Barbaree, W.C. Neely, S. Pathirana, B.A. Chin, and R.W. Cernosek. 2000. Demonstration of a TSM sensor for food pathogen detection. *Acoustic Wave-based Sensors Symp.*, 198th ECS meeting, Phoenix, AZ p. 1074.

Tang, Y., B. Fiebor, J. Barbaree, V. Vodyanoy, and B. Chin. 2000. Biosensor for *Salmonella* detection. Amer. Chem. Soc., Washington D.C.

Bailey, C.A., B. Fiebor, V. Vodyanoy, J. Barbaree, R. Cernosek, and B.A. Chin. 2000. Thickness shear mode (TSM) resonator platform used for biosensing. 2000. ECS, Phoenix, Arizona.

(Three papers at the 1999 Southeastern Branch for the American Society for Microbiologists meeting at Alabama State University in Montgomery, Alabama.)

Salama, E.M. and J.M. Barbaree. 1999. Comparison of the FDA and the new chromogenic Biosynth methods for isolation and identification of *Listeria monocytogenes* from food. ASM meeting, Chicago, Illinois.

Wilder, T.D., J.M. Barbaree, R.A. Norton, and K.S. Macklin. 1999. Bacteria associated with avian gangrenous dermatitis. ASM meeting, Chicago, Illinois.

Timms, B.J., J.M. Barbaree, R.A. Norton, K.S. Macklin, and J.E. Hubbard. 1999. Molecular characterization of *Escherichia coli* associated with avian cellulitis. ASM meeting, Chicago, Illinois.

Kerr, J.G., S.E. Maslanka, C.L. Hatheway, G. Williams, J.M. Barbaree, L.A. Carson, M. Miller, and B. Swaminathan. 1998. Molecular subtyping of *Clostridium perfringens* using pulsed-field-gel electrophoresis. ASM meeting in Atlanta, Georgia, May, 1998.

Barbaree, J.M. 1997. Microbiologic tools for epidemic investigations. Southeastern Branch - American Society for Microbiology annual meeting, Helen, Georgia.

Kerr, J.G., J.M. Barbaree, S.B. Price, and A.E. Smith. 1997. Use of PCR to detect *Escherichia coli* O157:H7 and enterohemorrhagic *E. coli* in bovine feces. Ala. Acad. Science, Montgomery, Alabama.

Oyarzabal, O.A., J. Shireman, J.M. Barbaree, I.V. Wesley, S. Beckert, and D.E. Conner. 1997. Genomic variation of *Arcobacter skirrowii* as determined by pulsed-field-gel electrophoresis. Ala. Acad. Science, Montgomery, Alabama.

Williams, G., J. Barbaree, and C. Hatheway. 1996. Use of a random amplified polymorphic DNA procedure to subtype *Clostridium perfringens* strains associated with foodborne disease and wound infections. Abst. C282, American Society for Microbiology (ASM) meeting, New Orleans, Louisiana.

Barbaree, J.M. 1995. Methods for fingerprinting bacteria. Southeastern Branch of American Society for Microbiology, Birmingham, Alabama.

Connolly, M. and J. Barbaree. 1995. Genomic Fingerprinting of *Edwardsiella* species using a random amplified polymorphic DNA procedure and Pulsed-Field-Gel Electrophoresis ASM meeting in Washington D.C., May 24).

Connolly, M., J. Barbaree, and K. Reddington. 1994. Genomic fingerprinting of *Edwardsiella* species using a random amplified polymorphic DNA procedure. ASM.

Ahmed, N.M., D.E. Conner, J.M. Barbaree, J. McInroy, and M.A. Connolly. 1994.

Characteristics and biotypes of *Escherichia coli* 0157:H7 isolates exhibiting differences in heat resistance. ASM.

P.K. Cassidy, G.N. Sanden, and J.M. Barbaree. 1992. Evaluation of a rapid immunodot assay for *Bordetella pertussis* cultures. ASM.

Barbaree, J.M. 1992. Selecting a subtyping technique for use in investigations of legionellosis epidemics. International Symposium on Legionella, Orlando, Florida.

