Mary Ann Moran

CURRICULUM VITAE

Department of Marine Sciences University of Georgia Athens, GA 30602-3636 (706) 542-6481 mmoran@uga.edu

EDUCATION

B.A. 1977; Colgate University, Hamilton, NY

M.S. 1982; Cornell University, Ithaca, NY; Department of Natural Resources Ph.D. 1987; University of Georgia, Athens, GA; Graduate Program in Ecology

HONORARY AND PROFESSIONAL SOCIETIES

American Society of Limnology and Oceanography American Society for Microbiology American Academy of Microbiology International Society for Microbial Ecology Estuarine Research Federation The Oceanography Society

PROFESSIONAL EXPERIENCE

Distinguished Research Professor. 2005-present. Department of Marine Sciences, University of Georgia, Athens, GA

Professor. 2003-present. Department of Marine Sciences,

University of Georgia, Athens, GA

Adjunct Professor. 2003-present. Department of Microbiology,

University of Georgia, Athens, GA

Associate Professor. 1998-2003. Department of Marine Sciences,

University of Georgia, Athens, GA

Assistant Professor. 1993-1998. Department of Marine Sciences,

University of Georgia, Athens, GA

Assistant Research Microbiologist. 1989-1992. Department of Microbiology,

University of Georgia, Athens, GA

Postdoctoral Associate. 1988-1989. Department of Microbiology, University of Georgia, Athens, GA

HONORS AND AWARDS

Chair, U.S.-European Workshop on Microbial Cyberinfrastructure Resources for Microbial Sciences, Washington D.C., 2007 Editorial Board Member, Environmental Microbiology, 2006

Chair, CAMERA Scientific Advisory Board, 2006-2007

Fellow, American Academy of Microbiology 2006

Distinguished Research Professor, University of Georgia, 2005

Investigator, Moore Foundation Initiative in Marine Microbiology, 2004-2009.

Co-chair, U.S.-European Union Workshop on Genomic Approaches for Studying the Marine Environment and Resources. Bremen, Germany, 2005

Committee member, Gordon and Betty Moore Foundation Marine Microbes Sequencing Initiative, 2004, 2005, 2007

Committee member, NSF Microbial Observatory Principal Investigators' Workshop, 2004

Keynote Speaker, NSF Microbial Observatory Principal Investigators' Workshop, 2003

Organizer, NSF Microbial Observatory/LExEn Principal Investigators' Workshop, 2002

Associate Editor, Limnology and Oceanography, 1998 – 2004

Editorial Board Member, Applied and Environmental Microbiology, 1998-2001

Chair, American Society for Microbiology, Microbial Ecology Division, 2001–2002

Plenary Lecturer, ASLO Annual Meeting, Victoria B.C., 2002

Awardee of the National Oceanographic Partnership Program (NOPP), 2001

Councilor, American Society for Microbiology, Microbial Ecology Division, 1995-1998

Creative Research Medal 1997, University of Georgia

RESEARCH PUBLICATIONS

Research Papers:

- Pimentel, D., M. A. Moran, S. Fast, G. Weber, R. Bukantis, L. Balliet, P. Boveng, C. Cleveland, S. Hindman, and M. Young. 1981. Biomass energy from crop and forest residues. *Science* 212:1110-1115.
- **Moran, M. A.** 1984. Influence of adjacent land use on understory vegetation of New York forests. *Urban Ecology* 8:329-340.
- Benner, R., M. A. Moran, and R. E. Hodson. 1985. Effects of pH and plant source on lignocellulose biodegradation rates in two wetland ecosystems, the Okefenokee Swamp and a Georgia salt marsh. *Limnology and Oceanography* 30:489-499.
- Benner, R., M. A. Moran, and R. E. Hodson. 1986. Biogeochemical cycling of lignocellulosic carbon in marine and freshwater systems: relative contributions of procaryotes and eucaryotes. *Limnology and Oceanography* 31:89-100.
- Morris, W. F., P. L. Marks, C. L. Mohler, N. R. Rappaport, F. R. Wesley, and M. A. Moran. 1986. Seed dispersal and seedling emergence in an old field community in central New York (USA). *Oecologia* 70:92-99.

- **Moran, M. A.**, A. E. Maccubbin, R. Benner, and R. E. Hodson. 1987. Dynamics of microbial biomass and activity in five habitats of the Okefenokee Swamp ecosystem. *Microbial Ecology* 14:203-214.
- **Moran, M. A.**, T. Legovic, R. Benner, and R. E. Hodson. 1988. Carbon flow from lignocellulose: A simulation analysis of a detritus-based ecosystem. *Ecology* 69:1525-1536.
- **Moran, M. A.**, and R. E. Hodson. 1989. Formation and bacterial utilization of dissolved organic carbon derived from detrital lignocellulose. *Limnology and Oceanography* 34:1034-1047.
- **Moran, M. A.**, and R. E. Hodson. 1989. Bacterial production on vascular plant detritus: Relationship to plant biochemistry and weight loss. *Applied and Environmental Microbiology* 55:2178-2189.
- **Moran, M. A.**, R. Benner, and R. E. Hodson. 1989. Kinetics of microbial decomposition of vascular plant detritus in two wetland ecosystems. *Oecologia* 79:158-167.
- **Moran, M. A.**, and R. E. Hodson. 1990. Bacterial production on humic and nonhumic components of dissolved organic carbon. *Limnology and Oceanography* 35:1744-1756.
- **Moran, M. A.** and R. E. Hodson. 1990. Contributions of degrading *Spartina* alterniflora lignocellulose to the dissolved organic carbon pool of a salt marsh. *Marine Ecology Progress Series* 62:161-168.
- Lee, K.-H., **M. A. Moran**, R. Benner, and R. E. Hodson. 1990. Influence of soluble components of red mangrove (*Rhizophora mangle*) leaves on microbial decomposition of structural (lignocellulosic) leaf components in seawater. *Bulletin of Marine Science* 46:374-386.
- **Moran, M. A.**, L. R. Pomeroy, E. S. Sheppard, L. P. Atkinson, and R. E. Hodson. 1991. Distribution of terrestrially-derived dissolved organic matter on the southeastern U.S. continental shelf. *Limnology and Oceanography* 36:1134-1149.
- **Moran, M. A.**, R. J. Wicks, and R. E. Hodson. 1991. Export of dissolved organic matter from a mangrove swamp ecosystem: Evidence from natural fluorescence, dissolved lignin phenols, and bacterial secondary production. *Marine Ecology Progress Series* 76:175-184.
- Wicks, R. J., M. A. Moran, and R. E. Hodson. 1991. Carbohydrate signatures of aquatic macrophytes and their dissolved degradation products determined by a sensitive high-performance ion chromatography method. *Applied and Environmental Microbiology* 57:3135-3143.

