

Curriculum Vitae - 2001  
**James Martin Barbaree, Ph.D.**

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### **Education**

**Ph.D.**, Bacteriology, 1967; **M.S.**, Microbiology, 1964; **B.S.**, Zoology, 1963

### **Current University Position**

Tenured 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

### **Responsibilities**

Teaching: Clinical and Pathogenic Microbiology, General Microbiology, Thesis/Dissertation Research, & Special Problems in Microbiology

Research: Primary focus on molecular methods for detection and fingerprinting food- and waterborne pathogenic bacteria, development of a microchip for detection of pathogens

Committees: Various departmental and university committees

Advisement of students: 4 graduate and 20 undergraduate Microbiology majors

### **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**

- 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 department 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 9 training courses in management

### **Additional Professional Experience**

- Associate Director of Research for the Auburn University Research Center for Food Safety & Next Generation Rapid Bacteria Detection (2000- to date)
- Member of Auburn University Patent Screening and Patent Policy Committees (current)
- Member of College of Sciences and Mathematics (Auburn University) Planning and Assessment Committee (current)
- Chair of Search committee (4 times) for hiring faculty in department
- Chaired & planned 1 international & 3 domestic scientific meetings
- 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 a 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

## Chronologic Work History

Employer/Dates	Title/Duties
Auburn University	Visiting Asst Prof. 1991-1992, Assoc. Prof. 1992 - 1999, Full Prof. 1999- to date; teaching, advising and research
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 in summers

<b>Employer/Dates</b>	<b>Title/Duties</b>
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 (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

The Retired Officers Association

### **Committee Memberships and Offices**

Branch Councilor for SEB-ASM (1995-1998)

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

Alternate Branch Councilor (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)  
USM graduate teaching assistantship (1962)

### **Postgraduate Professional Training Courses**

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

Vodyanoy, V.J., S.T. Pathirana, M.J. Hartell, E.V. Olsen, **J. Barbaree**, W.C. Neely, and B.C. Chin. 2001. Rapid and sensitive detection of *Salmonella* by an immunosensor. *Biophysic. J.*:Jan. issue.

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 Diseases 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.

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.

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.

**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.** 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.

**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.

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. 1985. 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

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.

(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.

Oyazabal, 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.

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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.

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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.

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- 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.
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- Sanden, G.N., B.S. Fields, J.M. Barbaree, J.C. Feeley, and W.E. Morrill. 1986. Bactericidal activities of I<sub>3</sub> and I<sub>5</sub> resins against *Legionella pneumophila*. Third Conference on Progress in Chemical Disinfection.
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- 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 feeleyi* and avirulent and virulent *L. pneumophila*. ASM.
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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 B<sub>12</sub> 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.

### **Patent Disclosures Applied for at Auburn University**

1999

- Unique preservation method (group disclosure)

1998

- Acoustic Wave Microbalance for Detection of Bacteria (group disclosure)
- Device for Rapid Meat Species Identification (group disclosure)

### **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**

Effects of physiologic conditions on the rapid detection of *Salmonella* with a microchip sensor.  
Student: Han Chen (current student)

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

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

Stability of a piezoelectric quartz crystal sensor for *Salmonella*. Auburn Univ.

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

Microbiology of avian necrotic dermatitis. Auburn Univ.

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

Clonal relationships of *Escherichia coli* causing cellulitis in poultry. Auburn Univ.  
Student: Brandi Timms (**M.S. degree-June 1999**)

Comparison of traditional and molecular methods for subtyping *Clostridium perfringens*. Auburn Univ. (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. Auburn Univ.  
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**

Rapid detection of *Legionella pneumophila* using a piezoelectric quartz crystal sensor.  
Student: Jennifer Naylor (Current student)

Quorum Sensing by *Legionella pneumophila*. Auburn Univ.  
Student: Ziegler (Current student)

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 (Pending)

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**

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~~Physician=s Journal@on TV