Marston, B.J., J.F. Plouffe, R.F. Breiman, T.M. File, R.f. Benson, M. Moyenudden, W.L. Thacker, K. Wong, S. Skelton, B. Hackman, S.J. Salstrom, J.M. Barbaree, and the Community-based Pneumonia incidence study group. 1992. Preliminary findings of a community-based pneumonia incidence study. International Symposium on *Legionella*, Orlando, Florida.

Tyndall, R.L., E.K. Bowman, K.S. Ironside, D. Milton, J. Barbaree, and E. Lehman. 1991. Aerosolization of microorganisms and endotoxin from home humidifiers. ASM.

Reichler, M.R., W.T. Martin, B. Mishua, R.F. Benson, C. Starns, and J.M. Barbaree. 1991. Pseudoepidemic of Legionnaires disease linked to false-positive *Legionella* urinary antigen test results. ASM.

Cassiday, P.K., G.N. Sanden, and J.M. Barbaree. 1991. Comparison of 4 suspending solutions for storage of *Bordetella pertussis*. ASM.

Pang, Y., J. Barbaree, B. Swaminathan, W. Morrill, G. Sanden, T. Mastro, and P. Houck. 1990. Molecular epidemiology of *Legionella pneumophila* serogroup 3 using restriction fragment length polymorphism and ribotyping. ASM.

Sanden, G., W. Morrill, and J. Barbaree. 1990. Incubation of water samples containing amoebae improves detection of legionellae by culture. ASM.

Fields, B.S., J.M. Barbaree, G.N. Sanden, and W.E. Morrill. 1990. Virulence of a strain of *Legionella anisa* associated with pontiac fever: Evaluation using protozoan, cell culture, and guinea pig models. ASM.

Mamolen, M., R. Breiman, J. Barbaree, K. Stone, J. Spika, D. Dennis, and R. Vogt. 1989. Legionnaires disease outbreak due to identical strains at Two lodges. ASM.

Sanden, G.N., B.S. Fields, W.E. Morrill, and J.M. Barbaree. 1989. Development of a kinetic enzyme immunoassay for antibodies to *Bordetella pertussis*. ASM.

Mao, S., J.M. Barbaree, Y. Wang, L.M. Graves, B. Swaminathan, M. Mamolen, and R.F. Breiman. 1989. Ribotypes of *Legionella pneumophila* serogroup 1. ASM.

Marston, B., J. Plouffe, R. Breiman, T. File, R. Benson, L. Thacker, K. Wong, S. Skelton, B. Hackman, S. Salstrom, J. Barbaree, and CBPIS Group, CDC, Atlanta, Ga. 1989. Preliminary findings of a community-based pneumonia incidence study. 31st Interscience Conference on

Antimicrobial Agents and Chemotherapy.

Sanden, G.N., P.K. Cassiday, and J.M. Barbaree. 1989. Immunoglobulin A (IgA) and IgG subclass responses to *Bordetella pertussis* antigens in serum samples from pertussis cases. 31st Interscience Conference on Antimicrobial Agents and Chemotherapy.

Fields, B.S., G.N. Sanden, J.M. Barbaree, W.E. Morrill, R.M. Wadowsky, and E.H. White. 1988. Intracellular multiplication of *Legionella pneumophila* in amoebae isolated from hospital hot water tanks. ASM.

Barbaree, J.M., and W.T. Martin. 1988. Rapid dot blot procedure for the identification of *Legionella*. ASM.

Barbaree, J.M. 1986. Perspectives on the ecology and control of *Legionella*. American Water Works Assoc. Meeting in Atlanta, Georgia.

Barbaree, J.M., W.E. Morrill, B.S. Fields, G.N. Sanden, and W.T. Martin. 1987. Response of guinea pigs treated with steroids and challenged with *Legionella dumoffii* or *Legionella pneumophila*. ASM.

Morrill, W.E., J.M. Barbaree, B.S. Fields, G.N. Sanden, and W.T. Martin. 1987. Recovery of *Bordetella pertussis* from Regan-Lowe transport medium incubated at four different temperatures. ASM.

Sanden, G.N., B.S. Fields, J.M. Barbaree, J.C. Feeley, and W.E. Morrill. 1986. Bactericidal activities of I₃ and I₅ resins against *Legionella pneumophila*. Third Conference on Progress in Chemical Disinfection.