- Bergbauer, M., **M. A. Moran**, and R. E. Hodson. 1992. Degradation of lignocellulose from a freshwater macrophyte by aero-aquatic fungi. *Microbial Ecology* 23:159-167
- **Moran, M. A.**, and R. E. Hodson. 1992. Contributions of three subsystems of a freshwater marsh to total bacterial secondary production. *Microbial Ecology* 24:161-170.
- Sobecky, P. A., M. A. Schell, **M. A. Moran**, and R. E. Hodson. 1992. Adaptation of model genetically engineered microorganisms to lake water: growth rate enhancements and plasmid loss. *Applied and Environmental Microbiology* 58:3630-3637.
- **Moran, M. A.**, V. L. Torsvik, T. Torsvik, and R. E. Hodson. 1993. Direct extraction and purification of rRNA for ecological studies. *Applied and Environmental Microbiology* 59:915-918.
- **Moran, M. A.**, and R. E. Hodson. 1994. Dissolved humic substances of vascular plant origin in a coastal marine environment. *Limnology and Oceanography* 39:762-771.
- **Moran, M. A.**, and R. E. Hodson. 1994. Support of bacterioplankton production by dissolved humic substances from three marine environments. *Marine Ecology Progress Series* 110:241-247.
- Wiebe, W. J., **M. A. Moran**, and R. E. Hodson. 1994. Preface. *Microbial Ecology* 28:111-112. (editors of special edition)
- Newell, S. Y., M. A. Moran, R. J. Wicks, and R. E. Hodson. 1995. Productivities of microbial decomposers during early stages of decomposition of shoots of a freshwater sedge. *Freshwater Biology* 34:135-148.
- **Moran, M. A.**, L. T. Rutherford, and R. E. Hodson. 1995. Evidence for indigenous *Streptomyces* populations in a marine environment based on a 16S rRNA probe. *Applied and Environmental Microbiology* 61:3695-3700.
- Hodson, R. E., W. A. Dustman, R. P. Garg, and M. A. Moran. 1995. Prokaryotic in situ PCR: Visualization of microscale distribution of specific genes and gene products in prokaryotic communities. Applied and Environmental Microbiology 61:4074-4082.
- Sobecky, P. A., M. A. Schell, **M. A. Moran**, and R. E. Hodson. 1996. Impact of a genetically engineered bacterium with enhanced alkaline phosphatase activity on marine phytoplankton communities. *Applied and Environmental Microbiology* 62:6-12.
- Bushaw, K. L., R. G. Zepp, M. A. Tarr, D. Schulz-Jander, R. A. Bourbonniere, R. E. Hodson, W. L. Miller, D. A. Bronk, and **M. A. Moran**. 1996. Photochemical

- release of biologically available nitrogen from aquatic dissolved organic matter. *Nature* 381:404-407.
- González, J. M. H., W. B. Whitman, R. E. Hodson, and **M. A. Moran**. 1996. Identifying numerically abundant culturable bacteria from complex communities: an example from a lignin enrichment culture. *Applied and Environmental Microbiology* 62:4433-4440.
- González, J. M., F. Mayer, **M. A. Moran**, R. E. Hodson, and W. B. Whitman. 1997. *Microbulbifer hydrolyticus* gen. nov., sp. nov., and *Marinobacterium georgiense* gen. nov., sp. nov., two marine bacteria from a lignin-rich pulp mill waste enrichment community. *International Journal of Systematic Bacteriology* 47:369-376.
- Bano, N., M. A. Moran, and R. E. Hodson. 1997. Bacterial utilization of dissolved humic substances from a freshwater swamp. *Aquatic Microbial Ecology* 12:233-238.
- **Moran, M. A.** and R. G. Zepp. 1997. Role of photoreactions in the formation of biologically labile compounds from dissolved organic matter. *Limnology and Oceanography* 42:1307-1316.
- González, J. M., F. Mayer, **M. A. Moran**, R. E. Hodson, and W. B. Whitman. 1997. *Sagittula stellata* gen. nov., sp. nov., a lignin-transforming bacterium from a coastal environment. *International Journal of Systematic Bacteriology* 47:773-780.
- Miller, W. L., and **M. A. Moran**. 1997. Interaction of photochemical and microbial processes in the degradation of refractory dissolved organic matter from a coastal marine environment. *Limnology and Oceanography* 42:1317-1324.
- González, J. M., and **M. A. Moran**. 1997. Numerical dominance of a group of marine bacteria in the α-subclass of Proteobacteria in coastal seawater. *Applied and Environmental Microbiology* 63:4237-4242.
- Chen, F., J. M. González, W. A. Dustman, M. A. Moran, and R. E. Hodson. 1997. *In situ* reverse transcriptase: an approach to characterize genetic diversity and activity of prokaryotes. *Applied and Environmental Microbiology* 63:4907-4913.
- Hopkinson, C., I. Buffam, J. Hobbie, J. Vallino, R. Hodson, M. A. Moran, J. Covert, E. Smith, J. Baross, B. Crump, B. Eversmeyer, F. Prahl, M. Perdue, S. Findlay, and K. Foreman. 1998. Terrestrial inputs of organic matter to coastal ecosystems: an intercomparison of chemical characteristics and bioavailability. *Biogeochemistry* 43:211-234.
- Bano, N., **M. A. Moran**, and R. E. Hodson. 1998. Photochemical formation of labile organic matter from two components of dissolved organic carbon in a freshwater wetland. *Aquatic Microbial Ecology* 16:95-102.

- **Moran, M. A.**, W. M. Sheldon, and J. E. Sheldon. 1999. Biodegradation of riverine dissolved organic carbon in five estuaries of the Southeastern United States. *Estuaries* 22:55-64.
- Cai, W.-J., L. R. Pomeroy, M. A. Moran, and Y. Wang. 1999. Oxygen and carbon dioxide mass balance for the estuarine/intertidal marsh complex of five rivers in the southeastern U.S. *Limnology and Oceanography* 44:639-649.
- Wiegert, R. G., M. Alber, J. O. Blanton, A. Chalmers, R. E. Hodson, M. A. Moran, L. R. Pomeroy, and W. J. Wiebe. 1999. The Georgia Rivers Land Margin Ecosystem Research Program. *Limnologica* 29:286-292.
- Bushaw-Newton, K. and M. A. Moran. 1999. Photochemical formation of biologically available nitrogen from dissolved humic substances in coastal marine environments. *Aquatic Microbial Ecology* 18:285-292.
- González, J. M., R. P. Kiene, and **M. A. Moran**. 1999. Transformation of sulfur by an abundant lineage of marine bacteria in the α-subclass of the Proteobacteria. *Applied and Environmental Microbiology* 65:3810-3819.
- González, J. M., R. E. Hodson, and **M. A. Moran**. 1999. Bacterial populations in replicate marine enrichment cultures: assessing variability in abundance using 16S rRNA-based probes. *Hydrobiologia* 401:69-75.
- Kiene, R. P., L. J. Linn, J. González, **M. A. Moran**, and J. A. Bruton. 1999. Dimethylsulfoniopropionate and methanethiol are important precursors of methionine and protein-sulfur in marine bacterioplankton. *Applied and Environmental Microbiology* 65:4549-4558.
- **Moran, M. A.**, W. M. Sheldon, and R. G. Zepp. 2000. Carbon loss and optical property changes during long-term photochemical and biological degradation of estuarine dissolved organic matter. *Limnology and Oceanography* 45:1254-1264.
- González, J. M., R. Simó, R. Massana, J. S. Covert, E. O Casamayor, C. Pedrós-Alió, and **M. A. Moran**. 2000. Bacterial community structure associated with a dimethylsulfoniopropionate-producing North Atlantic algal bloom. *Applied and Environmental Microbiology* 66:4237-4246.
- Buchan, A., L. S. Collier, E. L. Neidle, and **M. A. Moran**. 2000. Key aromatic-ring-cleaving enzyme, protocatechuate 3,4-dioxygenase, in the ecologically important marine *Roseobacter* lineage. *Applied and Environmental Microbiology* 66:4662-4672.
- Esham, E. C., W. Ye, and **M. A. Moran**. 2000. Identification and characterization of humic substances-degrading bacterial isolates from an estuarine environment. *FEMS Microbiology Ecology* 1174:1-9.