Sanden, G.N., B.S. Fields, J.M. Barbaree, J.C. Feeley, and R.C. Good. 1986. Viability of *Legionella pneumophila* in chlorine-free water at elevated temperatures. ASM.

Barbaree, J.M., W.E. Morrill, B.S. Fields, G.N. Sanden, and J.C. Feeley. 1986. Preliminary studies in guinea pigs of aerosolized challenge with *Legionella feeleii* and avirulent and virulent *L. pneumophila*. ASM.

Fields, B.S., J.M. Barbaree, J.C. Feeley, E.B. Shotts, and W.E. Morrill. 1985. *Tetrahymena pyriformis* coculture system for determining virulence of *Legionella* species. ASM.

Barbaree, J.M., G.W. Gorman, W.T. Martin, R.M. McKinney, B.S. Fields, P.W. Garbe, B.L. Davis, L.E. Markowitz, W.E. Morrill, and M.J. Linnan. 1985. Use of an environmental profile sampling protocol for *Legionella*. ASM.

Fields, B.S., J.M. Barbaree, J.C. Feeley, E.B. Shotts, G.W. Gorman, and W.T. Martin. 1984. Multiplication of *Legionella pneumophila* in protozoa isolated from water associated with a legionellosis outbreak. ASM.

- Barbaree, J.M., J.C. Feeley, G.W. Gorman, H.V. McEachern, and W.T. Martin. 1984. Comparison of selective media for the recovery of *Legionella*. ASM.
- Barbaree, J.M. W.T. Martin, J.C. Feeley, P.L. Garbe, and L.E. Markowitz. 1984. Quantitation of specific serogroups and a subtype of *Legionella* in a legionellosis outbreak. ASM.
- Towns, M.L., J.M. Barbaree, J.C.Feeley, and E.O. Hill. 1983. Comparison of the rapid tube test, paper chromatography, and gas liquid chromatography for the detection of hippurate hydrolysis by *Legionella species*. 2nd International Symposium on *Legionella*. Atlanta, Georgia.
- Barbaree, J.M., J.C. Feeley, R.J. Gibson, and A.W. Pasculle. 1983. Supplementation of buffered charcoal yeast extract agar with albumin for enhancement of growth of *Legionella species*. 2nd International Symposium on *Legionella*. Atlanta, Georgia.
- Martin, W.T., J.M. Barbaree, and J.C. Feeley. 1983. Detection and quantitation of *Legionella pneumophila* by immune autoradiography. 2nd International Symposium on *Legionella*. Atlanta, Georgia.
- Jones, E.E., P.J. Checko, A.F. Dalton, C.B. Cope, J.M. Barbaree, G.C. Klein, W.T. Martin, and C.V. Broome. 1983. 2nd International Symposium on *Legionella*. Atlanta, Georgia.
- Barbaree, J.M., and A. Sanchez. 1983. Comparison of the stability of 2 *Legionella* species in rubber-stoppered and glass-sealed vials. ASM.
- Barbaree, J.M., A. Sanchez, and G.N. Sanden. 1982. Differences in the tolerance of *Legionella* species to sodium chloride. SEB-ASM.
- Barbaree, J.M. 1980. Thermal stability of lyophilized bacteria. Society for Cryobiology.
- Barbaree, J.M. 1979. Factors affecting the lyophilization of bacteria. ASM.
- Barbaree, J.M., P. Rossing, J. Habas, and J.F. Dobbins. 1977. A comparative statistical study of the Cornwall, Micromedic, and LKB dispensers. ASM.
- Barbaree, J.M., J. Habas, F. Thompson, and J.S. Smith. 1977. Studies on the use of 50C, 60C, and 70C as accelerated storage temperatures to estimate the stability of lyophilized *Bacteroides fragilis*. SEB-ASM.
- LaMotte, L.C., C.T. Hall, and J.M. Barbaree. 1974. The quality of clinical microbiology as judged by performance in the CDC clinical laboratories evaluation programs. American Society for Tropical Med. and Hygiene.
- Wilson, C.R., J.M. Barbaree, and R.D. Reid. 1973. A vitamin B₁₂ study in portions of Escambia and Blackwater Bays, Florida. ASM.
- Barbaree, J.M., J. Padula, and R.R. Facklam. 1972. Optochin and bacitracin disc susceptibility of

Streptococcus pneumoniae on different blood agar media. ASM.

Barbaree, J.M., and W.J. Payne. 1967. Products of denitrification by a marine bacterium as revealed by gas chromatography. SEB-ASM.

Additional Publications

Quarterly Summaries of Proficiency Test results (1971-1974) from clinical laboratories tested in microbiology by the CDC proficiency testing program - I graded reports, pointed out errors, Recommended appropriate procedures for identifying pathogenic bacteria, fungi, and parasites, and performing serological tests, and wrote summary analyses that were published (**18 publications**).

Patent Dis closures Applied for at Auburn University

- ? Detection of Foodborne *Salmonella* Contamination by Polyclonal Antibody Assays (Vodyanoy, Neely, Chin, Barbaree)
- ? Method for Protection of Biological Material (Vodyanoy, Barbaree, Braden, Chin, Neely, Pathirana)
- ? Methods of Forming Monolayers and Uses Thereof (Vodyanoy, Chin, Barbaree, Pathirana, Neely)
- ? Phage as Bioselective Elements in Biosensors (Petrenko, Vodyanoy, Samoylov, Neely, Barbaree, Chin)

Current Research Focus

- ? Microchip for rapid detection of *Salmonella typhimurium* in liquid
- ? Microchip for rapid detection of *Legionella pneumophila* in liquid and aerosols
- ? Quorum sensing by *Legionella pneumophila*
- ? Fingerprinting epidemic strains of bacteria

Masters Thesis Research Directed

Comparison of hydrophobic and hydrophilic antibodies to capture bacteria on an acoustic wave sensor. AU

Student: Nominanda Barbosa (current student)

Effects of physiologic conditions on the rapid detection of *Salmonella* with a microchip sensor. AU.

Student: Han Chen (current student, projected M.S. 2003)

Study of vancomycin resistant enterococci and methicillin resistant *Staphylococcus aureus* genotypes from regional clinics and hospitals. AU.

Student: Quincy Moore (**M.S. degree - June, 2000**)

Stability of a piezoelectric quartz crystal sensor for *Salmonella*. Au.

Student: Eric Olsen (**M.S. - June, 2000**)

Microbiology of avian necrotic dermatitis. AU.

Student: Tracy Wilder (**M.S. - September, 2000**)

Clonal relationships of *Escherichia coli* causing cellulitis in poultry. AU.

Student: Brandi Timms (**M.S. degree-June 1999**)

Comparison of traditional and molecular methods for subtyping *Clostridium perfringens*. AU. (Collaborative project with the Centers for Disease Control and Prevention, Atlanta)

Student: Glen Williams, M.S., **1998**.

Molecular methods for subtyping *Edwardsiella* using PCR and PFGE. AU.

Student: Michael Connolly, M.S., **1996**.

Lyophilization of *Escherichia coli*. Univ. of Georgia.

Student: S. Samples, M.S., **1982**.

A vitamin B12 study in portions of Escambia and Blackwater Bays, Florida. U. West Fla..

Student: C.R. Wilson, M.S., **1972**.

Folic acid levels in various age groups of humans. U. West Fla.

Student: M. Northup, M.S., **1972**. (Co-directed with Dr. Roger Reid)

Chitinolytic bacteria in marine copepods. U. West Fla.

Student: S. A. Buck, M.S., **1971**.

Ph. D. Dissertation Research Directed

Use of phage display technology to rapidly detect bacteria with an acoustic wave sensor.