- Covert, J. S. and M. A. Moran. 2001. Molecular characterization of estuarine bacterial communities that use high- and low-molecular weight fractions of dissolved organic carbon. *Aquatic Microbial Ecology* 25:127-139.
- Buchan, A., E. L. Neidle, and **M. A. Moran**. 2001. Diversity of ring-cleaving dioxygenase gene *pcaH* in a salt marsh bacterial community. *Applied and Environmental Microbiology* 67:5801-5809.
- Buchan, A., S. Y. Newell, J. I. L. Moreta, and **M. A. Moran**. 2002. Analysis of internal transcribed spacer (ITS) regions of rRNA genes in fungal communities of a southeastern U.S. salt marsh. *Microbial Ecology* 43: 329-340.
- Miller, W. L., M. A. Moran, W. M. Sheldon, R. G. Zepp, and S. Opsahl. 2002. Determination of apparent quantum yield spectra for the formation of biologically labile photoproducts. *Limnology and Oceanography* 47: 343-352.
- Hardwick, E. O, W. Ye, **M. A. Moran**, and R. E. Hodson. 2003. Temporal dynamics of three culturable *γ-Proteobacteria* taxa in salt marsh sediments. *Aquatic Ecology* 37:55-64.
- Stepanauskas, R., M. A. Moran, B. Bergamaschi, and J. T. Hollibaugh. 2003. Covariance of bacterioplankton composition and water chemistry in a temperate delta estuary. *Aquatic Microbial Ecology* 31:85-98.
- Lyons, J. I., S. Y. Newell, A. Buchan, and **M. A. Moran**. 2003. Diversity of ascomycete laccase gene sequences in a southeastern U.S. salt marsh. *Microbial Ecology* 45:270-281.
- **Moran, M. A.**, J. M. González, and R. P. Kiene. 2003. Linking a bacterial taxon to sulfur cycling in the sea: studies of the marine *Roseobacter* group. *Geomicrobiology Journal* 20:375-388.
- González, J. M., J. S. Covert, W. B. Whitman, J. Henricksen, F. Mayer, B. Scharf, R. Schmitt, A. Buchan, J. A. Fuhrman, R. P. Kiene, and **M. A. Moran**. 2003. *Silicibacter pomeroyi* sp. nov. and *Roseovarius nubinhibens* sp. nov., DMSP demethylating bacteria from marine environments. *International Journal of Systematic and Evolutionary Microbiology* 53:1261-1269.
- Buchan, A., S. Y. Newell, M. Butler, E. J. Biers, J. T. Hollibaugh, and **M. A. Moran**. 2003. Dynamics of bacterial and fungal communities on decaying salt marsh grass. *Applied and Environmental Microbiology* 69:6676-6687.
- Buchan, A., E. L. Neidle, and **M. A. Moran**. 2004. Diverse organization of genes of the β-ketoadipate pathway in members of the marine *Roseobacter* lineage. *Applied and Environmental Microbiology* 70: 1658-1668.
- Zepp, R. G., W. M. Sheldon, and **M. A. Moran**. 2004. Dissolved organic fluorophores in southeastern U.S. coastal waters: Correction method for

- eliminating Rayleigh and Raman scattering peaks in excitation-emission matrices. *Marine Chemistry* 89:15-36.
- Vila, M., R. Simó, R. P. Kiene, J. Pinhassi, J. M. González, **M. A. Moran**, C. Pedrós-Alió. 2004. Dimethylsulfoniopropionate incorporation by marine bacterioplankton taxa studied by microautoradiography combined with fluorescence in situ hybridization. *Applied and Environmental Microbiology* 70:4648-4657.
- Chen, R. F., P. Bissett, P. Coble, R. Conmy, G. B. Gardner, M. A. Moran, X. Wang, M. L. Wells, P. Whelan, and R. G. Zepp. 2004. Chromophoric Dissolved Organic Matter (CDOM)Source Characterization in the Louisiana Bight. *Marine Chemistry* 89:257-272.
- Moran, M. A., A. Buchan, J. M. González, J. F. Heidelberg, W. B. Whitman, R. P. Kiene, J. R. Henriksen, G. M. King, R. Belas, C. Fuqua, L. Brinkac, M. Lewis, S. Johri, B. Weaver, G. Pai, J. A. Eisen, E. Rahe, W. M. Sheldon, W. Ye, T. R. Miller, J. Carlton, D. A. Rasko, I. T. Paulsen, Q. Ren, S. C. Daugherty, R. T. Deboy, R. J. Dodson, A. S. Durkin, R. Madupu, W. C. Nelson, S. A. Sullivan, M. J. Rosovitz, D. H. Haft, J. Selengut, and N. Ward. 2004. Genome sequence of *Silicibacter pomeroyi* reveals adaptations to the marine environment. *Nature* 432:910-913.
- Mou, X., M. A. Moran, R. Stepansuskas, J. M. González and R. E. Hodson. 2005. Culture-independent identification of bacterioplankton involved in DMSP transformations by flow cytometric cell sorting and subsequent molecular analyses. *Applied and Environmental Microbiology* 71:1405-1416.
- Poretsky, R. S., N. Bano, A. Buchan, G. LeCleir, J. Kleikemper, M. Pickering, W. M. Pate, **M. A. Moran**, and J. T. Hollibaugh. 2005. Analysis of microbial gene transcripts in environmental samples. *Applied and Environmental Microbiology* 71: 4121-4126.
- Stepanauskas, R., **M. A. Moran**, B. A. Bergamaschi, and J. T. Hollibaugh. 2005. Sources, bioavailability, and photoreactivity of dissolved organic carbon in the Sacramento-San Joaquin River Delta. *Biogeochemistry* 74: 131–149.
- Buchan, A., J. M. González, and **M. A. Moran**. 2005. An overview of the marine Roseobacter lineage. *Applied and Environmental Microbiology* 71: 5665-5677.
- Lyons, J. I., S. Y. Newell, R. P. Brown, and **M. A. Moran**. 2005. Screening for bacteria-fungal associations in a south-eastern US salt marsh using preestablished fungal monocultures. *FEMS Microbiology Ecology* 54:179-187.
- Shank, G. C., R. G. Zepp, R. F. Whitehead, and **M. A. Moran**. 2005. Variations in the spectral properties of freshwater and estuarine CDOM caused by partitioning onto river and estuarine sediments. *Estuarine and Coastal Shelf Science* 65:289-301.