Student: Eric Olsen (projected Ph.D. 2005)

Rapid detection of *Legionella pneumophila* using a piezoelectric quartz crystal sensor.
Student: Jennifer Naylor (**Ph.D., 2001**)

Quorum Sensing by *Legionella pneumophila*. Auburn Univ.
Student: Ziegler (Called to Armed Forces Active Duty)

Genotyping and rapid detection of *Escherichia coli* O157:H7 . Auburn Univ.
Student: Sharon Massingale (**Ph.D., 1999**)

Comparison of *Listeria monocytogenes* genotypes isolated from food in Egypt and the U.S. and efficacy of irradiation of cheese containing *Listeria*. Visiting Scientist and graduate student: Ehab Salama, Suez Canal Univ., Ismailia, Egypt (**Ph.D. completed with Suez Canal University**)

Disinfection of Potable Quality Water Containing *Legionella pneumophila*. Georgia Institute of Technology. Student: Gary N. Sanden, **1990**.

Editorial Activities

Editor for Journal of Microbiological Methods.

Guest editorships: J. Appl. Environ. Microbiol., Cur. Microbiol., Biotechnology, ASHRAE J., J. Inf. Dis., J. Amer. Med. Assoc., & J. Pub. Health

Peer Review Panels

Scheduled for peer review of Microbiology and Cell Science Department at the U. of Fla.

12/3/02-12/6/02

NSF – 1999-2000

EPA Grants - 1995-2000; FDA Grants - 1998

EPA Cincinnati Laboratory Peer Review - 1997; EPA Promotion Board Review - 1998

Other grant reviews: VA administration and ASHRAE

Television Activities

2001 – Interview with local TV station

1998 - National TV story about research project concerning detection of food pathogens using a microchip sensor

1995 - Interview on CNN (Future Watch program) about use of PCR to detect *E. coli* O157:H7

1994 - Interview with channel 9 in Columbus, Georgia concerning DNA fingerprinting

1990 - Film concerning work at the CDC on Legionnaires= Disease; presented on ~~A~~Physicians= Journal@on TV

Grants and Contracts

2002/2004

Title: High-resolution Dark-field Microscope for Fast Detection of Pathogens

PI's: V. Vodyanoy, V. Petrenko, and J. Barbaree

Source: Under Secretary of Defense for Acquisition, Technology, and Logistics (USD AT & L) and Combating Terrorism Technology Support Office (CTTSO) Technical Support Working Group (TSWG)

Amount: \$435,000 (Pending)

Title: Preservation of Biological Materials (Viral Glass)

PI: V. Vodyanoy; Co-PI's: J. Barbaree and V. Petrenko

Source: USD AT& L and CTTSO, TSWG

Amount funded: \$417,000

2002/2003

Title: Sensor Development for COLSAs Multiple Miniature Battlefield Sensors.

PI's: R. Cernosek, S. Wentworth, J. Barbaree, V. Vodyanoy, and W. Neely

Source: COLSA Corp.

Amount: \$605,000

Pending

Title: Substitution of Antibodies by Phage-borne Probes in Detection Devices

PI's: V. Petrenko, V. Vodyanoy, W. Neely, and J. Barbaree

Source: USDAT & L and CTTSO TSWG

Amount: \$396,000

Pending

Title: Survey of Animal Feeds for Adulteration by Prohibited Meat-and-Bone Meal and Extension Education to Prevent Feed-based BSE Transmission

PI's: An, H., D. Rankins, J. Barbaree, R. Cernosek, S. Kempf, Kriese-Anderson, J. Weese, and C. Wei.

Source: USDA

Amount: \$589,422

Pending

Title: RFID Bacterial Sensor Tags (renewal)

PI's: B. Chin, J. Barbaree, W. Neely, V. Vodyanoy, and D. Conner

Source: USDA CSREES

Amount funded: \$568,700

2000/2002

Title: Multiple Miniature Battlefield Sensors
 PI's: R. Cernosek, J. Barbaree, W. Neely, S. Wentworth, V. Vodyanoy, and R. Zee
 Source: US Army SMDC through COLSA Corp.
Amount funded: \$100,00

Title: RFID Bacterial Sensor Tags
 PI's: Chin, Barbaree, Neely, Vodyanoy, and Conner
Amount funded: \$486,300
 Source: USDA CSREES

Title: RFID Bacterial Sensor Tag
 PI's: Chin, Barbaree, and Conner
Amount funded: \$280,260 (renewed)
 Source: USDA

Title: Sensor Development for Weapons of Mass Destruction
 PI's: Barbaree, Wentworth, Neely, and Vodyanoy
Amount funded: \$440,000
 Source: COLSA