- Pinhassi, J., R. Simó, J. M. González, M. Vila, L. Alonso-Sáez, R. P. Kiene, M. A. Moran, and C. Pedrós-Alio. 2005. Dimethylsulfoniopropionate turnover linked to the composition and dynamics of the bacterioplankton assemblage during a microcosm phytoplankton bloom. *Applied and Environmental Microbiology* 71: 7650-7660.
- Howard, E. C., J. R. Henriksen, A. Buchan, C. R. Reisch, H. Bürgmann, R. Welsh, W. Ye, J. M. González, K. Mace, S. B. Joye, R. P. Kiene, W. B. Whitman, and M. A. Moran. 2006. Bacterial taxa that limit sulfur flux from the ocean. *Science* 314:649-652.
- LeCleir, G. R., A. Buchan, J. Maurer, **M. A. Moran**, J. T. Hollibaugh. 2007. Comparison of chitinolytic enzymes from an alkaline hypersaline lake and an estuary. *Environ. Microbiol.* 9: 197–205.
- Biers, E. J., R. G. Zepp, and **M. A. Moran**. 2007. The role of nitrogen in chromophoric and fluorescent dissolved organic matter formation. *Marine Chemistry* 103:46–60.
- Mou, X., R. E. Hodson, **M. A. Moran**. 2007. Bacterioplankton assemblages transforming dissolved organic compounds in coastal seawater. *Environmental Microbiology* 9:2025–2037. doi:10.1111/j.1462-2920.2007.01318.x
- Dong, Y., M. A. Moran, and S. Guerrero. 2007. Exploring marine bacterial diversity in coastal Georgia salt marshes using DNA technology. *The American Biology Teacher*. In press.
- Moran, M. A., R. Belas, M. A. Schell, J. M. González, F. Sun, S. Sun, B. J. Binder, J. Edmonds, W. Ye, B. Orcutt, E. C. Howard, C. Meile, W. Palefsky, A. Goesmann, Q. Ren, I. Paulsen, L. E. Ulrich, L. S. Thompson, E. Saunders, and A. Buchan. 2007. Ecological genomics of marine roseobacters. *Applied and Environmental Microbiology* 73:4559-4569.
- **Moran, M. A.** and E. V. Armbrust. 2007. Genomes of sea microbes. In: A Sea of Microbes. *The Oceanography Society Journal*. L. Proctor and D. Karl, issue editors. June 2007, pp. 47-55.
- Bürgmann, H., E. C. Howard, W. Ye, F. Sun, S. Sun, S. Napierala, and **M. A. Moran.** 2007. Transcriptional response of *Silicibacter pomeroyi* DSS-3 to dimethylsulfoniopropionate (DMSP). *Environmental Microbiology*. Online prepublication: doi:10.1111/j.1462-2920.2007.01386.x.
- **Moran, M. A.** and W. L. Miller. 2007. Resourceful heterotrophs make the most of light in the coastal ocean. *Nature Reviews Microbiology*. In press.
- Edmonds, J. W., N. B. Weston, S. B. Joye, and **M. A. Moran**. 2007. Variation in prokaryotic community composition as a function of resource availability in tidal creek sediments. *Applied and Environmental Microbiology*. In press.

Books:

Limburg, K. E., M. A. Moran, and W. H. McDowell. 1986. The Hudson River Ecosystem. Springer-Verlag, NY. 318 pp.

Book Chapters:

- Benner, R., M. A. Moran, and R. E. Hodson. 1986. Importance of bacteria to the degradation of the lignin and polysaccharide components of lignocellulose in aquatic ecosystems. pp. 517-523 In: S. Barry and D. R. Houghton, eds. *Biodeterioration VI*. C.A.B. International Mycological Institute. The Cambrian News, Ltd. Great Britain.
- Hodson, R. E., M. A. Moran, D. L. Lewis, R. E. Murray, and R. Benner. 1987. The microbial ecology of a naturally acidic ecosystem, the Okefenokee Swamp, Georgia. In: S. S. Rao, ed. *Microbial Interactions in Acid-stressed Aquatic Ecosystems*. CRC Press.
- Hodson, R. E., **M. A. Moran**, and R. Benner. 1988. Modeling the persistence of lignocellulosic detritus in wetland ecosystems. pp. 357-374 In: G. C. Llewellyn and C. E. O'Rear, eds. *Biodeterioration Research 1*. Plenum Press.
- Hodson, R. E., and M. A. Moran. 1989. Microbial transformations of mangrove detritus: Fate of soluble and structural, lignocellulosic components. pp. 287-291
 In: T. Hattori, Y. Ishida, Y. Maruyama, R. Morita, and A. Uchida, eds. Recent Advances in Microbial Ecology. Japan Scientific Societies Press.
- Hodson, R. E., P. A. Sobecky, and M. A. Moran. 1989. Horizontal gene transfer among bacteria in aquatic systems: effects of nutrient concentrations. pp. 131-138
 In: C. E. O'Rear and G. C. Llewellyn, eds. *Biodeterioration Research* 2. Plenum Press.
- Moran, M. A., L. R. Pomeroy, E. S. Sheppard, L. P. Atkinson, and R. E. Hodson. 1991. Lignin-derived organic matter in Georgia coastal waters. In: K. J. Hatcher, ed. *Proceedings of the 1991 Georgia Water Resources Conference*. Institute of Natural Resources.
- Hodson, R. E. and M. A. Moran. 1995. Comparative biodegradation kinetics of simple and complex dissolved organic carbon in aquatic ecosystems. pp. 47-64 In: R. G. Zepp and C. Sonntag. Role of Nonliving Organic Matter in the Earth's Carbon Cycle. John Wiley and Sons Ltd.
- Chen, F., W. Dustman, M. A. Moran, and R. E. Hodson. 1997. In situ PCR methodologies for visualization of microscale and taxonomic diversities in prokaryotic communities. In: A. D. L. Akkermans, J. D. Van Elsas, F. J. De Bruijn (eds). Molecular Miocrobial Ecology Manual. (2nd edition).

- **Moran, M. A.** and R. G. Zepp. 2000. UV radiation effects on microbes and microbial processes. pp. 201-228 In: D. L. Kirchman, ed. Microbial Ecology of the Oceans. Wiley, NY.
- González, J. M., R. P. Kiene, S. B. Joye, D. Yu. Sorokin, and **M. A. Moran**. 2002. Oxidation of organic and inorganic sulfur compounds by aerobic heterotrophic marine bacteria. pp. 291–310. In V. P. Singh and R. D. Stapleton (eds.), Biotransformations: bioremediation technology for health and environmental protection. Elsevier Science Publishers, Amsterdam, The Netherlands.
- Moran, M. A. and J. S. Covert. 2003. Photochemically mediated linkages between DOM and bacterioplankton. pp. 244-262 In: S. Findlay and R. Sinsabaugh, eds. Aquatic Ecosystems: Interactivity of dissolved organic matter. Academic Press.
- Sheldon, W. M., **Moran, M. A.** and J. T. Hollibaugh. 2002. Efforts to link ecological metadata with bacterial gene sequences at the Sapelo Island Microbial Observatory. In: The Ecoinformatics Challenge: Meeting Ecological Information Needs for the Site, Network, and Community. International Institute of Informatics and Systemics, Orlando, FL.
- Newell, S. Y., J. I. Lyons, and **M. A. Moran**. 2006. A saltmarsh decomposition system and its ascomycetous laccase genes. pp. 371-377 In: G. Gadd, P. Dyer, and S. Watkinson (eds.), Fungi in the Environment. Cambridge University Press, Cambridge. In press.
- Poretsky, R. S., N. Bano, A. Buchan, J. T. Hollibaugh and M. A. Moran. 2007. Environmental transcriptomics: A method for exploring community-level gene expression in natural samples. In: Molecular Microbial Ecology Manual. Kowalchuk, G.A., de Bruijn, F.J. Head, I.M. Akkermans, A.D., and van Elsas, J.D., editors. In press.
- **Moran, M. A.** 2007. Marine prokaryotic genomics and metagenomics. In: Microbial Ecology of the Oceans. D. L. Kirchman, ed. Wiley, NY. In press.

Presentations and Published Abstracts (Past 5 Years; first author only):

- **Moran, M. A.**, J. M. González, R. P. Kiene, R. Simó, C. Pedrós-Alió. 2001. Organic sulfur cycling by the marine *Roseobacter* lineage. American Society for Limnology and Oceanography, Annual Meeting. Albuquerque, NM. (Invited presentation).
- **Moran, M. A.** 2001. Linking bacterial community structure to biogeochemical function: The role of marine roseobacters in organic sulfur cycling in seawater. University of Tennessee, Knoxville TN. (Invited presentation).

- **Moran, M. A.** 2001. Interaction of biological and photochemical processes in the degradation of terrestrial DOM in the coastal zone. Bedford Institute of Oceanography, Halifax, NS. (Invited presentation).
- **Moran, M. A.**, N. Ward, R. Kiene, W. B. Whitman, and J. Heidelberg. 2002. The genome sequence of a marine roseobacter. NSF/USDA Awardees Workshop, Plant, Animal and Microbial Genomes X Conference, San Diego, CA (Invited presentation).
- **Moran, M. A.** 2002. Biogeochemistry or biogeofiction? Molecular approaches to organic sulfur cycling in the ocean. American Society for Limnology and Oceanography Annual Meeting. Victoria, CA (Invited plenary lecture).
- **Moran, M. A.** 2002. A genomic approach to organic sulfur cycling in the ocean. Center for Marine Biotechnology, University of Maryland, MD (Invited presentation).
- **Moran, M. A.**, N. Ward, R. P. Kiene, W. B. Whitman, J. Heidelberg, A. Buchan, J. Henriksen. 2003. The genome sequence of a marine *Roseobacter*. NSF/USDA Awardees Workshop. (Invited presentation)
- **Moran, M. A.** 2003. Genes, genomes, and biogeochemistry in a Georgia salt marsh. NSF Microbial Observatory Workshop. (Invited keynote lecture)
- Moran, M. A. 2003. Ecologically-relevant isolates link structure with biogeochemical function in microbial communities. Microbial Diversity Course. Marine Biological Laboratory, Woods Hole. (Invited lecture)
- **Moran, M. A.**, N. Ward, R. P. Kiene, W. B. Whitman, J. Heidelberg, A. Buchan, J. Henriksen. 2004. The genome sequence of a marine *Roseobacter*: Links to the global sulfur cycle. NSF/USDA Awardees Workshop. (Invited presentation)
- **Moran, M. A.**, W. B. Whitman, and R. E. Hodson. 2004. Prokaryotic diversity in a salt marsh/estuarine ecosystem. Third Annual Microbial Observatories Principal Investigator Workshop. Big Sky, MT.
- **Moran, M. A.** 2005. Genomes and biogeochemistry in the sea: insights from marine Roseobacters. University of Pennsylvania. Philadelphia, PA. (Invited presentation)
- **Moran, M. A.** 2005. Genomics of ecologically-relevant marine Roseobacters. U.S.-European Workshop, Genomic approaches for studying the marine environment and resources. Bremen, Germany. (Invited presentation)
- **Moran, M. A.** 2005. A genomic approach to biogeochemistry in the ocean. American Society for Microbiology, Annual Meeting. Atlanta, GA. (Invited presentation)

- Moran, M. A., R. Belas, W. B. Whitman, A. Buchan, J. González, M. Schell, F. Sun. 2005. Genomics meets Biogeochemistry in Seawater. International Union of Microbiological Sciences Meeting. San Francisco, CA. (Invited presentation)
- **Moran, M. A.** 2005. Genomes and biogeochemistry in the sea: insights from marine Roseobacters. University of Pennsylvania. Philadelphia, PA. (Invited presentation)
- Moran, M. A. 2005. Bacterial diversity and biogeochemistry in the sea: A genomics approach. European Union MIRACLE Symposium: Microbial marine communities diversity: from culture to function. Renesse, The Netherlands. (Invited presentation)
- **Moran, M. A.** 2005. Genomics and biogeochemistry of marine roseobacters. University of Quebec at Montreal. (Invited presentation)
- **Moran, M. A.** 2006. Insights into Sulfur Biogeochemistry from Marine Bacterial Genomes. Gordon Research Conference on Environmental Bioinorganic Chemistry. (Invited presentation).
- **Moran, M. A.** 2006. Global Climate Regulation from a Genomic Perspective. Opening Symposium for the 2006 Microbial Diversity Course, Marine Biological Laboratory, Woods Hole. (Invited presentation).
- **Moran, M. A.** 2006. The Role of Genomics in Microbial Ecology. Gordon Research Conference on Marine Microbes. (Invited Presentation).
- **Moran, M. A.** 2006. Insights into Sulfur and Carbon Cycling from Marine Genomes. Center of Marine Biotechnology, University of Maryland Biotechnology Institute. (Invited Presentation)
- **Moran, M. A.** 2006. Insights into Biogeochemical Cycles from Marine Genomes. Department of Biology, University of Montana. (Invited Presentation)
- **Moran, M. A.** 2006. Ecological genomics in the coastal ocean. Computational Systems Biology Lab, University of Georgia. (Invited Presentation)
- **Moran, M. A.** 2007. Ecological genomics in the coastal ocean. Department of Marine Sciences, University of South Florida. (Invited Presentation)
- **Moran, M. A.** 2007. Coastal carbon processing by generalist bacteria. Department of Microbiology, Cornell University. (Invited Presentation)