1999

Title: RFID Bacterial Sensor Tag
 PI's: Chin, Barbaree, and Conner
Amount funded: \$280,680/1 yr.
 Source: Special Research Grants Program, USDA

1998

Title: Preliminary Research on an Acoustic Wave Microchip System for Rapid Detection of
Salmonella typhimurium and *Escherichia coli* O157:H7.
 PI's: B. Chin, J. Barbaree, & V. Vodyanoy
 Source: AU VPR Office, COSAM, Vet. Med., COAg, & Eng.
Amount funded: \$100,000

Title: Exploratory Grant for Proof of Concept for Acoustic Wave Microchip System for Rapid
 Detection of *Salmonella typhimurium*
 PI's: B. Chin, J. Barbaree, V. Vodyanoy,
 Source: National Science Foundation
Amount funded: \$99,999

Title: Development of Super Small Acoustic Wave Sensor for Counter Terrorism Activities
 Concerning Explosives and Pathogens
 PI's: B. Chin, R. Zee, J. Barbaree, & V. Vodyanoy
 Source: U.S. Space Missile Command
Amount funded: \$50,000 for 3 months

Title: Preliminary Studies on Acoustic Wave Immunosensor for Detection of Toxins and

Pathogens in Counter-terrorism Actions

PI's: B. Chin, J. Barbaree, and V. Vodyanoy

Source: Dept. of Justice

Amount: \$250,000/1 yr. – Funds reallocated

1997

Title: The development of preventive strategies to reduce the incidence of carcass condemnations in commercial broilers caused by avian cellulitis

PI's: **J.M. Barbaree** & R.A. Norton

Investigator: S. Bilgili

Source: U.S. Egg & Poultry Association

Amount funded: \$43,246/18 months

Title: *Escherichia coli* O157:H7, a foodborne pathogen: Laboratory and field studies

PI's: **J.M. Barbaree** & R. Musso

Co-investigators: S.B. Price, J.C. Wright, F. DeGraves, B.L. Nielsen, & J.J. Shaw

Source: AAES Competitive Grant, National Initiative Competitive Grants Program

Amount funded: \$163, 636/3 years

1996

Title: PCR Techniques for rapid , specific detection and identification of *Campylobacter* and *Arcobacter* spp. from ready-to-cook poultry

PI's: O.A. Oyarzabal & D.E. Conner

Co-investigators: J.M. Barbaree & L.H. Lauerman

Source: U.S. Poultry & Egg Association

Amount funded: \$22,425

1995

Title: Training and update on technologies for microbiologic assessment of food safety and public health in Alabama industries and laboratories

PI's: J.M. Barbaree & D.E. Conner

Source: Ala. Biotechnology Center

Amount funded: \$112,500

Title: Develop, refine and evaluate detection techniques for *Escherichia coli* O157:H7 from animal and environmental samples

PI: S.B. Price

Co-PI's: J.M. Barbaree, J.H. Kirk, & J.C. Wright

Co-investigators: T.L. Hathcock & J.C. Stringfellow

Source: Food Technology Institute, Ala. Cattleman's Association, & AU College of Vet.

Med.

Amount funded: \$16,450

Title: Equipment grant for PCR workshop for teachers and Ala. health laboratory workers.

PI: J.M. Barbaree

Source: Ala. Biotechnology Center

Amount funded: \$5000

1992

Title: Role of Beneficial and harmful microorganisms in Mobile Bay.

P.I.: James M. Barbaree

Source: Ala.-Miss. Sea Grant Consortium

Amount funded: \$10,000

1991

Title: International meeting for exchange of scientific information on *Legionella*.

P.I.'s: Rick Nolte (Emory University, Atlanta, Georgia) & J. Barbaree

Co-P.I.: James M. Barbaree (at the Centers for Disease Control initially)

Source: Environmental Protection Agency, Washington, D.C.

Amount funded: \$75,000

1988

Interagency Money:

Project: *Bordetella pertussis* research

Target for funds: Laboratory supervised by James Barbaree at the CDC

Amount received: Approximately \$600,000

Source: National Vaccine Committee (affiliated with NIH, but had separate funding)