GRANTS RECEIVED

- 1988. Georgia Sea Grant. Production and Microbial Transformations of Lignocellulose-Derived Dissolved and Particulate Organic Matter in Estuarine and Coastal Water. Co-Principal Investigator (with R. E. Hodson). \$57,700.
- 1988. National Science Foundation. *Microbial Mediation of Organic Carbon Transformations in an Emergent Macrophyte-Dominated Habitat of the Okefenokee Swamp Ecosystem*. Co-Principal Investigator (with R. E. Hodson, R. G. Wiegert, and C. S. Hopkinson). \$450,000.
- 1989. National Science Foundation. *Microbial Degradation of Detrital Lignocelluloses in Marine Environments: Production and Fate of Particulate and Dissolved Degradation Products*. Co-Principal Investigator (with R. E. Hodson). \$279,624.
- 1990. Georgia Sea Grant. *Lignocellulose-Derived Organic Matter in the Georgia Nearshore: Diagenetic Changes and Relative Importance as a Carbon Source*. Co-Principal Investigator (with R. E. Hodson and L. R. Pomeroy). \$140,932.
- 1990. Georgia Sea Grant. Fate of Genetically Engineered Microorganisms in the Marine Environment: Effects of Environmental Conditions on Persistence of Introduced Genes and Rates of Genetic Exchange with Indigenous Marine Bacteria. Co-Principal Investigator (with R. E. Hodson, M. A. Schell, and P. A. Sobecky). \$63,000.
- 1991. Office of Naval Research. *Potential for In Situ Aromatic Pollutant Remediation by Lignin-Degrading Marine Actinomycetes*. Principal Investigator (with R. E. Hodson). \$289,020.
- 1991. National Science Foundation. *Marine Humic Substances: Formation via Vascular Plant Degradation and Biological Availability*. Co-Principal Investigator (with R. E. Hodson). \$180,266.
- 1991. University of Georgia Research Foundation Faculty Grant. *Ribosomal RNA-Based Study of the Lignin-Degrading Bacterial Consortium in a Coastal Marine Environment*. Principal Investigator. \$7,292.
- 1992. Georgia Sea Grant. *Bacterial Utilization of Marine Humic Substances in Salt Marsh and Coastal Waters of the Southeastern United States*. Co-Principal Investigator (with R. E. Hodson, W. L. Miller, and L. R. Pomeroy). \$220,000.
- 1992. University of Georgia State-of-the-Art Conference Grant. *Paradigms and Paradoxes of the Microbial Loop; A Symposium in Honor of Larry Pomeroy*. Co-Principal Investigator (with W. J. Wiebe and R. E. Hodson). \$15,000.
- 1993. National Science Foundation. *The Role of Bacterial Processes in the Biogeochemistry of Humic Substances in the Okefenokee Swamp Ecosystem*. Co-Principal Investigator (with R. E. Hodson). \$360,000.

14

- 1993. U.S. Environmental Protection Agency. *Trace Gas Exchange in the Boreal Forest Biome: Effects of Fire and Beaver Activity*. Principal Investigator (with R. E. Hodson). \$90,687.
- 1993. Office of Naval Research. *Potential Bioremediation of Aromatic Pollutants by Consortia of Lignin-Degrading Bacteria*. Principal Investigator (with R. E. Hodson). \$76,722.
- 1993. Department of Energy. *Paradigms and Paradoxes of the Microbial Loop* (funding for a conference at the University of Georgia in honor of Dr. Larry Pomeroy). Principal Investigator (with W. J. Wiebe and R. E. Hodson). \$6,000.
- 1993. Office of Naval Research. In situ PCR Procedures for Determination of Distribution and Activity of Specific Genes for Aromatic Pollutant Degradation in Marine Waters and Sediments. Co-Principal Investigator (with R. E. Hodson). \$373,286.
- 1994. National Science Foundation. *LMER: A Comparative Study of the Transport and Transformation of Material From Rivers Through the Land-Sea Margin.*Co-Principal Investigator (with R. G. Wiegert, R. E. Hodson, W. J. Wiebe, A. G. Chalmers, M. Alber, and L. R. Pomeroy). \$2,999,118.
- 1995. Office of Naval Research. *Bacterial Degradation of Cellulosic Wastes at Sea*. Principal Investigator (with B. J. Binder). \$223,730.
- 1995. U.S. Geological Survey. *Molecular Approaches to Bacterial Population Assessment and Monitoring*. Co-Principal Investigator (with R. E. Hodson and J. Gonzalez). \$11,000.
- 1995. University of Georgia Information Technology Policy Board. *Undergraduate Computing Facility for the Department of Marine Sciences*. Principal Investigator (with R. E. Hodson and E. Chin). \$83,466.
- 1996. Office of Naval Research. Prokaryotic In situ PCR: Visualization of Microscale Distribution of Specific Genes and Gene Products for Aromatic Pollutant Degradation in Marine Waters and Sediments. Co-Principal Investigator (with R. E. Hodson). \$370,883.
- 1996. Georgia Sea Grant. *Identification and Characterization of Ecologically Relevant Lignin-Degrading Bacteria from Coastal Marine Environments*. Principal Investigator. \$94,047.
- 1997. National Science Foundation. Research Experience for Undergraduates: Supplement to the Georgia Rivers Land-Margin Ecosystem Research Program. Principal Investigator (with M. Alber). \$5,000.
- 1997. Department of Energy. In situ Activity and Functional Diversity of Microbes Linking Carbon and Nitrogen Cycles in Marine Ecosystems: Tandem Application of in situ PCR and Biogeochemical Measurements. Co-Principal

- Investigator (with R. E. Hodson, D. Bronk, B. Binder, F. Chen, C. Sinigaliani, H.-M. Hwang, R. Jones, D. Kuhn). \$1,493,895.
- 1998. Georgia Sea Grant. Lignin Degradation by Typical Bacteria from Coastal Seawater: the Marine Alpha Cluster. \$37,605.
- 1998. National Science Foundation. Research Experience for Undergraduates: Supplement to the Georgia Rivers Land-Margin Ecosystem Research Program. Principal Investigator (with M. Alber). \$5,000.
- 1998. Office of Naval Research. *Interaction of Biological and Photochemical Processes in the Degradation of CDOM in Coastal Marine Environments*. Principal Investigator. \$179,947.
- 1998. National Science Foundation. *Ecological and Biogeochemical Characterization of a Dominant Lineage of Coastal Ocean Bacterioplankton*. Principal Investigator. \$287,422.
- 1998. Office of Naval Research. *South Atlantic Bight Synoptic Offshore Observational Network*. Co-Principal Investigator (with H. Seim, et al.). \$1,622,543.
- 1999. Department of the Interior (CALFED). Dissolved Organic Carbon Release from Delta Wetlands: Amounts, Alterations, and Implications for Drinking Water Quality and the Delta Foodweb. Part 1. Compositional Characteristics. Co-Principal Investigator (with B. Bergamachi, J. T. Hollibaugh, et al.). \$1,392,669.
- 2000. National Science Foundation. *LTER Georgia Land/Ocean Margin Ecosystem*. Co-Principal Investigator (with J. T. Hollibaugh, S. Pennings, and 16 other Co-PIs). \$4,180,499.
- 2000. National Science Foundation. *Prokaryotic Diversity of a Salt Marsh/Estuarine Complex at the University of Georgia Marine Institute, Sapelo Island*. Principal Investigator (with W. B. Whitman, R. E. Hodson, and F. Chen). \$1,002,182.
- 2001. Office of Naval Research. Effects of Biological and Photochemical Degradation on the Optical Properties of CDOM Exported to Coastal Marine Environments. Principal Investigator. \$150,191.
- 2001. National Science Foundation. *A Genomic Approach to Sulfur Biotransformations in the Ocean: The Genome Sequence of a Marine Roseobacter*. Principal Investigator (with R. Kiene, W. Whitman, N. Ward, and J. Heidelberg). \$882,593.
- 2002. National Science Foundation. Research Experiences for Undergraduates: Prokaryotic Diversity of a Salt Marsh/Estuarine Complex at the University of Georgia Marine Institute, Sapelo Island. Principal Investigator. \$21,800.

- 2002. National Science Foundation. *Microbial Observatories/Life in Extreme Environments Principal Investigators' Workshop*. Principal Investigator (with S. Cady). \$62,496.
- 2003. Office of Naval Research. *Interactions of Nitrogen and Nonliving Organic Matter in the Formation and Decomposition of CDOM in Coastal Marine Environments*. Principal Investigator. \$225,539.
- 2004. National Science Foundation. *Bacterial Regulation of Organic Sulfur Cycling in the Ocean: A Genomic Approach*. Principal Investigator (with W. Whitman, R. Kiene, A. Summers). \$481,109.
- 2004. Gordon and Betty Moore Foundation. *Investigator in Marine Microbiology*. Principal Investigator. \$2,668,000.
- 2005. National Science Foundation. *EU-US Workshop on Genomic Approaches for Studying the Marine Environment and Resources*. Principal Investigator. \$37,910.
- 2005. National Science Foundation. *Creativity extension to the Sapelo Island Microbial Observatory*. Principal Investigator (with W. B. Whitman and R. E. Hodson). \$124,682.
- 2007. National Science Foundation. *Mobilome Genomics: Large Plasmids of Diverse Prokaryotic Groups*. Co-Principal Investigator with A. E. Summers (PI) and three others. \$1,106,419.
- 2007. National Science Foundation. Workshop on Cyberinfrastructure Resources for Genome-Enabled Research on Microbial Life and the Marine Environment. Principal Investigator. \$34,047.
- 2008. National Science Foundation. *A Functional Genomics Approach to Organic Sulfur Cycling in the Ocean*. Principal Investigator (with R. Kiene and W. B. Whitman). \$864,782.
- 2008. National Science Foundation. MO: Functional Genomic Investigations of Dissolved Organic Carbon Cycling at the Sapelo Island Microbial Observatory. Principal Investigator (with W. B. Whitman and M. Booth). \$1,250,137.

PEER REVIEW ACTIVITIES

Proposal Review:

National Science Foundation, Biological Oceanography Program National Science Foundation, Chemical Oceanography Program National Science Foundation, Ecosystems Program National Science Foundation, Environmental Geochemistry and Biogeochemistry National Science Foundation, Ecological and Evolutionary Physiology

National Science Foundation, Biocomplexity (Gen-En)

National Science Foundation, Marine Geology and Geophysics

National Science Foundation, Polar Programs

National Science Foundation, ECOHAB Multiagency Initiative

National Science Foundation, Hydrologic Sciences Program

National Science Foundation, Ecology Program

National Science Foundation, Biocomplexity Program

National Science Foundation, CAREER

National Science Foundation, ADVANCE

National Science Foundation, Biotic Surveys and Inventories Program

National Science Foundation, Ecological and Evolutionary Physiology Program

National Sea Grant College Program

National Institutes of Health Minority Biomedical Research Support Program

U.S. Department of Energy, Carbon Sequestration Program

NOAA, New York Bight Program

NOAA, Office of Ocean and Coastal Resource Management

NOAA, National Undersea Research Program

NOAA, ECOHAB Program

National Environment Research Council, United Kingdom

USDA Forest, Rangeland, Crop, Aquatic Ecosystems Program

USDA, National Research Initiative Grants Program

USDA CREES Program

USGS, Water Research Institute Program

U.S.-Israel Joint Projects

Hudson River Foundation

Petroleum Research Fund

Austrian ScienceFund FWF

NERC (UK) Program

US DOE Pacific Northwest Laboratories

Panel Service:

1996. US Geological Survey, Biology Program

1998. National Science Foundation, Life in Extreme Environments Program

2001. National Science Foundation, Integrated Research Challenges in Environmental Biology Program

2002. National Science Foundation. Joint USDA/NSF Microbial Genomes Panel

2005. US Department of Energy. Microbial Genome Sequencing Panel

Manuscript Review:

Antonie van Leeuwenhoek Applied and Environmental Microbiology Aquatic Microbial Ecology Aquatic Microbial Food Webs Archiv für Hydrobiologie Botanica Marina Biogeochemistry Chemosphere Deep Sea Research Ecology Environmental Science and

Technology

Environmental Toxicology

Estuaries

FEMS Microbiology Ecology

Geochimica et Cosmochimica Acta

Geomicrobiology Journal

Hydrobiologia

International Journal of Systematic and Evolutionary Microbiology

Journal of Experimental Marine Biology

and Ecology

Journal of Geophysical Research

Journal of Plankton Research Limnology and Oceanography Limnology and Oceanography

Methods

Marine Chemistry Microbial Ecology

Marine Ecology Progress Series Marine Microbial Food Webs

Science Nature

Organic Geochemistry

Pedobiologia

UNIVERSITY OF GEORGIA SERVICE

Graduate Coordinator, NSF Research Training in Prokaryotic Diversity (1994-1997)

Member, Department of Marine Sciences Curriculum Committee (1994-present)

Departmental Representative, University of Georgia Academic Dishonesty Panel (1994-1999)

Member, Department of Marine Sciences Ad Hoc Committee on By-Laws (1994-present)

Departmental Representative, Franklin College Computing Committee (1994-2001)

Member, Department of Marine Sciences Faculty Search Committee for recruitment of a physical oceanographer and chemical oceanographer (1994)

Chair, Department of Marine Sciences Faculty Search Committee for recruitment of a marine geochemist (1995)

Co-chair, Recruitment Committee, NSF Research Training Grant in Prokaryotic Diversity (1996)

Chair, Department of Marine Sciences Faculty Search Committee for the Associate Director of the School of Marine Programs (1996)

Member, Search Committee for Eminent Scholar in Microbial Physiology (1995-1996)

Chair, Department of Marine Sciences Resources Committee (1995-2004)

Graduate Coordinator, Department of Marine Sciences (1997-2005)

Chair, Department of Marine Sciences Graduate Affairs Committee (1997-2005)

Chair, Franklin College of Arts and Sciences, Teaching Awards Committee (1999)

Chair, School of Marine Programs Faculty Search Committee for Director of the UGA Marine Institute (2001)

Member, Institute of Ecology Search Committee for Director of the Institute of Ecology (2002)

- Member, University of Georgia Research Foundation Faculty Research Grants Review Committee (1999-2002)
- Chair, School of Marine Programs Faculty Search Committee for Associate Director (2003)
- Member, Department of Marine Sciences, Space Allocation Committee (2002-2006)
- Member, University of Georgia College of Arts and Sciences Promotion and Tenure Review Committee (2005)
- Member, University of Georgia Vice President for Research Faculty Advisory Council (2005)
- Member, Department of Biochemistry and Molecular Biology Search Committee for Department Chair (2006)
- Chair, Franklin College Promotion and Tenure Review Committee (2006)
- Member, Graduate School 2007 Excellence in Research Awards Committee (2006)
- Member, Franklin College Distinguished Research Professor Award Committee (2006)
- Member, Vice President for Research Distinguished Research Professor Committee (2006)
- Member, Department of Marine Sciences, Graduate Affairs Committee (2006)
- Member, Promotion and Tenure Committee Review Committee (2007)

TEACHING

Courses Taught:

- 1989-present. Microbial Ecology (MARS 4620/6620), Department of Marine Sciences (Co-listed in the Department of Microbiology).

 Graduate/advanced undergraduate course in the ecology of marine microorganisms. Lectures, 3 per week. Enrollment, 20-30 graduate and undergraduate students; Course responsibility, 50% (co-taught with M. Joye).
- 1995-present. Marine Biology (MARS 3450), Department of Marine Sciences. Undergraduate course in the biology of marine organisms and ecosystems. Lectures, 3 per week; Laboratory, 2 or 3 sections per week; Enrollment, 40-60 undergraduate students; Course responsibility, 50% (co-taught with M. Alber).
- 1992-2005. Hydrobiology Seminar (MARS 8130), Department of Marine Sciences. Graduate seminar course in current topics in biological oceanography. Seminars/Discussions: 1 per week; Enrollment, 4-15 graduate students; Course responsibility, 100%.
- 2003. Genomics and Bioinformatics for the Microbial Ecologist (MARS 8990), Department of Marine Sciences. Graduate seminar course on genome annotation and bioinformatics. Lecture: 1 per week, Lab: 1 per week; Enrollment, 8 graduate students; Course responsibility, 100%.

2005. Marine Ecological Genomics (MARS 8190). Department of Marine Sciences. Graduate course on ecological analysis and annotation of marine bacterial genomes. Lecture: 2 per week, Lab: 2 per week. Course responsibility, 100%.

Students and Post-Doctoral Associates Advised:

Graduate Students:

Karen L. Bushaw-Newton. Ph.D. Institute of Ecology. 1998.

E. Cartier Esham, Ph.D. Department of Microbiology. 2000.

Alison Buchan, Ph.D. Department of Marine Sciences. 2001.

Justine Lyons, M.S. Department of Marine Sciences. 2002.

Rachel Poretsky, Ph.D. candidate. Department of Marine Sciences (matriculated 8/02).

Erinn C. Howard, Ph.D. candidate. Department of Microbiology (matriculated 9/03).

Scott Gifford, Ph.D. candidate, Department of Marine Sciences (matriculated 9/06).

Vanessa V. Spence. Ph.D. candidate. Department of Microbiology (matriculated 9/06).

Current Graduate Committee Service for:

16 Ph.D. and M.S. students in the Departments of Marine Sciences, Microbiology, Plant Biology, and the Institute of Ecology, University of Georgia, and 1 student at Woods Hole Oceanographic Institution

Postdoctoral Advisees:

Dr. Richard J. Wicks, 1988-1990

Dr. Nasreen Bano, 1993-1997

Dr. Ram Garg, 1994-1995

Dr. Feng Chen, 1995-1996

Dr. José González, 1996-2000

Dr. Ramunas Stepanauskas, 2000-2003

Dr. Alison Buchan, 2002

Dr. Jennifer Edmonds, 2004-2006

Dr. Helmut Buergmann, 2005-2006

Dr. Johanna Rinta-Kanto, 2007-present

Undergraduate Research Advisement (Honors Theses, REU fellows, Student workers):

John Baumann (1994) Lynn McNutt (1994)

Kenia Whitehead (1995)

Ted Ellis (1996)

Elham Zarnegar (1996)

Andrea Smith (1997)

Preethi Lala (1997)

Latisha Parker (1997)

Jennifer Ewert (1999)

Noah Kahn (1999)

Amanda Kane (2000)

Debra Davis (2000)

Maria Pickering (2000, 2001)

Melissa Butler (2001)

Emily Claire Hebling (2002)

Jacob Shalak (2003)

Ryan Brown (2003) Whitney Pate (2004) Rory Welsh (2004) Tomas Pickering (2004) Jennifer Oliver (2005-6) Collin Closek (2005) Adam Spaulding (2006) Chantel Lester (2006) Ryan Hollibaugh (2006)

High School Student Interns:

Ryan Hollibaugh (2004, 2005) Pratibha Rayapati (2005) Sherri Hall (2006) Alayna LeCroy (2007)

Robert Hein (2005) Eli McKinney (2006) Hannah Gollin (2007) Austin Martin (2007)

Research Experience for Teachers:

Stella Guerrero (2007)

Undergraduate Academic Advisement:

Advisor to 17 juniors and seniors majoring in Biology, Franklin College of Arts and Sciences, UGA

Advisory committee of 3 Interdisciplinary Studies undergraduate majors, UGA